

In essence he is arguing that strain in certain types of underground rock can generate an electric signal, which in turn can ionise a column of air above the rock. The ionised column would move through the atmosphere as the source of strain moved underground. And the ionised air can glow, taking on a shape, according to Persinger, similar to that popularly ascribed to many UFOs that fall into the category of UAPs.

Brian Brady at the US Bureau of Mines in Colorado has put the effect described by Persinger to the test. He subjected quantities of quartz crystal to pressures similar to those occurring in active fault zones in the Earth's crust, and he found that the piezo-electric effect did induce visible ionisation of the surrounding air, just as Persinger predicted.

Persinger has suggested a large number of consequences should his theory indeed be correct. For example, sightings of UAPs should be concentrated around active fault zones; there should be more in hilly terrain; reservoirs with their attendant stresses on the rock should be focal points for the effect; and the passage of masses of air, such as cold fronts, should release any strain that may have built up.

Persinger's hypothesis thus contains what has long been demanded of ufology: a theory capable either of explanation or falsification.

Neither Persinger nor Brady is a ufologist, but certain UFO researchers have come to recognise the importance of their work and set about verifying it. Paul Devereux, a British researcher into "Earth mysteries", has recently published the results of his preliminary study (*Earth Lights*, Turnstone, 1982). He attempts to show that there is a significant correlation between active fault zones in Britain and areas where UFOs are most often sighted.

One area that has since 1972 been recognised as a region of many UFO sightings is in the Pennine foothills surrounding Leeds and Manchester, an area that also has a high concentration of active faults. Local inhabitants and police forces talk of a luminous aerial phenomenon, known as the "mystery helicopter" because of its low-level manoeuvrability. (Surprisingly, Devereux found that this was the only area of active faults that did not have a marked number of UFO reports, but this seems to be a result of his patchy methods of obtaining data.)

Research completed this year, one of us (Randles) has shown that the "mystery helicopter" is a typical UAP and has verified in the field a substantial number of Persinger's postulates. For example, the study shows a correlation between levels of sighting and the thickness of quartz-bearing rock; that the most active faults, such as the Craven fracture, tend to produce the most spectacular UFO concentrations in local folklore; that there is a direct association between the lights and the presence of reservoirs; and clear indications that the UAP entails atmospheric ionisation. There are even suggestions that Persinger's idea that weather systems can trigger UAPs might be realistic. This research will be published in *The Pennine UFO Mystery* (Granada) this spring.

It is interesting that Rutledge's study of a hill area in Missouri appears also to illustrate several of Persinger's predicted features. And is it merely coincidence that the two completed studies in the field both revolve around hilly terrain, just as Persinger suggested? We believe that these preliminary studies strongly indicate that here, at last, is a valid theory for some UFO phenomena, and that what we have called UAPs can now be tested scientifically.

While this search for a physical basis to the UFO phenomenon has been continuing, there has been parallel research into another aspect. This category is much more contro-



versial and inherently implausible, as it contains the alleged abductions of humans on board a UFO. The abductors are typically described as "alien beings" and the UFO as a "spaceship". Serious UFO researchers have come to recognise that these stories are essentially subjective. Randles, for example, found that while for observations of UAPs the average number of witnesses per sighting was about 2.6, this number fell dramatically for abductions to an average of only 1.3. And the more bizarre the alleged abduction, the closer this figure tended towards 1.0, or total subjectivity.

Persinger has suggested that these reports might be hallucinations instilled into the witnesses by the effect of ionising radiation in close proximity. The work of some UFO investigators has also shown apparent comparisons between the physiological effects of close contact with UFOs and temporal lobe epilepsy. This might support Persinger's hypothesis, as might the fact that the only recent abduction reported in the Pennine area occurred on the Craven fault.

Meanwhile Alvin Lawson, professor of English at California State University, and his colleague, William McCall, a medical hypnotist, have endeavoured to prove whether the details of memories about abduction can be explained purely in terms of the psychology of the percipient. This would be the case if indeed the events were involuntary hallucinations. In their initial work, Lawson and McCall put imaginative individuals, screened for lack of UFO knowledge or interest, into a state of controlled hypnosis. The subjects were then asked to hallucinate a UFO abduction, and the researchers compared the results with memories of allegedly real abductions. They found marked points of similarity.

Latest tests seem to indicate a 100 per cent correlation between certain modes of abduction imagery and the way the subject was born. If born by natural means, the subject's entry into the UFO will never be imagined as by way of a bright explosion of light; if born by surgical means, the entry will never be by transport along a tube or tunnel. Lawson views these methods of entry into the UFO as repressed memories of sudden forced emergence into the world at birth, or of slow travel along the birth canal in the normal way.

Some psychologists still dispute the experiments of Lawson and McCall. They argue that there is no independent proof that an individual is capable of remembering the birth process. But, it remains possible that the imagery is a construct

based upon that person's memory (as later told to him) of his process of birth. If this is true then there may be a loophole for the theory; a case where an individual, for some reason or another, such as being abandoned at birth, never discovers how he was born, nor has opportunity to absorb such information unconsciously while a young child.



We have not intended in this article to prove any specific origin for UFO phenomena, or to appeal to the scientific community for greater respect. But the value of UFO research to science does seem clear. It is a crossdisciplinary topic, offering data in fields as diverse as the psychology of perception, hallucinations, sociology of belief, atmospheric physics, geophysics and several others. That would appear to make it worthwhile for science to be a little more lenient with the serious UFO researchers and their data. □

Jenny Randles is director of investigations for the British UFO Research Association and was co-author with Peter Warrington of *UFOs: A British Viewpoint* (Robert Hale, 1979). Readers who would like to help the authors to research the more credible aspects of UFOs, in particular the "unidentified atmospheric phenomena", are invited to write to Jenny Randles at 9 Crosfield Rd, Somerville, Wallasey, Wirral L44 9EH.