

Science, Not Superstition: The Nature of Ghosts

Despite many thousands of reports of apparitions since the beginning of history, the evidence for the paranormal remains very sketchy. It is not too hard to see why this is, and why sceptics remain to be convinced; the main reason is a lack of tangible, tabulated evidence. Ghosts stories are almost purely anecdotal, and seem to be very personal experiences. They also mostly seem to focus on trivial, mundane events, which is remarkable when we are often told that ghosts are imprints of violent etc. behaviour committed in the past and this somehow becomes imprinted upon the environment. We can only presume that many people have died from the mundane, for instance how many times have you read a ghost story where a figure is seen in the middle of the night, walk across the room to the window and vanish?

We all seem to love a good ghost story, but they are sources of frustration. Very little time has been spent trying to understand the nature of ghosts- why do we see them? and what are they? In an era of dwindling science grants and the lack of objective enthusiasm by scientists (particularly in the field of spontaneous cassettes in parapsychology), sadly, this is one status quo that will be maintained. The burden of providing proof lies with the amateur and his trusty range of secondhand, or custom-built equipment.

Tantalising pieces of experimental evidence and observations have given us a few clues, but, to quote one drama serial, "a ghost is a mass of data waiting for a correct interpretation". It is fair to mention another quote (which I hope I will report reasonably accurately): "In the world of parapsychology, we not only await an Einstein, but an Aristotle." An excellent comment indeed on crude knowledge that we have into understanding the nature of ghosts.

For the sake of discussion, let us assume that you do believe in ghosts, either by faith, religious or otherwise, or by actually seeing one. You do not need convincing. Now, do ghosts occur "all in the mind" as many critics have cruelly suggested, or do they occur in the environment? Hopefully, in the discussion that follows, you will be intrigued as I am and will hopefully want to learn more of these elusive apparitions.

Those who dismiss ghosts as being a figment of the mind have one compelling piece of evidence on their side: the seeming lack of interplay between spirits and their environment: on the whole, they do not move things around or communicate with witnesses although there are of course exceptions to this. One could easily create a theory that accounts for the movement of objects by psychokinetic abilities on the part of the observer, or poltergeist phenomena but this is hardly satisfactory since, to quote Fortean researchers Janet and Colin Bord excellent maxim, it attempts to explain one mystery by invoking another. Furthermore, ghosts rarely appear on film or videotape; again, there are exceptions to this. Even with infra-red imaging equipment the chances of successfully recording a ghost on film or tape is remote.

Of interest are of those cases where, of many people in a group, only a few see the apparition, the others excitedly asking "what do you see?" One may attempt to use 'mass hysteria' or 'mass hallucination' as one possible explanation but for it to be remarkably selective and for people to see the same thing, unprompted by others, is intriguing to say the least. Also, sometimes video/film equipment does record something. I should also point out here that sometimes cameras have picked up images when even humans don't see anything at all, and others times the reverse situation is true.

The most widely touted theory regarding ghosts is known as "The Stone Tape" theory, made popular by the excellent BBCtv drama production shown in 1972, and written by Nigel Kneale (the creator of "Quatermass" in the 1950s). In this dramatisation, a group of scientists realise that the image and sounds of the ghost is stored materially in the fabric of an old room and that people sensitive to the recording can play it back in their heads- a fascinating idea since it presupposes that everyone's reaction to the 'ghost' is different- "like eyesight or hayfever". The production is also noteworthy for predicting the digital revolution many years early.

"The Stone Tape" theory relies on no 'external' ghost- everything is perceived in the mind, and nothing can be recorded or analysed on their equipment. Such a 'ghost' would follow a predetermined course of action- walking the same path as in life, although how the recording comes to be imprinted on stone is an interesting theoretical question!

This explanation does have many parallels with 'real' ghost-stories; the apparition that walk through walls where doors used to be, climb up steps that no longer exist etc. The most spectacular cases of this are at The Treasurer's House in York (where a worker in the basement saw a legion of Roman soldiers, whose legs were cut off at the ankles- the current level of the ground), Westminster Abbey (where a priest is seen walking an inch or two above the ground, marking the settling of the ground since he 'died') and Bell Lane in Enfield, London (where a phantom stagecoach allegedly rushes along - 6 feet above the ground).

