

20 years at the Koestler Parapsychology Unit

MANY people have experienced seemingly psychic phenomena, such as having a dream that predicts the future, seeing a ghost, or thinking of a long-lost friend and then receiving a telephone call from that person moments later. In addition, some individuals appear to possess psychic abilities, including mediums who claim to communicate with the dead, healers who seem to help cure illness, and psychics who can apparently bend keys and cutlery using just the power of their minds.

Such allegedly psychic experiences and abilities have been reported throughout history – however, it is only in the last hundred years or so that researchers have carried out systematic and scientific work into these topics (for a historical review see Beloff, 1977). The Koestler Parapsychology Unit is one such group of researchers. Based within the psychology department at the University of Edinburgh, the KPU includes the only endowed chair of parapsychology in the UK, established by a bequest following the suicide in 1983 of internationally acclaimed intellectual, writer and journalist Arthur Koestler. Koestler had a lifelong interest in the paranormal, seen most clearly in his 1972 book *The Roots of Coincidence*, and he wanted the subject to be given serious attention within a university setting.

In 1985 American parapsychologist Robert Morris was appointed as Edinburgh's first Koestler Professor of Parapsychology. A figure widely respected by psychologists, parapsychologists and sceptics alike, Morris died unexpectedly in August 2004, after almost two decades as Koestler Professor. The Koestler Chair is currently vacant.

Over the years, 30 students gained their PhDs under Morris's supervision, and about 120 undergraduate psychology students conducted their final-year projects and dissertations with KPU staff. A number of KPU research staff and students went on



CAROLINE WATT outlines the continuing influence of the Edinburgh unit on the field.

to obtain lectureships and established their own parapsychology research groups in other UK psychology departments. Two are now professors (Deborah Delanoy at the University of Northampton and Richard Wiseman at the University of Hertfordshire). A new brood of PhD students – one might think of them as

mechanism that may underlie apparently paranormal experiences. In some cases, an experience that is initially interpreted as paranormal may turn out to be attributable to quite well-understood mechanisms, including coincidence, poor observation or recall, self-deception, and deception by others. In other cases, psychic experiences may be explained through an extension of what science already knows about human sensorimotor capabilities, or new human capabilities may be discovered. Most parapsychologists would consider 'paranormal' phenomena to fall into either or both of the latter two categories, and would assume that they can apply the tools of science to investigate these possible extended or new capabilities.

Some terminology: parapsychologists use the theory-neutral term *psi* to encompass the two main categories of allegedly paranormal phenomena. *Extrasensory perception* (ESP) refers to apparent paranormal communication, where a person seems to obtain information from another person without the use of the currently known senses or inference. An example of this would be the feeling of knowing who is calling before answering the phone. ESP breaks down into three sub-categories: *telepathy* refers to apparent mind-to-mind communication; *clairvoyance* refers to apparently obtaining information from the environment (e.g. from inside a sealed envelope); and *precognition* refers to apparently obtaining information about a future event. The second main category of psi phenomena is *psychokinesis* (PK). This refers to apparent paranormal influence, where one person appears to affect an animate or inanimate object in their environment through thought alone. For example, people commonly report feeling the hairs stand up on the back of their neck, turning round and finding they are being stared at. There are three sub-categories of PK: *macro-PK* refers to large-scale apparent PK effects,

Professor Robert Morris

Morris's grandchildren – is now emerging from under the wings of individuals whose careers in psychology and parapsychology started at the Koestler Unit.

Basic concepts

The Koestler bequest defines parapsychology as 'the scientific study of paranormal phenomena, in particular the capacity *attributed to* some individuals to interact with their environments by means other than the recognised sensory and motor channels'. As Morris did, I have emphasised that this definition not only includes the study of hypothesised 'genuine psi' but also 'what's not psychic but looks like it' (Morris, 1986) – what one might call pseudo-psi. Following the remit of the bequest, work at the Koestler Unit makes no assumptions about the

WEBLINKS

For more details on KPU researchers' interests and publications, see:

<http://moebius.psy.ed.ac.uk>

such as metal-bending or table levitations, that are visible to the naked eye; *micro-PK* refers to apparent PK effects that can only be detected statistically (such as deviations in the output of electronic random number generators that correspond with the mental intention of an operator); *bio-PK* or DMILS (direct mental interaction between living systems) usually refers to the apparent influence of one person's volition on another person's physiology (for example, psychic healing), though parapsychologists have also studied DMILS in animals and with samples of tissue or bodily fluids in vitro.

