

Phantoms in Focus? On the Capture and Interpretation of Alleged Spirit Photographs

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It's a question which continues to evoke much wonder and fascination even today: Do humans possess some kind of inner essence, spirit, or soul that is capable of surviving beyond the moment of death? While various notions about disembodied spirits (or ghosts) of the dead have been around for millennia, being present within a number of cultural religious and folkloric traditions¹, this question of whether they exist remains to be largely open and debated. One approach that has continually been taken toward trying to resolve this question involves attempts to capture spirits on film, based on the argument that if people are actually seeing them, then some spirits should be reflecting visible light and thus be physically tangible at least to some degree.

The history of spirit photography reaches back to the earliest days of the camera (mid to late 1800s), when a number of photographers claimed to have captured "extras" – translucent, human-like figures which appeared unexpectedly in the portraits of the people sitting for them. Many of these were eventually found to be the result of double exposure, film tampering, or the deceptive use of simple paper cutouts, but the apparent popularity of these ghostly images at the time (which was probably influenced in part by the blossoming of the Spiritualism movement) kept them coming in various shapes and forms.²

Even today, the photographic approach continues to be popular among paranormal investigators, with the advent of digital technology allowing numerous alleged spirit photos to be conveniently taken at allegedly haunted sites and put up onto the Internet with relative ease.³⁻⁴ Could any of these photos be considered genuinely anomalous, or do they have more conventional explanations? To begin addressing that question, I take a look here at some of the more pertinent issues that I think paranormal investigators should be aware of in their efforts to capture and interpret their own spirit photographs. A brief overview of some of the ways that photography has been utilized by parapsychologists in certain field investigations of alleged hauntings is also given.

Capture Issues

Of course, in order to consider whether or not a photograph may exhibit a genuinely anomalous effect, it's vital to try and rule out ordinary factors for the effect as much as possible. Some of the factors that one would want to rule out immediately are rather obvious, but it makes good sense to briefly revisit them here for the sake of awareness.

Film Exposure Effects: A number of alleged spirit photographs taken over the decades were initially captured using exposed film, and so in that situation, it's important to consider such things as how old the film is (since old film can be prone to age-related defects), whether the film roll was properly advanced from frame-to-frame between shots (to prevent double exposure), and whether the film might've been accidentally pre-exposed to light beforehand

during loading or pre-processing (which can be one source of fogging effects).⁴ While most of these factors don't really pose much of an issue anymore – owing to the widespread use of digital cameras nowadays – they're good to keep in mind when evaluating older photographs.

Stray Lighting: When preparing to take a photograph, it's good to be mindful of other sources of light which may be present in the immediate surroundings, such as lamps, flashlights, vehicle headlights, streetlights, and flashes from other cameras. When caught in close peripheral range of the snapshot, the light being emitted from these sources could possibly stray into the camera lens. Similarly, one should also take note of any surfaces in view of the camera which might be capable of reflecting light from the camera flash back into the lens. Such surfaces can include window panes, metal, glossy paint, polished wood or leather, and especially mirrors. A simple illustrative example of the effect brought on by reflective surfaces can be seen in the photo shown in Figure 1 below, which I made by taking a snapshot of my bathroom mirror.



Figure 1. Simple illustrative example of the effect produced by a reflective surface (in this case, a mirror) redirecting the light from a camera flash back into the lens.

When cast back at the lens, any stray or reflected light can possibly produce artificial light-enhancing effects known as *lens flares*, which could potentially be misinterpreted as being spirit-related. The underlying optics of the effect has previously been described in an article by Gary Schwartz and Katherine Creath⁵, and can be illustrated in the diagram shown in Figure 2.

In brief, many cameras use two types of lenses: one to magnify or widen photo images, and the other to capture enough light for the image. Located just behind the aperture stop, the *diverging lens* (represented by the narrow hourglass-shaped lens in Figure 2) captures as much light as possible across the plane of the photographic image, and then the *converging lens* behind it (represented by the narrow oval-shaped lens in Figure 2) focuses that light.