Of relevance here is a passage that appeared last year in the New York Times on-line magazine. It recounted how audio experts were trying to uncover the erased 18 1/2 minute segment from one of President Nixon's Watergate tapes. Using digital technology, and a knowledge of the original media, it may be possible to at least partially restore some of the excised material. Very interesting, but what has this to do with ghosts? The following quote may explain the matter:

"One of the more peculiar theories about sound was developed hypothetically some 30 years ago. A technician named Richard Woodbridge III coined the phrase "acoustic archaeology" in the August 1969 issue of Proceedings of the I.E.E.E. (the Institute of Electronic and Electrical Engineers". Woodbridge theorised that there were many occasions when sound might innocently get scooped out of the air and preserved. For example, when an ancient potter typically held a flat stick against a rotating pot, he was accidentally (and crudely) recording into the clay the sounds around him. Woodbridge

wrote about experiments he performed pulling basic noises off a pot. Another experiment involved setting up a canvas and then talking while making different brush strokes.

'This is to record the finding of a spoken word in an oil portrait,' Woodbridge wrote. The word was "Blue" and was located in a blue paint stroke - as if the artist was talking to himself or to the subject. Parenthetically, the search was long and tedious. The principle, however, was established."

(I should point out that the popular US TV show "Mythbusters" performed experiments searching for sound recordings in paintings and pottery and reached a contrary (ie negative) conclusion in its entertaining experiments.)

This may have an overlap with ghosts: A possible example of such a possible pseudo-tape recording occurred in 1982, when the landlord at the Prince of Wales inn at Kenfig in Mid-Glamorgan (Wales) complained of the sound of organ music and voices. When he had retired for the night. John Marke, an electrical engineer and Allan Jenkins, an industrial chemist, connected electrodes to the wall of the pub after closing time one night. They fed 20,000 volts across the electrodes and locked tape recorders in the room for four hours. Reports in books later described voices (speaking in old Welsh), organ music and a clock ticking (though there was no clock in the room at the time). It was mentioned a few years back that the stones in the wall contain may contain similar substances to those found in modern tape. One unanswered question remains however; would the sounds have occurred in the room anyway even if the scientists hadn't pumped 20,000 volts into the wall? - in short, had a control experiment been performed?

This Stone Tape evidence suffered a blow in later years when I learned from Dr. Melvyn Willin (who has a doctorate in Parapsychology and Music) that technicians at the now-defunct BBC Radiophonic Workshop, described the Prince of Wales pub sounds as being akin to distortion and feedback, perhaps caused by the nearby presence of a very large transformer required to create the hefty voltages required. Certainly, having heard extracts from the tape, the sounds resemble flatulent elephants, not clocks ticking etc.! John Marke said, shortly after the 1982 recordings, that BBC Newsnight, and TV crews from Japan and Canada had filmed the experiments under controlled conditions with "surprising results" (although it is not clear what he means by this). Furthermore, Marke elucidated that he had performed experiments of a similar nature at the Jolly Sailor pub in Porthcawl. If anyone knows the outcome of this experiment, please let me know.

Another major problem for the Stone Tape theory is: just where are the data required for playback stored? This poses no problem for buildings, where the fabric remains more-or-less in situ, but what about the reports of phantoms on battlefields, or brand new housing estates? The ground must have been worked thousands of times, hedges and trees uprooted and planted, so where is the "ghost" information stored? Mike White, an ASSAP member suggested that it might actually be recorded in deep lying strata, deep beneath the surface. Of course, this might tie in nicely with Paul Devereux's hypothesis of "Earth Lights" being the product of tectonic plate stresses. And David Taylor, Parasearch chairman, has made the connection between recent earth tremors in the

Dudley area and its population of ghosts. One satellite TV show ("Ghost Hunters-Spectres of the Severn") even made the connection between the ghosts in Gloucestershire (e.g. The Ancient Ram Inn) being linked to its series of local fault lines. This programme has suggested the possible link between high rates of spectral appearances and geological fault lines; the evidence was intriguing, but faulty, since no control of non-fault areas was performed. The idea is that somehow the stresses in the Earth causes bursts of electro-magnetism, and this affects eyewitness perceptions. An acquaintance has also suggested this link, but has suggested that the natural conductivity of the surrounding ground may also play a part in somehow causing phantoms some distance away from an earth tremor or fault line. If this phantom-fault line connection is proven, then the mechanism will still be a mystery: is it simply due to the natural effect of electricity and magnetism on the brain, or some unknown force?

