University of Waterloo STAT 231 – W. H. Cherry

sporadic? Scientists point out that in terms of the physics we understand, psychic ability is simply impossible.

An example of the difficulties is the apparent evidence that distance is no factor in sending a message.

Edwin May, who until recently led the psychic experiments for Science Applications, said that in one early test his group had subjects say when one of Jupiter's major moons was entering the shadow of the planet. The experimenters got back positive results.

But when they checked it, it seemed the test subjects had geared their image reception to what happened on Jupiter - a result that did not take into consideration the roughly 40 minutes it takes for light from the planet to reach the Earth.

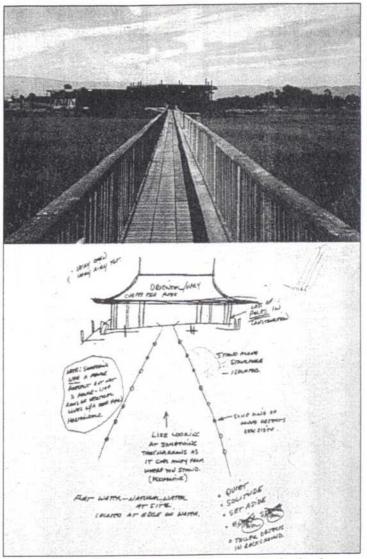
"You had cognition that was faster than the speed of light", he said. And how could that be when Einsteinian physics shows that nothing can travel faster than light?

Mr. May referred to some theories that try to imagine a universe in which cause and effect are disconnected, but then he added, "I am not happy to throw away known physics".

And that is where statistically based psychic research ultimately breaks down, Prof. Oldford said. If there isn't any explanation how a physically impossible phenomenon can work, no scientist is going to believe even the most robust statistics.

REFERENCES: The Globe and Mail article reprinted overleaf on page 14.1 and above is based in part on material (about 56 pages in 'normal'sized type) entitled An Assessment of the Evidence for Psychic Functioning, available on Prof. Utts' home page at http://wwwstat.ucdavis.edu.users/utts/ An earlier shorter article by Stephen Strauss on the tests appeared in The Globe and Mail on December 2, 1995, page A5.

> Utts, J. Replication and Meta-Analysis in Parapsychology. Statistical Science 6(#4): 363-378 and 379-403 (November, 1991).



In this test of a psychic ability known as 'remote viewing,' a viewer sketched a footbridge that he received through extrasensory perception from a sender who was at the site. (University of California at Davis, University of Oregon and Ed May)

Frazier, K. (editor). Paranormal Borderlands of Science. Prometheus Books, Buffalo, New York 14215 (1981); see particularly the first seven articles in Book I under the heading Psi Phenomena and Belief.

NOTE: The phrases written on the diagram above, as far as they can be deciphered, appear to be as follows (from left to right and down the diagram):

- very open, very airy top; oriental/very curved roof; • lots of *poles* in construction;
- note: something *like* a bridge parapet but not a fence like rows of vertical posts without much space horizontally;
- stand alone structure isolated;
- like looking at something that narrows as it goes away from where you stand (perspective);
- some kind of round objects; same sizes;
- flat water natural water at site; located at edge of water;
- quiet; solitude; set aside; taller objects in background.

The article EM9538 reprinted overleaf on page 14.1 and above is also used in Figure 12.9 of the STAT 221 Course Materials and in Statistical Highlight #70.