When stray light rays are passing between these two camera lenses, they can be reflected by bouncing off the lenses twice. Because a converging lens collects the light rays shining on its surface and focuses them towards a specific point^{6,p.548}, the reflecting light rays can increase in brightness as they converge and thereby produce an enhanced (or “flared”) image of illumination (the image can also be very bright because the light from the camera flash is often much brighter than the light in the surrounding room). The resulting lens flares can be circular (following the shape of the camera stop), or elliptical if the stray light rays producing

them are being cast on the lenses at a very steep angle. Because of their pale brightness, the flares can sometimes be mistaken for ghostly images.

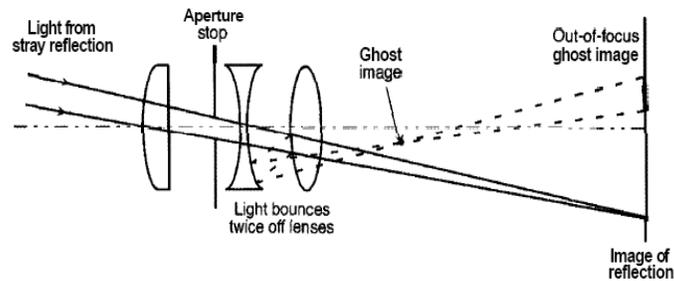


Figure 2. Illustrative diagram of the optics underlying the generation of lens flares, which could possibly be mistaken for ghostly images. Reproduced from Figure 10 of Schwartz and Creath.⁵

Stray or Protruding Objects: Closely related to the effect of stray lighting is the artificial effect that material objects create when they happen to stray or protrude out in front of the camera lens. Such objects can include hair, fingertips, and camera straps. When in particularly close proximity to the lens, these objects may be out of focus, causing them to show up as blurry and ambiguous-looking streaks, forms, or blobs. They may also reflect light when a flash is used (causing them to appear pale bright), or they may cast shadows, either of which could be misinterpreted as a ghostly form.⁷ Illustrative examples of both effects are shown in Figure 3, which were created when I allowed the braided cord of a camera strap to loosely slip in front of the lens.

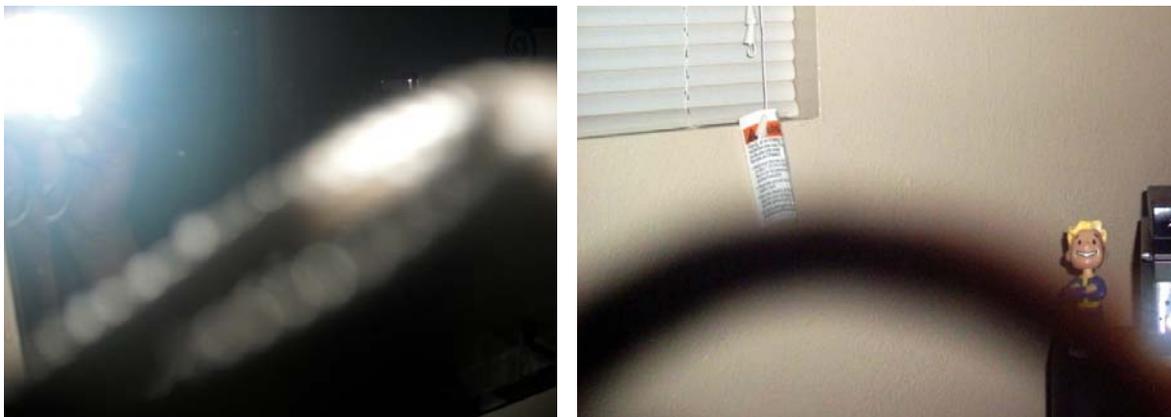


Figure 3. Illustrative examples of the artificial photographic effects produced when a material object (in this case, a braided camera strap) strays in front of the camera lens. When close to the lens, the object may reflect the light of the camera flash back into the lens (as seen on the left), or it may cast a shadow (as seen on the right).

