## Klaus Heinemann, probing the paranormal

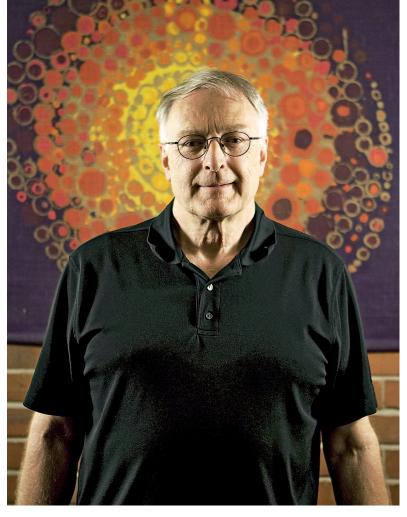
The experimental physicist, 66, is researching the phenomenon of 'orbs'. He and his wife, Gundi, an educationalist and energy healer, have three children and live in Silicon Valley, California

Some people are owls and others larks. I'm both. I'm up and at my desk with a cup of black tea by 6.30. If anyone had predicted five years ago that I'd become involved in research into other-worldly phenomena, as a sceptical physicist I'd have reacted with flat-out disbelief. Yet today I have no doubt that orbs - plasma-like, translucent spheres of light that have begun appearing in digital photographs - may be among the most significant outside-of-thisreality phenomena man has witnessed.

In 2004, Gundi and I took some digital photographs at a conference on energy medicine. When I downloaded them I discovered a clearly defined bright disk in one picture. I assumed the camera was faulty, or that dust had caused the effects. I returned to the conference room to see if I could find any obvious explanation for the light sphere. There was none. We took hundreds of random pictures to see if the mysterious spheres might appear again. To our astonishment, they did. I looked into it and found that these light forms, which had begun appearing randomly on digital pictures during the late 1990s, were being called orbs.

I share everything with Gundi, so when she surfaces around 8am I tell her about my latest experiments, and we have breakfast together — fruit, eggs or a ham or cheese sandwich. Wherever we are, we walk for an hour, preferably in nature. Then it's back to my computer.

Officially I'm retired from the Eloret Corporation, the scientific-research company I formed in 1985; my son, Jan, an engineer, is now the CEO, but I'm still chairman. We employ around 100 physicists and engineers, and we help devise the space technology of the future, under contract to Nasa. As a physicist I was taught that to prove any theorem it must be verified through



6 ORBS — PLASMA-LIKE SPHERES OF LIGHT — HAVE BEGUN APPEARING IN DIGITAL PHOTOGRAPHS ?

numerous reproducible, independently verifiable experiments. But at the borderline of our physical reality — the realms of subtle energy, sometimes called the paranormal — current orthodox research methods often go out the window. This is where my second life, researching orbs, enters.

I am constantly reminding people that what we see with our physical eyes is only a minuscule fraction of what we term reality, and that huge amounts of the electromagnetic spectrum remain invisible to us. Digital technology appears to be more sensitive to low-energy light such as red than celluloid cameras, and the orbs tend to show up predominantly in this spectrum. Also it's possible to easily enhance the contrast and colours in digital photography, which gives clearer images.

As a scientist used to working with sophisticated techniques such as electron spectroscopy — which can detect details down to the atomic level of optical resolution — I began examining my orb pictures and found the multicoloured spheres had interior patterns resembling computer circuit boards, and each interior was unique. Of course, it would be easy to fake a few pictures, yet there are now hundreds of thousands of orb pictures available, taken by enthusiasts, scientists and the public.

When I'm carrying out experiments, lunch time can come and go and I might not even notice. Sometimes I'll meet my

son at a local restaurant. Thai food is a favourite. Afternoons are mostly spent analysing photos and experiments. Hundreds of sequential pictures of the same orb, taken under scientifically sound conditions in rapid succession, have demonstrated that they're capable of moving very fast - up to 500mph or more. They can also change size and orientation almost instantaneously. Most astonishingly, if you "ask" the orbs to appear, they show up more often in your photos, especially at happy gatherings. Our analysis shows they appear to want to communicate by the location where they appear in your photos. For instance, a woman in the UK whose 18-year-old son died in 2007 sent me pictures of her daughter's wedding clearly showing a bright orb by the bride's back. Like thousands of people who have seen orbs in their pictures after losing a loved one, she believes this was her son letting her know that he was there for his sister's special day.

My working theory is that orbs are emanations from spirit beings. There has always been a huge body of anecdotal evidence that the spirit world exists, that consciousness survives physical death, and now, thanks to digital technology, we believe we are seeing it. Orbs are a non-physical, albeit real, phenomenon that can now be detected by physical means.

The implications for the way we view our world and physical death are enormous, but this field of research is in its infancy. Several other scientists, such as the physicist William A Tiller, who has spent more than 40 years researching the nature of consciousness, much of it at Stanford, have now joined the debate.

We usually pop out for supper at one of our great seafood restaurants nearby. Around 10 Gundi slips off to bed, but the owl in me keeps going and I'm often at

work until after midnight. Before drifting off I feel grateful to be alive in such exciting times. The Orb Project, by Miceal Ledwith and Klaus Heinemann (Beyond Words) is out now

Interview: Hazel Courteney. Portrait by Max Whittaker

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50