The "Stone Tape" theory does not explain those instances where ghosts communicate with the observer (sometimes being able to understand a foreign language), but one could always explain this as due to telepathy, which, conveniently does not seem to be a quantifiable subject under current understanding of physical laws! Also a mystery are those cases that seem to incorporate a 'sentient' ghost, and in this category one could include Poltergeists, which love to put on a good show for the observers, but only once recording media (video, tape recorders etc.) have been turned off or directed elsewhere.

One seemingly obligatory feature of paranormal manifestation seems to be a sudden drop in temperature, or a very localised zone of cold air - the so-called "cold spot". Again, this is sometimes real and is measureable on a thermometer, and other time it seems to be a perceived effect. One idea is that the ghost is somehow extracting energy from the air. Alternately, the "cold spot" may not be real and may simply be an artefact of the way the human body reacts to such things, such as shivering uncontrollably when in a state of shock, for instance. Incidentally, a story I vaguely recall from a few years back refers to the fact that one ghost would shift locations to another room if an ioniser was left activated in its original haunted location; more recently, a mention in a Ghost club circular referred to a build-up of static electricity during a vigil. And, a contact at Ghosts-UK mentioned that: "I once saw a spirit in full manifestation. She was quite see through, her features were clear, she was animated and there was a blue/green aura of mist swirling around her. Once she vaporised she set the smoke alarm off."

A friend once related how, during an otherwise uneventful vigil, a digital multimeter (used by, for example, car mechanics and electricians to measure electrical conductivity, voltage etc.) registered a massive surge just before a crash was heard to emanate from an empty room. Alas, I cannot recall which electrical property (voltage, current or resistance) showed the "spike". How all these environmental effects affect, or are affected by ghosts is an open area for research.

More recently, and very excitingly, a new avenue of research comes from Vic Tandy at Coventry University. He has found that infra-sound (at around 19 Hz) causes the human eye to vibrate almost imperceptably, but causing a feeling of "being watched" as it causes a distortion in the peripheral vision. You wouldn't feel the vibration (it is so subtle) but it

would cause unease, not just in the eye but in the stomach too (19 Hz being close to the natural frequency of the human body, as reinforced by research from NASA). Vic discovered this effect when he traced feelings of dread to a faulty desk fan in his lab. Once this fan was repaired, the feeling vanished. He has also discovered one other case of this infrasound being the cause of spooky feelings, in an old catacomb. He has also noted the conditions when such "feelings" may occur. The media naturally tried to conclude that this low frequency sonic wave was the cause of all ghost stories, a claim very easy to dispute.

I am also intrigued by the cases where animals can "sense" the presence of ghosts. Dogs often bark at the air, and cats purr as if stroked by invisible hands. One story from York related how a dog, in its attempt to pursue something, ran into a brick wall! It is known that some animals possess superior senses to humans (such as hearing and smell)- do they use these enhanced senses, or do they possess other abilities, enabling them to see ghosts?

Attempts to record ghosts on equipment have met with remarkable degrees of unsuccess (for want of a better word): they are camera-shy even when cornered! At a lodge in Dudley Castle, near Birmingham, the oppressive nature of the building totally vanished when each room had two people, a video camera and a tape recorder installed! Members of ASSAP tried a tactic a few years back at Dover Castle: they reasoned that since ghosts never appear where video cameras are, they would place machines in every room and station themselves in a 'nerve centre', playing Monopoly and waited for things to happen! A good plan, but it never worked.....