Cigarette smoke or sources of condensed moisture (such as that from raindrops or respiratory exhales on a cold day) can also create cloudy, wispy, or misty forms that might look ghostly in both light and shadow, and so attention should be paid to the possible presence of these near the camera lens, as well.

Another material object that one should be mindful of – especially when taking photos outdoors or in old buildings – is airborne dust. When drifting into the range of a camera flash,

tiny dust particles can potentially reflect light and produce circular or disc-shaped density spots on a photograph that appear blurry, fuzzy, and/or semi-translucent.⁸ The Fuji Film Company once made an illustrative diagram of this effect, which can be seen in Figure 4.

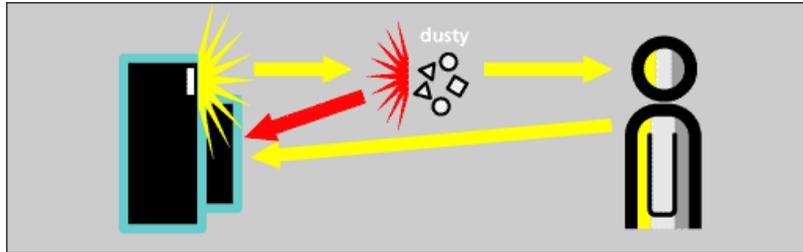


Figure 4. Simple illustrative diagram of how dust particles can reflect the light of a camera flash (red areas) and produce circular or disc-shaped density spots on a photograph. Source: Fuji Film Company.⁸

A good example photo, also made by the Fuji Film Company, of this density spot effect produced by reflected light from dust particles is shown in Figure 5.



Figure 5. Example photo showing the density spot effect produced from light being reflected back at the lens by airborne dust particles. Source: Fuji Film Company.⁸

This density spot effect has been one proposed way to explain “orbs” – the small round luminous images that have spontaneously appeared in some alleged spirit photographs⁵, as well as in those taken at allegedly haunted sites.^{4,9-10} Seemingly in line with this, some initial research findings tend to indicate that : 1.) orbs can be captured in photographs taken in both reputedly haunted and non-haunted areas; 2.) fewer orbs appear in photos taken with more expensive cameras (which often employ extra technological safeguards to reduce stray lighting effects); and 3.) orbs appear less often in photos taken with cameras which have the flash positioned farther away from the lens.^{5,9} In addition, a simple field experiment conducted by British investigator Steven Parsons using a camera with dual lenses found that, in multiple instances, an

orb captured in a photo taken with one lens often did not show up in a matching photo simultaneously taken with the other lens (which was focused at the same point in space as the first).¹⁰ This is important because if orbs really did represent some kind of spirit-related object that was tangible and located out in physical space, then one would expect it to have been captured by two lenses focused on that same point in space. In other words, one would expect it to have shown up in the same place in both of the resulting photographs.

Film Tampering and Computer-Based Digital Alteration: Upon close inspection, many alleged spirit photographs have been found to be fabrications. In some cases, this seems to have been unintentional, such as when someone accidentally puts their fingerprint on a film negative, causing a blurry-looking smudge to appear in the resulting photo print. But of course, a much larger proportion of fabricated photos appear to be hoaxes that were made to intentionally deceive others.

Most fabricated spirit photographs were relatively easy to spot early on. As mentioned in the beginning, many of the earliest photos were created through double-exposure or even the use of paper cutouts. But as time went on, more complex means of fabrication were introduced through direct tampering with the film negative, such that a false image could be spliced or superimposed into a photograph. This usually required a very careful examination of the photograph – and more ideally, the original negative – to spot.

