



Tuesday 14 January 2014 – Morning

LEVEL 2 AWARD THINKING AND REASONING SKILLS

B902/01/RB Unit 2 Thinking and Reasoning Skills Case Study

RESOURCE BOOKLET (CLEAN COPY)

Duration: 1 hour



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- This is a clean copy of the Resource Booklet which you should already have seen.
- You should refer to it when answering the examination questions which are printed in a separate booklet.
- You may **not** take your previous copy of the Resource Booklet into the examination.
- You may **not** take notes into the examination.

INFORMATION FOR CANDIDATES

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DOCUMENT 1

Background information

The term 'ghost' is traditionally used to refer to the spirit of a dead person that remains in some form among the living. Ghosts are a common feature of legends, books and films, but many people claim that they are not simply fiction. In fact, statistical evidence suggests that more people in Britain believe in the existence of ghosts than believe in God. Based on the number of 'sightings' reported, Britain is one of the world's most haunted countries. Mediums and clairvoyants claim to be able to communicate with the spirit world on behalf of the living. The first organised group to come together to investigate paranormal activities was The Society for Psychical Research formed in London in 1882.

There is debate about whether or not ghosts exist. Many people are sceptical about the paranormal because of a lack of evidence. However, others see the significant number of ghost sightings and unexplained ghostly phenomena as convincing evidence of the existence of ghosts. These paranormal sightings vary in character from apparitions (seeing a translucent or lifelike being) to hauntings (a repeated paranormal presence in a particular location). Accounts of haunting often include reference to strange physical activity, such as inanimate objects moving by themselves. The effect of the experience is also varied: for example, some claim to have had pleasant and reassuring encounters with a deceased relative, while others claim to be the victim of something sinister. Some claims suggest that ghosts, such as poltergeists*, interact with their surroundings, while other reports indicate that they are detached from and unable to affect the people and objects around them. The oldest recorded report of a poltergeist, comes from 9th century Germany, where a family was tormented by a presence throwing stones and starting fires in their farmhouse.

Scientific research into the paranormal has led to several theories to explain ghostly activity. One theory, known as the Stone Tape Theory, suggests that the buildings themselves capture and store images and sounds that occur there under certain conditions. These images and sounds can be 'replayed' at a later date under similar conditions. According to the Stone Tape Theory, what appears to be a ghost of a person who once walked the corridors of a Victorian hospital would actually be more like a video recording of a past event at that location. However, there is little evidence to support this theory, leading many to reject it as a valid explanation. More recent research has involved the study of environmental factors such as magnetic activity in the haunted location and its effect on people.

Psychologists and neuroscientists are among those who have a professional interest in gaining an understanding of the ghostly experiences that people claim.

*poltergeist: the apparent manifestation of an invisible, but noisy, disruptive or destructive being.

DOCUMENT 2**BBC News report from 2003**

Ghosts are the mind's way of interpreting how the body reacts to certain surroundings, say UK psychologists. A chill in the air, low-light conditions and even magnetic fields may trigger feelings that a 'presence' is in a room – but that is all they are, feelings.

This explanation of ghosts is the result of a study conducted by Professor Richard Wiseman and his colleagues at the University of Hertfordshire in which researchers led hundreds of volunteers around two of the UK's supposedly most haunted locations – Hampton Court Palace and the South Bridge Vaults in Edinburgh. Their work has thrown up some interesting data to suggest why so many people can be spooked in the same building but it provides no evidence that ghosts are real.

In Hampton Court – alleged to contain the ghost of the executed Catherine Howard, fifth wife of Henry VIII – volunteers were asked to record any unusual experiences, such as hearing footsteps, feeling cold or a presence in the room, as well as marking the location and intensity of the experience on a floor plan. In a 'normal' setting, you would expect the ghostly encounters to be evenly spaced, but in classic haunting, they would be clustered around certain places. The results were striking: participants did record a higher number of unusual experiences in the most classically haunted places of Hampton Court, areas such as the Georgian rooms and the Haunted Gallery. And in the Edinburgh vaults, the result was the same – during the study, the most unusual encounters occurred in the vaults traditionally considered to be the most haunted.

The researchers interpret this as evidence that hauntings are a real phenomenon because they are concentrated in specific places over time. Indeed, it is known for people from different cultures to consistently report similar experiences in the same place over hundreds of years.