Considering the difficulty of seeing ghosts, why is it that people almost always see them when they never expect it? For instance, when in a relaxed, or distracted frame of mind, or have just woken up? On vigils, this usually happens when you are changing tapes over or having a tea break. Of course, if the ghost had intelligence, we might say that "it" was being mischevious. But I wonder.... It almost reminds me of the Uncertainty Principle in Quantum Physics: observing the experiment adds energy to the system, altering it slightly, and making it impossible to observe two quantities simultaneous to a given precision (such as momentum and position). It may be similar to going on vigils: by observing, we are blocking what we set out to seek! In a similar fashion, John Spencer once related a theory that stated that ghosts seem to have a prediliction towards appearances when the witness is least expecting it, and hardly ever during vigils. The theory goes that the logical, rational hemisphere of the human brain may be blocking the appearance of ghosts (it should also be noted that the "artistic vs. scientific" hemisphere theory of the brain seems to be controversial too!). With the permission of the National Trust, an attempt was made by a party at Dover Castle to switch off the logical, reasoning side of the brain by getting drunk (!) and engaging in a musical jamboree. This vigil was unsuccessful as far as seeing ghosts was concerned!

As an aside, it should be pointed out here that most of the typical "bedroom invader" type phantoms are usually encountered between 2.15 and 4.00am. Can it be mere coincidence that the time that the body is usually at its tiredest and concentration falters is at about 3.15am?

Relaxed, but conscious people exhibit "alpha rhythms" in their brain. These are regularly recurring electrical waves. They are 11 "peaks" per second in an alpha state, and the voltages involved are tiny (approximately 50 MILLIONTHS of a volt!). When excited or startled, the alpha rhythms are replaced by a low voltage (37 microvolts), but irregular waves. In sleep, the waves become increasingly slow. Can ghosts be connected with these relaxed mental states?

It might be worthwhile to consider what happens in the brain during a ghost sighting, and ASSAP did use an Electroencephalogram (EEG) to measure this during their vigil of Chiselhurst caves many years back; this was in conjunction with an experiment into a connection between the various brain rhythms and hypnosis. Interestingly, one person did experience an epileptic episode in the caves some time prior to 1987 when this ASSAP vigil occurred. The man in question was not an epileptic, though it should be noted that everyone is likely to experience one such seizure in their lifetime. Still, the timing is interesting. But even so, an EEG is limited by what it can do: it records only a small sample of electrical activity from the surface, not the interior of the brain.

Perhaps the inclusion of equipment changes the nature of the environment; perturbs it in such a way as to prevent spontaneous cases occurring. A lot has been written about the effect that ghosts have on equipment - in Borley Church, a tape was ripped from the spools of an audio tape recorder; in the Enfield poltergeist case, three flashguns rapidly drained of power, tapes machines jammed, tapes were either wholly or partially wiped and a metal part inside one machine was bent; in Rosenheim in Bavaria, a poltergeist somehow created very localised voltage and current surges (which didn't trip the fuses) and even caused investigators to speculate about invisible forces causing direct pressure on the crystal in a microphone, springs inside a telephone and the pen of an instrument that recorded voltage fluctuations on a paper chart. But has anyone ever considered the effects that the introduction of equipment has on the appearance of ghosts- maybe the electrical and magnetic fields reduce the probability of a presence. In the Australian Humpty-Doo case, the Poltergeist would only put on a show once the TV camera batteries had run out of power, and any witnesses had left the building. An interesting coincidence, or just malice on the part of the poltergeist?

Returning to the argument that the barrage of electrical equipment we take on vigils perturb the EM atmosphere so much that we are actually inhibiting the very phenomena we are seeking: perhaps it should be ensured that our equipment is shielded from producing such pollution into the environment? Or, what would happen if we could create a machine where the periodic waves of the alpha rhythms are duplicated, but the voltages were increased many fold? Would we be feeding the ghost? Would one appear?

At a Society for Psychical Research talk recently, council member Tony Cornell mentioned that his infra-red triggered monitoring system (called 'SPIDER', or Spontaneous Psychophysical Incident Data Electronic Recorder) had been used for 10 years and had not produced one single, verifiably paranormal event on tape. It has only apparently triggered once in hundreds of deployments, and this was only after 53 days "in the field"! This could imply that humans need to be present for manifestations to occur.