Opportunities for fabrication have been made even easier today with the advent of computer technology, which can allow practically anyone to go in and subtly alter a digital photograph using photo editing software on a PC. There are even certain apps available now on smart phone devices which can allow someone to insert ghostly-looking effects into existing photos taken via their built-in phone camera.¹¹ Fortunately, most of the effects which can be digitally inserted into photographs tend to be too perfect-looking and too closely modeled after horror-based stereotypes to be real, so they can be rather easy to spot. But it will be more of a challenge if they ever get closer to modeling the effects more commonly seen in alleged spirit photographs that are harder to explain away.

In the absence of a film negative to directly examine, it seems likely that modern digital-based photos will increasingly require the examination and input of computer image specialists who have the methods and techniques of digital image forensics at their disposal to analyze and evaluate photos for any signs of possible alteration.¹² Alteration of pixel patterns and subtle inconsistencies in lighting are among a few of the indicators which might be used by image specialists to spot potential hoaxes over time.

Psychological Issues with Interpreting Photographic Images

Recognizing that there are certain psychological factors which can potentially influence our interpretation of alleged spirit photographs is just as important as considering ordinary factors for their creation. In particular, it's vital to recognize that human perception is highly subjective and can potentially lead us astray every once in a while – that little slip in human quality is what allows our eyes to even be amused or enthralled by the effects of optical illusions in the first place.

One of the ways in which human perception can potentially lead us astray is through its susceptibility to the effects of *pareidolia* – the act of perceiving or imagining what appear to be

meaningful patterns (such as faces) in purely random noise and ambiguous forms. Pareidolia is what can lead us to see shapes in the clouds, the face of Jesus on a piece of toast, or even a “man in the moon” (Figure 6).



Figure 6. An illustrative example of the perceptual effect of pareidolia: Ever noticed the face of the “man in the moon?”

Pareidolia can be quite effective at influencing one’s perception of an alleged spirit photograph, particularly when it’s coupled with the effects of *suggestion* – the implied hint that something should be viewed, or expected to be seen, in a certain way. Asking the question “Ever noticed the face of the ‘man in the moon?’” in Figure 6 is one form of suggestion which can shape the viewer’s perception toward seeing a “man in the moon,” especially if they don’t really notice it at first. In the case of spirit photographs, the suggestion that shapes the perception may come in the form of implying that there is a specific kind of ghostly form or unusual figure seen in one particular area of the photograph.

Another thing which can potentially influence the perception of a photograph is one’s own personal beliefs, expectations, and desires. For instance, what one sees in the photograph could be shaped by whether or not one believes in ghosts (or the paranormal in general), whether the photo was taken in a place that’s reputed to be haunted, or even whether it just looks “spooky” or mysterious enough.¹³⁻¹⁴ Several study findings seem to indicate that this kind of situational context tends to have a fair degree of influence on a person’s assessment of ostensibly anomalous photos, including those which may be spirit-related.¹³⁻¹⁷

Perhaps the effects of these psychological factors can be more clearly illustrated through an example: Consider the image shown in Figure 7 below. At first glance, it appears to be a pretty ordinary-looking photograph of a British village cemetery that was taken by amateur photographer Richard Durham when he was testing out a new camera on New Year’s Day.¹⁸ Later on, after he’d posted the photo up on Facebook, a friend of Durham’s commented that she thought she could see a ghostly figure in the background.



Figure 7. Photograph taken of a British village cemetery by amateur photographer Richard Durham on January 1, 2016. After he'd posted it up on Facebook, a friend of Durham's said that she'd seen a ghost in the background. Do you see it? Source: Richard Durham/Yahoo News¹⁸

According to Durham's friend and a few others who've reportedly seen it, the ghostly figure seen in the background of the photo appears to resemble that of a man on horseback. Could this really be an image of a ghost, or is it merely a pareidolic illusion created through a mixture of lights and shadows passing through the trees?