Work at the KPU largely falls into three broad strands: the study of pseudo-psi, psi, and paranormal beliefs and experiences.

Pseudo-psi research: What's not psychic but looks like it

In many real-world, spontaneous psychic experiences, normal psychological processes can lead a person mistakenly to label their experience as paranormal (for a review, see Watt, 1990–1991). Take coincidences as an example. Not only are we notoriously poor judges of probability, but also the law of truly large numbers states that with a large enough number of people and events, apparently meaningful coincidences are bound to happen. Furthermore, psychologists have shown that when an individual personally experiences a coincidence, this coincidence is rated as more surprising and meaningful than the same experience related by another person (Falk, 1989). Poor observation and inaccuracies in recollection may also account for some pseudo-psychic experiences.

One major factor causing people to mistakenly label an experience as paranormal is deliberate deception. This has been an important line of research at the KPU, where we have attempted to develop theoretical systems to describe and understand deception (e.g. Wiseman & Morris, 1994). This work includes looking at physical effects, such as the ways to misdirect attention and to make things seem to vanish or appear (Lamont & Wiseman, 1999), and mental effects, such as simulating psychic powers (e.g. Roe, 1995). For example, in one KPU study participants were shown videotapes of a faked psychic demonstration of metal bending and were later asked to recall details of the demonstration. The results showed that compared to psi disbelievers,

their apparent abilities are demonstrated and observed. These circumstances may be fruitful ones for the simulation of psychic abilities, therefore an important aspect of the KPU's pseudo-psi research has been the development of methodological guidelines for testing psychic claimants (Wiseman & Morris, 1995a). Morris (1987) has also published recommendations for minimising participant fraud in parapsychology laboratories. It is hoped that the KPU's pseudo-psi research will be beneficial not only to parapsychological studies, but also to cognitive and clinical psychology and other disciplines where deception may be involved.

Psi research

Looking at the psi hypothesis, several different kinds of ESP and PK studies have been conducted, but I will focus on a single example: ESP studies using the 'ganzfeld technique'. The ganzfeld is a mild sensory isolation procedure that is thought to be conducive to ESP. It is based on a noise-reduction model of ESP that hypothesises that ESP functions like a weak signal that is ordinarily drowned out by surrounding well-understood signals, such as somatic, visual, and auditory information. By reducing external and internal sources of distraction, parapsychologists reasoned that any ESP 'signal' would be more easily noticed. Two individuals are usually

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The Koestler Parapsychology Unit is based within the psychology department at the University of Edinburgh

psi believers tended to remember fewer details relevant to how the trick was done (Wiseman & Morris, 1995b), suggesting a functional distortion of processing that serves to support pre-existing beliefs.

Individuals claiming psychic abilities tend to be found in circumstances where the claimants have some control over how

DOES THE EXPERIMENTER'S BELIEF MATTER?

I have conducted a series of studies (e.g. Watt & Ramakers, 2003) looking at the question of experimenter effects in parapsychology. It has been suggested that the belief of the experimenter may influence the outcome of their study – such that sceptics tend to find what they expect, and so do believers. Indeed, some have claimed that the experimenter's own psi may affect the outcome of the study.

We selected a number of individuals who scored extremely high or extremely low on a paranormal belief questionnaire, and then trained them to administer a psi task to naive participants. The results for all sessions combined showed overall significant positive scoring on the psi task. More interestingly, when comparing sessions conducted by believer experimenters with sessions conducted by sceptics, the effect was entirely limited to those participants tested by believer experimenters. Participants tested by sceptical experimenters obtained chance results on the psi task.

The positive psi result could not be due to subtle cueing of the experimenter or participants, because all were blind to the randomised condition manipulations that were taking place during the psi task. Sensory leakage was also ruled out by locating experimenters and participants in separate isolated rooms.