A friend has pointed out the corroboration, noted by Michael Persinger, on the corroboration of the Earth's magnetosphere (magnetic field) during occurrences of spontaneous psychic events. This is rather akin to the cases of Spontaneous Human Combustion, which were noted (controversially) many years ago to follow the same peaks, namely that ESP & Precognition was more likely to occur on days of high geomagnetic activity, and Ghost & Poltergeist activity was more likely to during low geomagnetic activity. Albert Budden has also noted that witnesses to paranormal activity are likely to: live near high levels of electromagnetic activity (pylons etc) and/or have been involved in an electromagnetic discharge (lightning strike etc).

[As an aside to this main narrative, Dr.Persinger was interviewed on the BBC Horizon documentary edition aired on 16th April; the documentary covered the connection between the brain and religion - Neurothology. Dr.Persinger noted that the application of weak magnetic fields to the Temporal Lobes of the brain resulted in similar experiences to those who encounter religious or paranormal occurrences. For instance, in one subject, applying a field to the right lobe resulted in the person "sensing a presence". Dr.Persinger thinks that nearly, if not all cases of the paranormal could be explained by such magnetic fields, which could occur from overhead pylons or underground fault lines. To back this assertion up, the BBC showed a reconstruction of a case that Dr.Persinger had investigated. In this case, a young girl was complaining of nightly visitations by an entity. The cause of the disturbances was traced to the EM field of a clock radio, sitting on a table adjacent to the girl's bed. When the clock was removed, the girl reported no further "bedroom invaders".]

Some tantalising experimental evidence does exist that suggests that the stimulation of the brain by an external magnetic field can rekindle old, dormant memories - and 'create' new hallucinations ("Temporal Lobe Epilepsy"): this may explain the many cases of Alien Abduction prevalent throughout the world. Andrew Green recounted a tale at a recent lecture that people with TLE might be more prone to supernatural phenomena. There might also be an element of chaos and 'non-reproducibility of results' involved here: if the reports are anything to go by, phantoms should appear all over the place. Clearly this is not the case. Perhaps they require certain environmental conditions to be (even approximately) met before they appear?

The effects of strong magnetic fields on the brain, causing transient Temporal Lobe Epilepsy has been noted above: this can produce hallucinations and was trumpeted as a "explanation" for ghosts. But the actual fields required are so large it is highly doubtful that they could be produced naturally on the Earth. Even arch sceptic Richard Wiseman concedes this point. It may be that high fields are produced in the vicinity of fault lines when Earth Lights appear; after all, if these lights are anything like Ball Lightning, they may require strong fields to cohere the energised particles together.

The Hutchison Effect is a more recent attempt to mimic Poltergeist activity using electrical and magnetic fields; the equipment, when activated, caused items to levitate and various items to move seemingly by themselves. Fires would spontaneously erupt, too. The effect of these fields on the human body is quite damaging, and there is talk of

electricity being stored by the body, then released catastrophically. However, if the Hutchinson Effect is a good start to unravelling the mystery of the paranormal, it doesn't seek to explain how such strong electrical or magnetic fields can be generated in the environment. It also hasn't received much in the way of credibility from the scientific community because it is extremely difficult to reproduce. But, if magnetic fields are a partial answer to this conundrum, then a good, cheap piece of equipment that may be of use during vigils is the magnetic compass; any deviation from North caused by a field would be observable. You don't have to have a big equipment budget to perform science!

A very recent, and in this reviewer's opinion, particularly irksome modern introduction to ghost-hunting are "Orbs". I am not convinced that orbs represent definite signs of Paranormal activity. I am convinced by experiments done by ASSAP and the Ghost Club that most sightings can be explained by dust, fireflies, lens flare caused by reflections etc. After all, when you go into a "haunted house", you are probably disturbing a lot of dust and muck, which are picked up by cameras.

(To read recent research on orbs, [click here](#).)

