

Balfour Stewart

Balfour Stewart (1828-1887) was a Scottish physicist and meteorologist who was interested in psychical research. He was co-author with PG Tait of *The Unseen Universe* (1875), a much-discussed attempt to reconcile modern physics with Christianity.

Life and Career

Born on 1 November 1828 in Leith, Scotland, Stewart studied physics at the Universities of St Andrews and Edinburgh. In 1858 he began systematic observations and experiments on radiant heat, meteorology and terrestrial magnetism. A year later he was appointed director of the [Kew Observatory](#) in London, where he used magnetographs to record geomagnetic disturbances caused by storms – an achievement which in 1862 earned him membership of the [Royal Society](#). This same institution awarded him the Rumford Medal in 1868 for his work on heat radiation.

In 1870 Stewart was appointed professor of physics at Owens College, Manchester, holding the post until his death. During his teaching career he published several textbooks and elementary treatises on physics, heat, the conservation of energy and related subjects.

Stewart was secretary of the Government Meteorological Committee (1867), president of the Manchester Literary and Philosophical Society (1887), and president of the Physical Society (1887). The University of Edinburgh awarded him an honorary degree on LLD.

He died on 19 December 1887 near Drogheda, Ireland.^[1]

The Unseen Universe

During the 1870s Stewart developed an interest in claims of psychic phenomena, becoming closely associated with [William Barrett](#), a co-founder of the Society for Psychical Research.^[2] He was president of the Society from 1885 to 1887.

This activity was motivated largely by his Christian beliefs; he viewed evidence of telepathy, apparitional appearances and other related phenomena in terms of physics,^[3] seeing in them a means to reconcile science and religion, and in particular 'to render Christian miracles physically intelligible'.^[4] The outcome was a substantial study titled *The Unseen Universe: Physical Speculations on a Future State* (1875) co-authored with [Peter Guthrie Tait](#), a renowned mathematical physicist. The book went through several editions and created a vigorous debate among scientists, theologians, philosophers, and psychical researchers.^[5]

Guided by the [principle of continuity](#)– the modern notion that energy flows between universes and connects them by a sort of causal necessity – Stewart and Tait argued for the existence of an invisible 'order of things', one that is intimately

connected with the visible universe, and from which the latter derives its energy.^[6] This unseen universe remains full of energy when the visible universe has ceased to exist. Notably, in their view, thought and memory - 'the key elements of human intelligence' - should be seen as products of molecular movements; once these have come into existence they travel energetically and, far from dissipating into nothingness, remain stored in other universes.

Applying these propositions to the question of human immortality, they wrote that 'after death, when the soul is free to exercise its functions, it may be replete with energy, and have eminently the power of action in the present, retaining also... the memory of past events' which had been stored in it. Hence it would preserve the requisites of a 'continuous intelligent existence'.^[7]

For Stewart and Tait, the principle of continuity justifies the belief that Christian miracles can be explained in scientific terms. They stopped short of accepting the séance phenomena that impressed spiritualists such as William Barrett, considering these to be purely subject impressions. However, they accepted the possibility of telepathic influence between individuals as congruent with 'the possibility of an invisible realm (in this case mental) acting on a visible one (the brain) at a distance.'

([Oliver Lodge](#), a physicist and radio pioneer, and also a leading psychical researcher, later reached similar conclusions, arguing that the study of psychic phenomena and 'ether physics' give scientific intelligibility to the idea of a divine realm beyond gross matter.^[8])

Telepathy

In *The Unseen Universe*, Stewart argued against the view that human communication is necessarily limited to the five physical senses, holding that no scientific theory or law is ever complete; indeed, the SPR's research, notably its major survey *Phantasms of the Living*, made it likely that such a phenomenon as telepathy existed in fact.^[9]

Elsewhere, he proposed three possible explanatory hypotheses for telepathy:

- 1) the mind of person A may act directly upon the mind, and through it upon the body, of person B.
- 2) the mind of person A may act directly upon the body, and through it upon the mind, of person B
- 3) the body of A may act in a peculiar manner upon the medium, and the medium may act upon the body, and through it upon the mind, of B.

If '3' is correct, he wrote, we might obtain 'something approaching numerical laws', but this will hardly happen if number 1 is right.^[10]

Stewart believed there was good evidence for the phenomenon of telepathic apparitions, also studied in depth by the SPR. He argued that it would be

‘unscientific’ to dismiss as coincidence the occurrence of an apparition within ten minutes of that person’s death at a distant location.^[11]

Experiments

In November 1881, Stewart and Alfred Hopkinson made two visits to Buxton, Derbyshire, to test the putative thought-reading faculties of the daughters of Rev AM [Creery](#).^[12] The tests took the form of the popular ‘willing game’, where one person left the room and then tried to guess the object or word that the company had selected in her absence. On both occasions the girls made many correct guesses and the pair were impressed with the results.

The many experiments carried out by SPR members with the Creery family over a period of eight years ended when two of the girls were eventually caught using a code to signal to each other, although cheating of this kind did not account for earlier successes where the experimenters had acted as participants (see [Creery Telepathy Experiments](#)).

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Literature

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Endnotes

Footnotes

1. ^ Barrett (1888). Lewis (2015), 220-22.
2. ^ Noakes (2019), 109-10.
3. ^ Stewart (1884).
4. ^ Noakes (2019), 124-25.
5. ^ Followed in 1879 by *Paradoxical Philosophy*, which passed relatively unnoticed. A good description of the debate in Lewis (2015), 214-17.
6. ^ Stewart & Tait (1875/1894), 199.
7. ^ Stewart & Tait (1875/1894), 200. A similar position was maintained by Gustav Fechner and [William James](#), among others.
8. ^ Noakes (2019), 124-25.
9. ^ Stewart (1885).
10. ^ Stewart (1887), 265.
11. ^ Stewart (1882), 37.
12. ^ Stewart (1882), 38-42.