



The Science of Séances



Jon Thompson prepared this glossary for his talk.

Aether	An unseen substance pervading all space, which was thought by 19th-century scientists to allow radio waves, light and radiant heat to apparently travel through a vacuum. Aether was also thought to be the substance that allowed spirits to communicate from the spirit world.	Parapsychology	The study of paranormal phenomena.
Crooke's radiometer	An evacuated glass bulb containing freely rotating vanes, which were thought to turn due to the "pressure of light" against the aether that remained after evacuation. Now we know the rotation is due to thermal effects in the small amount of air that remains in the bulb.	Project Alpha	A hoax perpetrated by illusionists to uncover weak parapsychology experiments.
Electromagnetic field	The combination of electric and magnetic fields that are known to permeate the universe, rather than the aether.	Spiritualism	The belief system centred on the idea that the dead can communicate with the living. As a movement it still boasts around 8 million members worldwide.
Ideometer response	An effect whereby merely thinking about a task produces microscopic muscle movements. Explains phenomena such as ouija boards, spirit pendulums, etc.	Spirit cabinet	A cabinet with a curtain across the front instead of doors. A medium is tied to a chair inside the cabinet, and yet still produces "spirit" phenomena while the curtain is drawn. Tambourines would be thrown from the cabinet, musical instruments play, and spirits even appear from the cabinet and move amongst the spectators.
James Clerk Maxwell	Scottish mathematician whose equations first showed that electromagnetism propagates as a wave, taken at the time as proof of the existence of aether. Maxwell's equations are the foundation of wireless transmission.	Spirit performer	An illusionist whose act consists of faking mediumistic phenomena, usually far more spectacularly than the real thing.
Medium (person)	An individual who believes that they serve as an intermediary between this and the spirit world. Literally a "medium" through which information flows.	Table tapping	A séance phenomenon involving spirits tapping out answers to questions ("one knock for yes, two for no").
		The Society for Psychical Research	Set up in 1882 in Cambridge by Frederick Myers to investigate paranormal phenomena using modern scientific techniques. Still operating today.

Useful weblinks: Phantasms of the Living: The Journal of the Society for Psychical Research Vol II: <http://bit.ly/PYRnlq>
 Instruments To Lay Hold of Spirits: A modern account of investigations into séance phenomena in Victorian Britain: <http://bit.ly/R3FH24>
 The Society for Psychical Research: www.spr.ac.uk
 The Koestler Parapsychology Unit at Edinburgh University: <http://bit.ly/2ISVO>
 Professor Courtenay Raia's UCLA lecture on links between 19th century science and spiritualism: <http://www.youtube.com/watch?v=-1811HzlgdE>

Next SciBar: 9 October 2012. "The Arsonist, the Martian, the Cat and the Coke....oh and Dwain" {uses of mass spectrometry}, by Tony Bristow. Time: 6.30pm as usual.