One professional camera man said that there was a whole glut of explanations which could explain orbs: poor lens coating, the presence of an air gap between lenses in the camera, poor darkened internal surfaces and "specular reflection". He provided technical details which explains why successive shots on a digital camera may show just one bright orb, and then the next picture might show hundreds of fainter ones. His theory was that the cheaper cameras, with poorer lens coating etc. were easier to detect orbs - but this is due to the poorer construction. Parasearch researcher Andrew Homer writes, "Incidentally, from recent researches it appears that different makes of digital camera have their own orb 'signature'. One particular make even seems to reproduce 'face' type images. Orbs are recognised as a problem by digital camera manufacturers but rarely mentioned in the advertising blurb - no surprise there then!" He also says that the depth of field associated with cameras plus the presence of infra-red illumination, makes anything close to the lens appear to be coloured white and in sharp, or near-sharp focus - things like dust, or insects.

This brings me to another topic: the use of digital cameras. yes, they are handy and convenient, but the images are too easy to manipulate.

Digital cameras certainly can pick up what the human eye sees and more besides (i.e. slightly into the infra-red portion of the electromagnetic spectrum). One tale I would like to recount occurred at a recent vigil to Beaulieu Abbey. One digital camcorder, on super night vision mode (with one new image being recorded every second or so) showed streaks of light. These were like mobile orbs, with a comet trail, and most of them were moving horizontally, from right to left, although a handful did move diagonally from top right to bottom left. A correspondent on the Fortean Times message board suggested that this might be due to the optics or over exposure of mundane things. I should add here that I was observing the scene through my hand-held image intensifier. I saw no orbs at all.

This makes me think that the fault lies in the software in the camera, since it, and my intensifier should see more-or-less the same thing.

One team, on the Ghosts-UK website is attempting to prove that orbs are definitely paranormal by positioning four cameras in a square configuration, each camera pointing at one directly opposite. The theory is that if an orb appears in two cameras that are looking at each other, but not the others, then this would prove that orbs are 2 dimensional, and hence must be paranormal, as sparkles caused by water etc. would "apparently" cause 3 dimensional spherical obs.

(Incidentally, one of my absolute pet hates is when ghost hunters - and even TV people who should know better! - describe image intensifying "night sights" as infra red scopes. THEY ARE NOT!!!)

Back to orbs: whilst writing this, it occurred to me that there is a pre-digital age precedent: the glowing balls of light seen on American Civil War battle fields, and the like.

Tony Cornell of the SPR (Society for Psychical Research) bemoaned the lack of ghost reports in 2002, blaming possible interference by mobile phone masts. But, maybe there are the same number of ghosts, but we are interpreting them differently. It might be argued by Orb proponents that maybe the typical apparition has mutated or evolved into orbs, thanks to increased levels of EM pollution?

So, while I believe that most orbs are bunkum, there are a few that defy explanation so far. It is just highly suspect that orbs and digital photography's introduction were coincident.

[It was after writing the above section that a thought struck me as to why we have so many orb photographs appearing comparatively recently. I have seen a few orb photos from 35mm film, but they are very scarce. The reason is, I believe, due to the convenient nature of digital photography; you can take many pictures, delete the ones you want and reuse the camera's memory for other photos. This leads to any non-paranormal pictures being removed. Film cameras on the other hand, do not enable an immediate viewing of your photos, plus you have the expense of development costs etc., so you may feel inclined to take few pictures. So, it may not be case of more orbs photos being taken, but simply more photos taken - the majority of which are discarded. Sadly, this means that ghost hunting has turned into a hobby that has become the domain of camera-happy orb obsessives.]

A topic that I would like to mention that requires further research points to sociological aspects of ghost sightings. It was raised by museum curator Jeremy Harte at last year's excellent Parasearch ghost conference: why are "out of time" ghosts a recent occurrence?