Questionnaire measures suggested that participants' expectancy and motivation were unaffected by their experimenters' paranormal belief, raising the possibility that it was the experimenter's psi that influenced the outcome of the study. If experimenter psi effects are real – and this question needs further experimentation – then this suggests challenging questions not only for parapsychology but also for science in general. Traditionally the experimenter is conceptualised as an objective observer of the data, rather than being another participant in the study.

involved in this procedure: the sender will attempt to mentally communicate a randomly chosen 'target' to the receiver. The sender and receiver are placed in separate acoustically shielded rooms. The receiver wears translucent eye-shields and is bathed in red light. The receiver also reclines in a comfortable chair and wears headphones that play 'white noise'. The aim is for the receiver to become mentally and physically relaxed, and for their eyes, ears, and bodies to receive unchanging and unpatterned stimulation (ganzfeld literally means 'whole field' and originates from gestalt psychology). Under such stimulation, thoughts and images become more salient to the receiver.

A computer is used to randomly choose a target (such as a one-minute video-clip) from a large selection of possible targets, and plays that clip repeatedly to the sender. At the same time, the receiver reports out loud any thoughts or images that come to mind (the 'mentation'), and these verbal reports are recorded. Of course, neither the experimenter nor the receiver has any idea of what target the sender is viewing. At the end of the sending period, the sender remains in their room while the computer plays four video clips to the receiver – the target plus three decoys. The receiver's task is to compare each clip to their mentation, and to select which of the clips most closely matches the mentation.

If no information transfer is taking place (this is the null hypothesis), then we would expect the receiver to correctly identify the clip that was viewed by the sender 25 per cent of the time by chance alone. If the target clip is correctly identified, this counts as a 'hit'. Over a number of trials, usually with different sender–receiver pairs and with different sets of targets and decoys, the actual hit-rate is compared with the chance expectation using standard statistical

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Participant in a ganzfeld ESP study

techniques. Extrasensory perception is inferred to have taken place if the target is correctly identified more often than chance expectation.

There are good methodological reasons for presenting the target along with three decoys. Firstly, it controls for the process of subjective validation (Marks & Kammann, 1980) – with a single target it is easy to find similarities between aspects of the target and various mentation items. Similarities will of course occur by chance alone, but with four different target possibilities there will be chance matches to each of the possible targets. However, if ESP is taking place, one would expect there to be a greater number of matches (i.e. more similarities) between the actual target and the receiver's mentation. Secondly, having four target possibilities enables parapsychologists to know the exact likelihood of obtaining a hit by chance alone, and this enables statistical tests to be used to quantify the outcome of the study. In typical real-world situations, the factors leading to a coincidence – say between a person's dream and real-world events the following day – are so complex that it is practically impossible to give an accurate calculation of the odds of that coincidence. This is one reason why parapsychologists tend to focus on laboratory methods such as the ganzfeld to investigate ESP.

Using this procedure, a number of KPU studies have looked at individual differences in scoring on the ganzfeld ESP task. One theme that appears to be emerging is that individuals who regard themselves as 'creative' (e.g. artists, musicians) tend to score more 'hits' (to correctly identify the target from a set of four possibilities) than less creative individuals (see Dalton, 1997; Morris *et al.*, 1998). This line of research may throw some light on the question of the conditions needed to demonstrate psi, and further studies are needed to understand why creative individuals seem to perform well at ESP tasks.

Included in the KPU's psi research are meta-analytic reviews of the wider experimental literature, including ganzfeld ESP (Milton & Wiseman, 1999) and a comparison of clairvoyance and precognition (Steinkamp *et al.*, 1998). Methodological guidelines have also been produced for ESP testing (Milton & Wiseman, 1997), and issues about the validity of different research approaches have been discussed (Stevens, 2004; Watt, 1994).

Research into paranormal beliefs and experiences

This line of research is primarily concerned with exploring the psychological factors underlying people's paranormal beliefs and experiences. Many anomalous experiences, for example out-of-body experiences, near-death experiences, past-life experiences, and spontaneous psi experiences, are not uncommon, and psychologists and parapsychologists are beginning to build a picture of their phenomenology and psychological function (e.g. Cardeña *et al.*, 2000). For example, one KPU study of individuals claiming aura vision found this to be positively correlated with imagery abilities, as did experiences of being out of one's body (Alvarado & Zingrone, 1994). Another study (Lawrence *et al.*, 1995) found evidence that childhood trauma was associated with belief, supporting a psychodynamic model of paranormal belief. This finding suggests that, for some, paranormal belief fulfils a need for control in an otherwise chaotic and uncontrollable environment.