The ghostly interpretation of this photograph appears to have been influenced in part by the situational context that it was taken in. First is the fact that it was taken in a cemetery, which many people traditionally associate with spirits and spooky settings, and which may lead them to expect it to be a place where one would likely find a ghost. Second is the folkloric tale about a phantom horseman that apparently lingers among the local residents in the area where the photograph was taken.¹⁸ And a third possible influencing factor is Durham's own admitted belief in ghosts. Any or all of these contextual factors could have possibly helped drive some viewers' inclinations toward viewing an otherwise normal photo in a paranormal way. While the ghost interpretation cannot be definitively ruled out here, it also cannot be fully supported either, due to these alternate considerations.

Perhaps to a certain extent, these kinds of considerations can also be extrapolated to similar instances of alleged spirit forms captured on video, as well. One good example of this comes from an instance described by the late British investigator Tony Cornell.¹⁹ Back in the 1960s, Cornell had appeared in a TV documentary on psychical research that was produced by the Anglia Television Company, in which he'd been asked to demonstrate the manner in which the investigation of an allegedly haunted house proceeded. To do this, he was filmed conducting

an overnight surveillance at Morley Hall, a dilapidated 16th century mansion which was supposedly haunted by a spectral lady in white.

At one point in the broadcast when Cornell was being interviewed on camera about what he'd found during his time at the Hall (which was nothing), some viewers claimed to have seen an unusual figure appearing in the background just behind Cornell's left shoulder in a close-up shot. A reproduction of this close-up shot is shown in Figure 8 below, along with simple drawings made by two viewers of what they claimed to see in the shot.

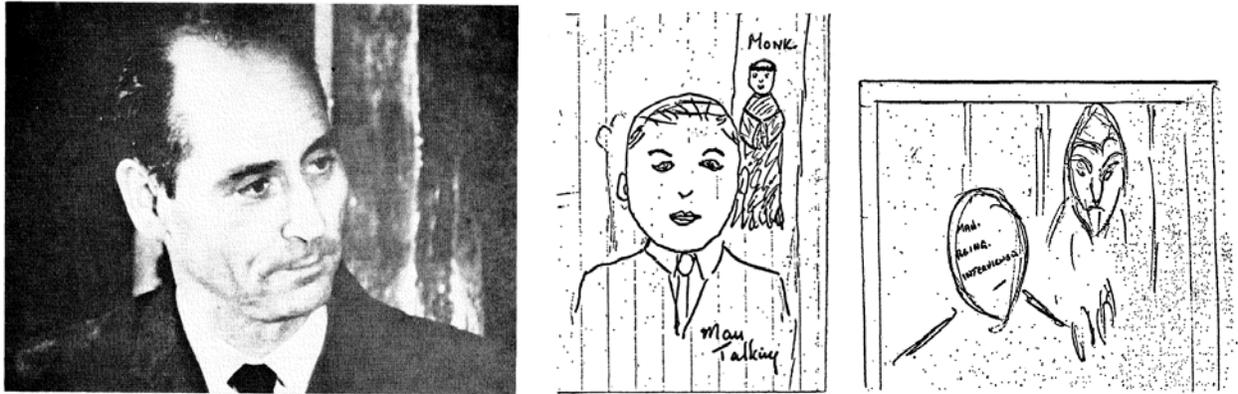


Figure 8. Reproduction of the close-up shot of Cornell being interviewed on TV, along with drawings made by two separate viewers of the unusual figure they claimed to see the background of the shot, just over Cornell's left shoulder. Reproduced from Plate II and Figures 1 & 2 of Cornell and Gauld.¹⁹

When this particular segment in the broadcast was being filmed, Cornell was being interviewed in front of a large window. It was still dark outside at the time, and the floodlights from the TV cameras were likely illuminating the edges of the stonework that lined the exterior walls of the mansion, causing the resulting mixture of light and shadow. Perhaps this mixture, coupled with the semi-fuzzy resolution of TV screens in the 1960s, could have created the visual pareidolic illusion of a figure that some viewers may have interpreted as being a ghost (especially in light of the contextual situation that the segment was being filmed in an allegedly haunted mansion).^{19,20}

All of the issues described above are particularly important for investigators to initially consider when capturing and trying to interpret a photograph that looks unusual. Sometimes, a little deeper inquiry can shed some simple, rational light on a seeming mystery.