"Hauntings exist, in the sense that places exist where people reliably have unusual experiences," Professor Richard Wiseman told BBC News Online. "The existence of ghosts is a way of explaining these experiences."

But are the ghosts real? Professor Wiseman and his colleagues are not so sure. They claim, somewhat paradoxically, that the hauntings exist but the ghosts do not. "People do have consistent experiences in consistent places, but I think that this is driven by visual factors mainly, and perhaps some other environmental cues," he said. Professor Wiseman has made detailed measurements at each place, such as temperature, light intensity and room space, and thinks that people are responding unconsciously to environmental cues and the general 'spookiness' of their surroundings.

He cites examples of mediums successfully indicating haunted areas of buildings with no prior knowledge of them. Some people interpret this as evidence that the ghosts are there, but another explanation is that the mediums are simply more sensitive to the environmental cues that result in haunted feelings – not sensitive to the ghosts themselves.

Sceptics have long maintained that ghostly encounters are influenced by a person's knowledge of the place and its history, the 'prior knowledge hypothesis'. But this study refutes that explanation, as the statistics showed that prior knowledge did not affect the areas in which strange experiences were recorded. "We found little if no evidence that people's prior knowledge mattered," said Professor Wiseman. "If anything, it made them veer away from having experiences in the known haunted sites."

DOCUMENT 3

Document 3a: A selection from the data collected by Professor Wiseman's online survey in response to the question: Do you believe that you have ever experienced a ghost?

	No. of adults	Definitely yes %	Probably yes %	Uncertain %	Probably no %	Definitely no %
Male	979	8	10	17	18	47
Female	1061	12	19	20	18	31
Working full time	1029	9	16	18	19	38
Working part time	246	9	14	20	19	38
Full time student	106	4	14	12	15	55
Retired	382	10	14	16	17	43
Unemployed	86	13	11	28	17	31

Document 3b: Report of the results of the survey

Despite huge advances in science and technology, more than 11 million adult Britons claim to have experienced a ghost, according to a poll commissioned by Professor Richard Wiseman of the University of Hertfordshire.

The publicity surrounding the poll suggested that reports of ghost-sightings have doubled in the past twenty years. Wiseman himself professes to be 'extremely sceptical about the existence of ghosts', saying that increased sightings are due to the influence of television ghost shows, such as *Most Haunted* and *Ghost Hunters*, rather than to genuine psychic activity. In his brand new book from Macmillan, *Paranormality: why we see what isn't there*, Wiseman argues that ghostly experiences can be traced to a variety of factors, including suggestion, light effects, low-frequency sound, waking dreams, and anxiety.

DOCUMENT 4

An article printed in the *Peterborough Telegraph* newspaper in 2011

Police in Peterborough have been called on to act as ‘ghostbusters’ by victims who feel they may have been targeted by thieves and jobs from beyond the grave. Peterborough police have been alerted on six occasions over three years to deal with ghostly apparitions. And in an eerie twist, three of these sightings occurred on the same date – 9th September – in consecutive years. Two other sightings also happened on the same day – 21st February – in central Peterborough.

The full list of ghostly sightings reported to police includes:

- On 9 September 2009 police were called to a report of a burglary in the PE1 postcode area. The caller told officers it was believed there was a ghost in their house but no trace was ever found.
- On 21 November 2009 a disturbance in a field adjoining a house in Thorney was reported. Officers were told by locals that this may have been caused by the ghost of a child.
- On 9 September 2010 police were called to a home in Stanground one week after an attempted burglary. Officers reported that a child had woken at night and believed that a ghost was trying to enter through a window.
- On 21 February 2011 officers stopped a ‘confused woman’ in Peterborough city centre. They noted that she appeared to be ‘talking to ghosts’. On the same date in the PE1 area, police received a call from a person who claimed to be hearing ‘ghost noises’ as well as seeing hands coming over the top of a door. The caller also reported a group of three males outside the property, one of whom was a white male.
- On 9 September 2011 a driver on the A47 in central Peterborough reported a person walking down a slip road onto the carriageway against the flow of traffic. The driver was described to be in such a state of shock that it felt like he ‘had seen a ghost’.

In all cases police say that no further action was taken by officers. A spokesperson for Cambridgeshire Police said, “Reports like these are extremely rare but where people have genuine concerns that they or their property is at risk we will investigate if appropriate”.