Present and future directions

Currently, the KPU has five research staff. Members of the public sometimes contact the KPU seeking help with unusual

DISCUSS AND DEBATE

Should mainstream researchers invest resources in studying people's paranormal experiences?

Should students be encouraged to study the psi hypothesis, when mainstream scientists do not yet accept there is evidence for psi?

Does psychology focus too much on topics that are easily studied but boring?

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experiences (for example, feeling that they are being touched when no one is present) that they interpret as paranormal. Dr Claudia Coelho is investigating whether such experiences may represent early indicators of psychological distress. Additionally, using discursive methods she is studying how parapsychologists construct the concept of anomaly (Coelho, 2004). Dr Peter Lamont is interested in the history and psychology of magic and ostensibly psychic phenomena, beliefs about the paranormal, psychic fraud and deception more generally, with a particular interest in how people frame inexplicable events (Lamont, 2004, in press). Dr Fiona Steinkamp (part-time) has been conducting postal and web studies of precognition (Steinkamp, 2000, 2001). Dr Paul Stevens is studying human detection/interaction with weak magnetic fields at biologically relevant frequencies, as well as evaluating physical mechanisms underlying cases of extended communication (e.g. telepathy, sense of presence, micro-level

psychokinesis effects) (Stevens, 2000, 2001). I am interested in experimenter effects in parapsychology, and the psychology of paranormal belief and experience (Watt & Ramakers, 2003; Wiseman & Watt, 2004).

Perhaps the greatest achievement of the Koestler Unit so far has been its success in studying this controversial topic within a university setting, in 'seeding' new units in other UK universities, and in enriching the academic profile of our department. In an article taking stock of his first 10 years as Koestler Professor, Robert Morris discussed how he sought to develop what

he called an integrative parapsychology: 'a systematic and responsible research programme that would integrate this controversial area into the ongoing research and teaching activities of the University community' (Morris, 1995, p.24). Bob Morris has indeed achieved this goal.

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FURTHER READING

For a reader giving a broad overview of parapsychology and providing key references, see: Wiseman, R. & Watt, C. (Eds.) (2005). *Parapsychology*. International Library of Psychology Series (D. Canter, Editor-in-Chief). Aldershot: Ashgate.

For an introductory textbook on parapsychology and anomalous experiences, see: Irwin, H.J. (2004). *Introduction to parapsychology* (4th edn). Jefferson, NC: McFarland.