Utilization of Photography in Parapsychological Investigations

To a limited extent, the photographic approach has been actively used by some parapsychologists as a means of possibly gathering supplemental evidence in field investigations of reported hauntings. In order to see just how the approach was used, let's take a look at a few examples from the literature, starting with a particularly well-known case from the 1970s – the popularly-dubbed “Entity” case investigated by Kerry Gaynor and Barry Taff²¹, which was highly fictionalized in a novel²² and a popular 1982 film starring Barbara Hershey. A more accurate

account of the case was once given by Gaynor on a segment of the popular TV series *Sightings* from the 1990s²³, as well as in the supplemental book to the series.²⁴

Among the phenomena that were reportedly witnessed in the case were unusual balls of light that would streak through the air at different trajectories in proximity to the woman who was at the center of the case. Professional photographers who accompanied Gaynor and Taff to the woman's home had attempted to capture the moving lights on film on more than one occasion – and they were apparently met with limited success, as seen in the photo shown in Figure 9, which was taken by photographer Dick Thompson. The low shutter speed of the camera reportedly created a short time exposure, causing the fast moving ball of light to appear as a curved arc showing its path of travel.

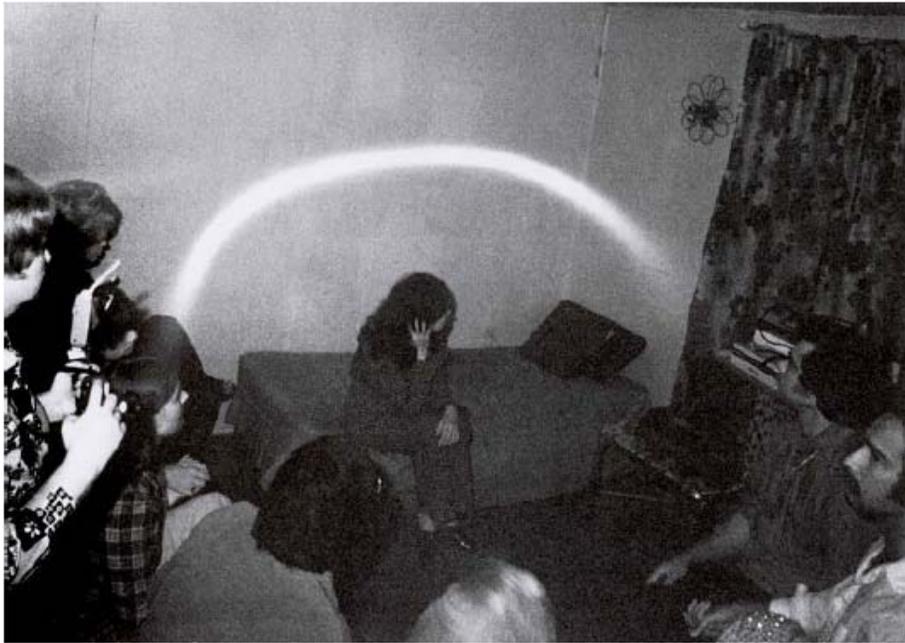


Figure 9. Cropped close-up of a photo taken by professional photographer Dick Thompson which appears to capture one of the moving lights (in the form of an arc) reportedly occurring in proximity to the woman seated at the center of the photo, who appeared to be the main focus of the “Entity” case investigated by Gaynor and Taff. Source: *Popular Photography*²⁵

One important thing about this photograph is that it gives the viewer certain dimensions of reference in the room to compare against the captured arc of light. In particular, note the 90-degree bend in the wall in the corner of the room off to the right. As Gaynor points out²³⁻²⁴, if this arc of light had simply been faked by someone shining a light onto the wall, then one would expect the arc to be visibly bent at the point where it intersects with the corner bend in the wall, in a manner akin to the example photo shown below in Figure 10. The fact that the arc is not bent indicates that it is not likely being created by a light being shined on the wall. Instead, it suggests that the arc of light is dimensional – i.e., it is out in the physical space of the room.