However, the sightings have come as little surprise to Sam Brown, a history student who works part-time at the supposedly-haunted Peterborough Museum and organises popular ghost walks through the city centre. Sam said, “Peterborough is an ancient city with a lot of history. We have an historic cathedral and other old buildings with links to hundreds of people from the past. There have been lots of ghost stories in the city over the years and we go through these on our walks. I would say that around 80 per cent of ghost stories can be explained with a rational answer. But it’s the remaining 20 per cent that no matter how hard you try to think of one, no logical answer exists”.

Among the places which are said to be haunted are the Queensgate Shopping Centre and the city’s museum. The museum is said to be stalked by the ghost of a First World War Australian soldier Sergeant Thomas Hunter, who was taken there in 1916 after being wounded. Back then the museum was a hospital and Sergeant Hunter died there. Since then staff have regularly reported furniture being mysteriously moved about.

DOCUMENT 5

'The Brown Lady' photograph

Document 5a



'The Brown Lady' is arguably the most famous and well-regarded ghost photograph ever taken. This photo was taken in September 1936 by Captain Provand and Indre Shira, two photographers who were assigned to photograph Raynham Hall for *Country Life* magazine.

This is what happened according to Shira:

"Captain Provand took one photograph while I flashed the light. He was focusing for another exposure; I was standing by his side just behind the camera with the flashlight in my hand, looking directly up the staircase. All at once I detected an ethereal veiled form coming slowly down the stairs. Rather excitedly, I called out sharply: 'Quick, quick, there's something.' I pressed the trigger of the flashlight. After the flash and on closing the shutter, Captain Provand removed the focusing cloth from his head and turning to me said: 'What's all the excitement about?'"

Upon developing the film, the image of The Brown Lady was seen for the first time. It was published in the 16 December 1936 issue of *Country Life*. The ghost has been seen occasionally since.

Document 5b**Who was 'The Brown Lady'?**

The ghost is thought to be that of Lady Dorothy Townshend, wife of Charles Townshend, 2nd Viscount of Raynham, residents of Raynham Hall in Norfolk in the early 1700s. It was rumoured that Dorothy, before her marriage to Charles, had been the mistress of Lord Wharton. Charles suspected Dorothy of infidelity. Although according to legal records she died and was buried in 1726, it was suspected that the funeral was a sham and that Charles had locked his wife away in a remote corner of the house until her death many years later.

Dorothy's ghost is said to haunt the oak staircase and other areas of Raynham Hall. In the early 1800s, King George IV, while staying at Raynham, saw the figure of a woman in a brown dress standing beside his bed. She was seen again standing in the hall in 1835 by Colonel Loftus, who was visiting for the Christmas holidays. He saw her again a week later and described her as wearing a brown satin dress, her skin glowing with a pale luminescence. It also seemed to him that her eyes had been gouged out. A few years later, Captain Frederick Marryat and two friends saw 'the Brown Lady' gliding along an upstairs hallway, carrying a lantern. Marryat fired a pistol at the apparition, but the bullet simply passed through.

DOCUMENT 6

Reports of three scientific studies into the paranormal

A UK study of haunted locations by psychologist Dr Paul Stevens

Hundreds of volunteers were taken around two allegedly haunted locations. Researchers found that people reported having more unusual experiences in the specific places at each location which are considered most haunted. They think this can be explained by the way people react to subtle draughts or to visual factors, like low lighting. The research also threw up evidence suggesting a link between magnetic fields and ghostly sightings. At both locations, the variance in local magnetic fields was highest in the areas thought to be most haunted, and lowest in areas where people typically did not record experiencing ghostly phenomena. The variations in magnetic fields were incredibly small – about 100 times less than you get from sitting about a metre away from your TV – but the researchers think the findings are significant. “The correlations between ghostly activity and magnetic variance were relatively large and tie in with laboratory findings that suggest varying magnetic fields have a measurable effect on the human body,” said Dr Stevens.

Canadian research by neuroscientist Dr Michael Persinger

Some studies have previously shown that variation in normal electromagnetic fields, when applied to certain parts of the brain, can result in experiences from the physical, like being touched, to the metaphysical, such as feeling close to God. “When these magnetic fields are reproduced in the laboratory in the brains of volunteers ‘the sensed presence’, fear, and other experiences are reported,” said Dr Michael Persinger. “When we measure houses the high-density haunt areas, usually not more than about one or two metres in diameter, are very electromagnetically noisy.”