References

- Alvarado, C.S. & Zingrone, N.L. (1994). Individual differences in aura vision: Relationships to visual imagery and imaginative-fantasy experiences. *European Journal of Parapsychology*, 10, 1–30.
- Beloff, J. (1977). Historical overview. In B.B. Wolman (Ed.) *Handbook of parapsychology*. New York: McFarland.
- Cardeña, E., Lynn, S.J. & Krippner, S. (Eds.) (2000). *Varieties of anomalous experience: Examining the scientific evidence*. Washington, DC: American Psychological Association.
- Coelho, C. (2004, January). Constructing anomalies in experimental parapsychology. Paper presented at the 17th Annual Conference on Interdisciplinary Qualitative Studies, University of Georgia, Athens, GA.
- Dalton, K. (1997, August). Exploring the links: Creativity and psi in the ganzfeld. *Proceedings of the 40th Annual Convention of the Parapsychological Association* (pp.119–134). Brighton.
- Falk, R. (1989). Judgement of coincidences: Mine versus yours. *American Journal of Psychology*, 102, 477–493.
- Lamont, P. (2004). Spiritualism and a mid-Victorian crisis of evidence. *Historical Journal*, 47, 897–920.
- Lamont, P. (in press). Critically thinking about paranormal belief. In S. Della Sala (Ed.) *Tall tales: Popular myths about the mind and brain*. Oxford: Oxford University Press.
- Lamont, P. & Wiseman, R. (1999). *Magic in theory*. Hatfield: University of Hertfordshire Press.
- Lawrence, R., Edwards, C., Barraclough, N., Church, S. & Hetherington, F. (1995). Modelling childhood causes of paranormal belief and experience: Childhood trauma and childhood fantasy. *Personality and Individual Differences*, 19, 209–215.
- Marks, D. & Kammann, R. (1980). *The Psychology of the psychic*. Buffalo, NY: Prometheus Books.
- Milton, J. & Wiseman, R. (1997). *Guidelines for extrasensory perception research*. Hatfield: University of Hertfordshire Press.
- Milton, J. & Wiseman, R. (1999). Does psi exist? Lack of replication of an anomalous process of information transfer. *Psychological Bulletin*, 125, 387–391.
- Morris, R.L. (1986). What psi is not: The necessity for experiments. In H.L. Edge et al. (Eds.) *Foundations of parapsychology: Exploring the boundaries of human capability*, pp.70–110. London: Routledge & Kegan Paul.
- Morris, R.L. (1987). Minimising subject fraud in parapsychology laboratories. *European Journal of Parapsychology*, 6, 137–149.
- Morris, R.L. (1995). Now you see it now you don't. *Edit*, 8, 24–26.
- Morris, R.L., Cunningham, S., McAlpine, S. & Taylor, R. (1998). Toward replication and extension of autoganzfeld results. In N.L. Zingrone et al. (Eds.) *Research in parapsychology 1993* (pp.57–61). Lanham, MD: Scarecrow Press.
- Roe, C.A. (1995). Pseudopsychics and the Barnum effect. *European Journal of Parapsychology*, 11, 76–91.
- Roe, C.A., Davey, R. & Stevens, P. (2003). Are ESP and PK aspects of a unitary phenomenon? A preliminary test of the relationship between ESP and PK. *Journal of Parapsychology*, 67, 343–366.
- Steinkamp, F. (2000). Does precognition foresee the future? A postal experiment examining the possibility of true precognition. *Journal of Parapsychology*, 64, 3–18.
- Steinkamp, F. (2001). Does precognition foresee the future? Two conceptual replications. Series 2: In the Laboratory. Series 3: On the WWW. *Journal of Parapsychology*, 65, 17–40.
- Steinkamp F., Milton J. & Morris R.L. (1998). A meta-analysis of forced-choice experiments comparing clairvoyance and precognition. *Journal of Parapsychology*, 62, 193–218.
- Stevens, P. (2000). Human electrodermal response to remote human monitoring: Classification and analysis of response characteristics. *Journal of Parapsychology*, 64, 391–409.
- Stevens, P. (2001). Effects of 5s exposures to a 50 μ T, 20 Hz magnetic field on skin conductance and ratings of affect and arousal. *Bioelectromagnetics*, 22, 219–223.
- Stevens, P. (2004). Experimental evaluation of a feedback-reinforcement model for dyadic ESP. *Journal of Parapsychology*, 68, 65–92.
- Watt, C. (1990–1991). Psychology and coincidences. *European Journal of Parapsychology*, 8, 66–84.
- Watt, C. (1994). Making the most of spontaneous cases. In S. Krippner (Ed.) *Advances in parapsychological research 7* (pp. 77–103). Jefferson, NC: McFarland.
- Watt, C. & Ramakers, P. (2003). Experimenter effects with a remote facilitation of attention focusing task: A study with multiple believer and disbeliever experimenters. *Journal of Parapsychology*, 67, 99–116.
- Wiseman, R. & Morris, R.L. (1994). Modelling the stratagems of psychic fraud. *European Journal of Parapsychology*, 10, 31–44.
- Wiseman, R. & Morris, R.L. (1995a). *Guidelines for testing psychic claimants*. Hatfield: University of Hertfordshire Press.
- Wiseman, R. & Morris, R.L. (1995b). Recalling pseudo-psychic demonstrations. *British Journal of Psychology*, 86, 113–126.
- Wiseman, R. & Watt, C. (2004). Measuring superstitious belief: Why lucky charms matter. *Personality and Individual Differences*, 37, 1533–1541.