This photograph by Thompson was later examined carefully by Adrian Vance, the West Coast editor of *Popular Photography*, who reportedly could not find an easy way to account for it using known optics. It was subsequently published in the May 1976 issue of the magazine.²⁵



Figure 10. Illustrative example of how the arc of light seen in Figure 9 would bend in the corner of the room if it were simply created by someone shining a light on the wall. I created this effect simply by placing a straight plastic curtain rod into the light of a lamp being shined into the bent 90-degree corner of a room.

Rather than a haunting, the “Entity” case seems to exhibit certain characteristics that might actually be more consistent with recurrent spontaneous psychokinesis (RSPK, or “poltergeist” phenomena). For instance, the moving lights and other phenomena seemed to be mainly focused around the woman at the center of the case, akin to the way that RSPK tends to be focused around a certain living human agent.²⁶ It is also worth noting that the late William Roll had once investigated an RSPK case in North Carolina that consisted largely of strange flashes of light occurring around a 19-year-old girl.^{27,Ch.6} One might also keep in mind the intriguing photographs that were produced in the late 1960s with Ted Serios, a Chicago bellhop who seemed to be able to psychically “imprint” specific images onto photographic frames through psychokinesis.²⁸ On this basis, we might perhaps consider the possibility that the unusual lights seen in the “Entity” case could’ve been a PK-related manifestation on the part of the woman (rather than a spirit) – a manifestation that might have been luminous enough at times to be captured on film.

The photographic approach was also utilized in a series of investigations conducted by Michaeleen Maher at various locations that were said to be haunted.²⁹⁻³³ In one of her earliest investigations²⁹, Maher was invited by a family friend to look into the reports of a dark spectral figure that the friend and her mother had both fleetingly glimpsed at separate times in the hallway of their apartment. As part of the investigative process, a photographer was asked to take pictures of various areas of the apartment using infrared film. When the film was developed later on, an unusual-looking parabolic lighting effect appeared on one of the frames taken near the hallway area (Figure 11). This effect did not appear on any of the other frames taken before or after.

However, while it was noted that the effect seen in the photo “...could not be explained by processing or printing errors on the part of the photographer, unknown human errors in the manufacturing or factory handling of the film cannot be ruled out as explanations, and therefore the unusual central frame cannot be adduced as evidence of a psychic effect.”^{29,p.349}



Figure 11. Unusual parabolic lighting effect captured in one of the frames taken by a photographer during an investigation of a recurring apparition conducted by Michaelen Maher and Gertrude Schmeidler.²⁹ Source: Time-Life Books³⁴

In later investigations, photographs were taken in various areas of a given haunted site by Maher, professional photographers, and/or psychics who were brought to the site, using one or more kinds of film – color, black & white, high-speed infrared, cinematic, and Polaroid instant imaging. This was often done without them knowing which specific areas of the site were the ones where ghosts and/or other haunting phenomena had previously been experienced by witnesses. And again in some instances, unusual-looking luminous images such as density spots and fogging effects were captured on the resulting photographic prints. Of this, Maher generally noted:

When something like this occurs, you can't really take it too far. You can show the photographs and negatives to experts who may be able to explain the cause of the unusual effects. They may identify the anomalies as familiar artifacts that are due to improper manufacture of the film or caused during one or another stage of the photographic process. If the experts can't determine what caused the effects, you're left with unexplained physical anomalies: end of story, usually.^{35,p.66}

In one investigation³², however, Maher was able to take the photographic approach a step further by subjecting it to a statistical analysis which could begin to address the following questions: Do anomalous photographic images tend to appear most often in the precise areas of the reputedly haunted site where witnesses have experienced ghosts and/or other haunting phenomena? Conversely, do they tend not to appear at all in relatively non-haunted areas of the site?