So does this mean that ghosts don’t exist at all? A likely explanation is that ‘ghosts’ are derived from the effects of magnetic fields on the observer’s brain. “However, science is the pursuit of the unknown. There may be stimuli present we still have to measure,” said Dr Persinger.

UK research conducted by Dr Barrie Colvin

Dr Barrie Colvin, a scientist who has spent the past five years analysing the knocks, raps and bangs produced by poltergeists, used some of the most advanced acoustic technology available to ‘fingerprint’ ghostly sounds. He has discovered that they are fundamentally different to the normal sounds produced by people, animals, or indeed anything in our physical world. They are, for the want of a better term, ‘ghostly’.

“The sounds produced by ‘ghosts’ are paranormal,” says Dr Colvin. “Their acoustic waveforms are completely different. I can’t find a conventional explanation for my results at all. Nor can any of the other scientists who’ve reviewed my work. To be honest, we’re all completely stumped. We did not expect to find these results.”

“I do not believe in life after death. I believe that most things labelled as ‘paranormal’ are simply hoaxes or delusions caused by drunkenness or drug-taking. Having said that, my results show that at least one part of the paranormal, which relates to the noises produced by ghosts and poltergeists, appears to be true. They are most definitely not human or natural.”

DOCUMENT 7

Comments posted on a website in response to the question 'Can ghosts be explained away by science?'

At the moment, there are all manner of things which seem to occur for which science has no ready answer. This is why superstitious people look for supernatural answers and call these things 'ghosts'. One day we will understand the science behind 'ghostly' sightings and it is irrational to draw conclusions without evidence, so we should object to using language like ghosts and paranormal.

Terry, Preston

The only evidence that would convince someone that you had seen a ghost would have to be photographic. Photographic evidence has too much potential for tampering. Therefore, there can never be any convincing evidence for the existence of ghosts. So there is no point even discussing it.

Joseph, Keighley

Anyone who claims to believe in ghosts is gullible and seriously lacking in intelligence. TV programmes and people who make money from these deluded people (like mediums and clairvoyants) are irresponsible and taking advantage of vulnerable people. Anyway, where do ghosts get their clothes from? Séances are ridiculous.

Helen, Devon

It is sad that some people think everything is bound within our minds. To me that is a self-inflicted prison sentence! Ghost stories have always been around, so we should not ignore them.

Amber, Ambleside

Two friends of mine moved into a new house and they soon discovered that while playing Elvis CDs, particular songs would be repeatedly played on their stereo, even if the player wasn't set to repeat. The volume would also go up considerably. If the CD in the stereo wasn't Elvis, the Elvis CDs would fly across the room. I witnessed this myself. One of the housemates actually saw a woman, dressed up in clothing from the '50s, coming down the staircase. They did a search on the house and its former occupants and found out that a woman had died in the house in the 1950s. Can someone please explain to me how this is happening if there is no such thing as ghosts? After all, cold air doesn't cause a CD to fly 4 feet above the ground and 12 feet across a room in full view of all the house occupants!

Susan, Edinburgh

How many studies have there been, involving equipment measuring electromagnetic fields and changes of temperature? Do we really need another to conclude that ghosts 'probably' don't exist? Let's just enjoy the mystery and romance of never knowing for sure! I love hearing people's ghost stories, and I don't want that ruined by some scientist saying it's all to do with energy fields or whatever. Scientists are boring, so we should take no notice of them.

Andy, Rhyl

A friend of mine had a poltergeist that haunted his bedroom as a child. This went on for many years – the ghost used to throw his toys across the room. Eventually his family had the room exorcised and the poltergeist left him alone after that (though the room still has a chill when the rest of the house is warm). He's now 26 and still hates talking about it, as it disturbed him so much. Although the evidence for a scientific explanation of ghosts is strong, it does not explain poltergeists.

Catherine, Blackpool

It's fairly arrogant and disrespectful to say that ghosts do not exist when there are so many people who have experienced one for themselves. If a person is sober, trustworthy and of sound mind then we should believe what they say – refusing to believe people who claim to have seen a ghost is like calling someone a liar when they say they watched Coronation Street on TV last night.

James, London

The evidence is not new information and does not explain photographic and audio evidence as well as objects being moved in sealed rooms. One explanation of how people feel in certain places is not the same as saying that ghosts do not exist. It's like saying that UFOs don't exist because some sightings have proven to be natural phenomena – who cares about the ones that can be dismissed? What we really want to know about are the ones that can't.

Nick, Durham

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