To qualify this, ghost reports go back to (at least) Roman times. However, for instance, there are no reports of Elizabethans seeing Roman ghosts. No reports of Tudors seeing

Bronze Age phantoms. It wasn't until quite recently (early 20th century???) that we started getting reports of Roman ghosts, and all other periods of history. Why? Were our predecessors so ignorant that they thought that anyone dressed "oddly" wasn't worth a second glance? Or is it because our schooling these days is so advanced that everyone knows what a Roman, Tudor, Elizabethan, Georgian etc. person looks like? My personal theory about this is similar to a "key and lock" mechanism. It requires some psychological conditioning, (knowledge from history or folklore etc. etc.) before a person can see the ghost. If a person is not familiar with how Romans look, then they may see nothing, or perhaps misidentification - for instance, the balls or light or mists that we sometimes see during vigils. This is somewhat reminiscent of the time when 17th and 18th century explorers would encounter natives; when the native saw the explorer's boats, some of them unconsciously blanked it from their vision, rendering it invisible, because they had never seen one before and didn't know "what to make of it". However, research by David Hambling and published in the Fortean Times casts doubt on this "I see no ships" hypothesis, and that the natives probably ignored the boats because they posed no threat to them.

Jeremy also expands on this research by noting that perhaps Ghosts have shaped our culture more than we suspect. An analysis of ghost sightings in Devon revealed that a huge 54% appeared on parish boundaries. Is this because boundaries have been formed around the sightings?

The last point I wish to refer to are those periodic phantoms; the ghosts that such re-enact some event on a regular, periodic basis (comparitively rare)- for Royal phantoms (say) that appear on the anniversary of their execution in the middle ages is bizarre, since with the 10 day shift in dates when Britain changed from the Julian to the Gregorian calendar in the mid-18th century, not to mention the various leap days added to the years by now, such sighting should be days or even weeks away from their expected appearances - But they aren't! Nature itself does not operate on a weeks, months, years system- this a purely human invention for the convenience of keeping appointments etc. Surely this must mean some form of human (perhaps psychological) trigger for such periodic events to take place? I have a theory about the seeming fondness for ghosts to keep to such appointments: humans, it must be noted, have a predeliction towards observing anniversaries and tend to congregate then, making sightings of ghosts that would have occurred anyway, more likely.

An interesting tale is regaled in the book "Ghostwatching - The Ghosthunter's Handbook": a family were regularly disturbed just before midnight by the sounds of footsteps on the stairs, even though there was no-one there. ASSAP were called and various sensors were placed in locations around the flat; an infra-red sensor was situated on the staircase. Nothing was seen or heard though. The next day, however, upon reviewing the output of the sensors, it seemed that at about five minutes to eleven, the sensors on the stairs were activated and continued to relay data for several minutes. What is interesting in this case is that a few days before, there had been a change from British Summer Time to Greenwich Mean Time. As "Ghostwatching" notes: "The implication

was that the sensor had triggered at close to midnight, but midnight British Summer Time. The ghost had 'ignored' the change-over to Greenwich Mean Time".

With regards to re-enactment, Chris Huff refers to two famous historical battles- Edge Hill, fought in 1642 and Flodden field in 1513. Both are famous for their visual and audio 'playbacks' : indeed, in the years after Edge Hill, King Charles was so concerned about the tales of fighting at Edge Hill that he sent along a team of investigators, who duly noted the phantom fighting (if anyone can provide documented evidence for this sighting, please let me know as I am sceptical of such anniversary ghosts). Edge Hill it seems no longer visualises (the last recorded case was in the mid-19th century), but Flodden is quite active. Sounds of a battle have often been heard and drivers using the A697 have reported soldiers crossing their path. "The difference", as Chris writes, "is that a power line runs very close to the battle field at Flodden, and this may have prolonged the haunting". Chris also points out the effect on a haunting caused by the renovation, rebuilding or remodelling of a building and that this can cause sporadic, spontaneous outbursts. Why this latter effect occurs is, like most of parapsychology, unknown.

To summarise then, it is clear from the meagre collection of experimental data that a great deal of work needs to be done to quantify and qualify the nature of ghosts. Hopefully, with the small but growing band of dedicated amateurs throughout the world some significant advances in our understanding will be achieved. But for those of you lucky enough to have seen a ghost, no amount of argument or debate is necessary for you- you are convinced that they do exist. Now let's try and understand them.