To find out, a statistical tally was taken of a collection of 22 individual photographs that a psychic had taken in various areas of an allegedly haunted house. As mentioned before, this was done without the psychic being aware of which areas within the house were specifically the haunted ones – i.e., the ones where the witnesses were said to have seen ghosts and/or experienced haunting phenomena.

The results are summarized in the 2 × 2 matrix table shown in Figure 12. Each side of the matrix addresses an individual question: The left side asks, “Did an anomalous image appear in a photograph taken in a certain area?” The top part of the matrix asks, “Was the area one of the haunted areas of the site where ghosts and/or haunt phenomena had been reported?”

		“GHOST” REPORTED	
		Yes	No
PHOTO ANOMALY	Yes	5	2
	No	2	13

Figure 12. Two-by-two matrix table showing the results of the statistical tally taken of the collection of 22 photographs taken by a psychic in various areas of an allegedly haunted house. Reproduced from Figure 3 of Maher³⁵

From the table, it can be seen that of the seven photographs taken in the haunted areas of the site, five of them did in fact show some kind of anomalous image. Conversely, of the 15 photos taken in the relatively non-haunted areas, 13 of them did not show any kind of anomaly. Based on a Fisher’s exact test, this tendency for photographic anomalies to appear in the haunted areas (and to be absent in the non-haunted areas) was statistically significant overall, with odds of about 30 to 1 against chance (typically, odds of at least 20 to 1 are taken as the threshold of significance).

A similar kind of photographic analysis was conducted by Devin Terhune, Annalisa Ventola, and James Houran during their investigation of an allegedly haunted residential home.³⁶ While remaining unaware of which specific areas were the haunted areas, a professional photographer took snapshots of the various rooms inside the home. The resulting photo prints were then separately examined by eight other professional photographers (again without knowing which prints were taken in the haunted areas) and rated on a scale from 1 – 4 based on the degree to which they appeared to be anomalous (with 1 = definitely not anomalous, and 4 = definitely anomalous). Akin to Maher’s finding, the photo prints which were

taken in the haunted areas received a significantly higher anomaly rating than those that were taken in the relatively non-haunted areas of the site, with odds of around 30 to 1 against chance. The investigators noted, however, that very few of the photographers gave the photos higher anomaly ratings of 3 & 4 (somewhat anomalous to definitely anomalous, respectively), indicating that there no clear consensus among them that the photos were particularly unusual. There was also a weakly suggestive trend that the more experience a photographer had (in terms of years practicing photography), the less the anomaly rating they gave to a photo. Perhaps this might reflect the photographers' knowledge and experience in spotting conventional factors for unusual images that less experienced photographers might not know about or recognize. If that is so, then this would suggest that consulting photographers with well-seasoned background experience would be good for investigators to do in their efforts to assess whether or not a given photo may show something unusual.

Conclusion

The debate over whether there is something genuinely anomalous in alleged spirit photographs that might lend support to the existence of ghosts has been ongoing for quite some time, with no clear resolution in sight as of yet. Given the inherent difficulty in ruling out conventional factors for seemingly unusual images, as well as the gradually increasing ease with which it may be possible to fabricate similar kinds of images using digital technology, paranormal investigators do face an uphill battle in primarily relying on this type of evidence.

But that's not to say that no progress has, or can be, made here. The process of identifying, recognizing, and ruling out more and more conventional factors is the only means by which investigators can hope to strengthen their evidential case. But this will continue to take a lot of dedicated effort and careful scrutiny to achieve. We must not be too hasty in jumping to conclusions here, lest we should be looking at simple white sheets rather than ghosts when we bring the lens into sharper focus. In recognizing the margin of uncertainty that continues to persist over the debate at this point, it's perhaps advisable that paranormal investigators should only take photographs as being a form of supplemental evidence, rather than as primary evidence. For now, having multiple lines of carefully gathered evidence (to include photographs) would probably serve as the best indicator that one is on to something intriguing and worthy of further study.

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