Can This Black Box See Into the Future?



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Credit: NASA

**DEEP in the basement** of a dusty university library in Edinburgh lies a small black box, roughly the size of two cigarette packets side by side, that churns out random numbers in an endless stream.

At first glance it is an unremarkable piece of equipment. Encased in metal, it contains at its heart a microchip no more complex than the ones found in modern pocket calculators.

But, according to a growing band of top scientists, this box has quite extraordinary powers. It is, they claim, the 'eye' of a machine that appears capable of peering into the future and predicting major world events.

The machine apparently sensed the September 11 attacks on the World Trade Centre four hours before they happened - but in the fevered mood of conspiracy theories of the time, the claims were swiftly knocked back by sceptics. But last December, it also appeared to forewarn of the Asian tsunami just before the deep sea earthquake that precipitated the epic tragedy.

Now, even the doubters are acknowledging that here is a small box with apparently inexplicable powers.

'It's Earth-shattering stuff,' says Dr Roger Nelson, emeritus researcher at Princeton University in the United States, who is heading the research project behind the 'black box' phenomenon.

'We're very early on in the process of trying to figure out what's going on here. At the moment we're stabbing in the dark.' Dr Nelson's investigations, called the Global Consciousness Project, were originally hosted by Princeton University and are centered on one of the most extraordinary experiments of all time. Its aim is to detect whether all of humanity shares a single subconscious mind that we can all tap into without realizing.

And machines like the Edinburgh black box have thrown up a tantalizing possibility: that scientists may have unwittingly discovered a way of predicting the future.

Although many would consider the project's aims to be little more than fools' gold, it has still attracted a roster of 75 respected scientists from 41 different nations. Researchers from Princeton - where Einstein spent much of his career - work alongside scientists from universities in Britain, the Netherlands, Switzerland and Germany. The project is also the most rigorous and longest-running investigation ever into the potential powers of the paranormal.

'Very often paranormal phenomena evaporate if you study them for long enough,' says physicist Dick Bierman of the University of Amsterdam. 'But this is not happening with the Global Consciousness Project. The effect is real. The only dispute is about what it means.' The project has its roots in the extraordinary work of Professor Robert Jahn of Princeton University during the late 1970s. He was one of the first modern scientists to take paranormal phenomena seriously. Intrigued by such things as telepathy, telekinesis - the supposed psychic power to move objects without the use of physical force - and extrasensory perception, he was determined to study the phenomena using the most up-to-date technology available.

One of these new technologies was a humble-looking black box known was a Random Event Generator (REG). This used computer technology to generate two numbers - a one and a zero - in a totally random sequence, rather like an electronic coin-flipper.

The pattern of ones and naught - 'heads' and 'tails' as it were - could then be printed out as a graph. The laws of chance dictate that the generators should churn out equal numbers of ones and zeros - which would be represented by a nearly flat line on the graph. Any deviation from this equal number shows up as a gently rising curve.

During the late 1970s, Prof Jahn decided to investigate whether the power of human thought alone could interfere in some way with the machine's usual readings. He hauled strangers off the street and asked them to concentrate their minds on his number generator. In effect, he was asking them to try to make it flip more heads than tails.

It was a preposterous idea at the time. The results, however, were stunning and have never been satisfactorily explained.

Again and again, entirely ordinary people proved that their minds could influence the machine and produce significant fluctuations on the graph, 'forcing it' to produce unequal numbers of 'heads' or 'tails'.

According to all of the known laws of science, this should not have happened - but it did. And it kept on happening.

Dr Nelson, also working at Princeton University, then extended Prof Jahn's work by taking random number machines to group meditations, which were very popular in America at the time. Again, the results were eyepopping. The groups were collectively able to cause dramatic shifts in the patterns of numbers.

From then on, Dr Nelson was hooked.

Using the internet, he connected up 40 random event generators from all over the world to his laboratory computer in Princeton. These ran constantly, day in day out, generating millions of different pieces of data. Most of the time, the resulting graph on his computer looked more or less like a flat line.

But then on September 6, 1997, something quite extraordinary happened: the graph shot upwards, recording a sudden and massive shift in the number sequence as his machines around the world started reporting huge deviations from the norm. The day was of historic importance for another reason, too.

For it was the same day that an estimated one billion people around the world watched the funeral of Diana, Princess of Wales at Westminster Abbey.

Dr Nelson was convinced that the two events must be related in some way.

Could he have detected a totally new phenomena? Could the concentrated emotional outpouring of millions of people be able to influence the output of his REGs. If so, how?

Dr Nelson was at a loss to explain it.

So, in 1998, he gathered together scientists from all over the world to analyze his findings. They, too, were stumped and resolved to extend and deepen the work of Prof Jahn and Dr Nelson. The Global Consciousness Project was born.

Since then, the project has expanded massively. A total of 65 Eggs (as the generators have been named) in 41 countries have now been recruited to act as the 'eyes' of the project.

And the results have been startling and inexplicable in equal measure.

For during the course of the experiment, the Eggs have 'sensed' a whole series of major world events as they were happening, from the NATO bombing of Yugoslavia to the Kursk submarine tragedy to America's hung election of 2000.

The Eggs also regularly detect huge global celebrations, such as New Year's Eve.

But the project threw up its greatest enigma on September 11, 2001.

As the world stood still and watched the horror of the terrorist attacks unfold across New York, something strange was happening to the Eggs.

Not only had they registered the attacks as they actually happened, but the characteristic shift in the pattern of numbers had begun four hours before the two planes even hit the Twin Towers.

They had, it appeared, detected that an event of historic importance was about to take place before the terrorists had even boarded their fateful flights. The implications, not least for the West's security services who constantly monitor electronic 'chatter', are clearly enormous.

'I knew then that we had a great deal of work ahead of us,' says Dr Nelson.

What could be happening? Was it a freak occurrence, perhaps?

Apparently not. For in the closing weeks of December last year, the machines went wild once more.

Twenty-four hours later, an earthquake deep beneath the Indian Ocean triggered the tsunami which devastated South-East Asia, and claimed the lives of an estimated quarter of a million people.

So could the Global Consciousness Project really be forecasting the future?

Cynics will quite rightly point out that there is always some global event that could be used to 'explain' the times when the Egg machines behaved erratically. After all, our world is full of wars, disasters and terrorist outrages, as well as the occasional global celebration. Are the scientists simply trying too hard to detect patterns in their raw data?

The team behind the project insist not. They claim that by using rigorous scientific techniques and powerful mathematics it is possible to exclude any such random connections.

'We're perfectly willing to discover that we've made mistakes,' says Dr Nelson. 'But we haven't been able to find any, and neither has anyone else.

Our data shows clearly that the chances of getting these results by fluke are one million to one against.

That's hugely significant.' But many remain skeptical.

Professor Chris French, a psychologist and noted sceptic at Goldsmiths College in London, says: 'The Global Consciousness Project has generated some very intriguing results that cannot be readily dismissed. I'm involved in similar work to see if we get the same results. We haven't managed to do so yet but it's only an early experiment. The jury's still out.' Strange as it may seem, though, there's nothing in the laws of physics that precludes the possibility of foreseeing the future.

It is possible - in theory - that time may not just move forwards but backwards, too. And if time ebbs and flows like the tides in the sea, it might just be possible to foretell major world events. We would, in effect, be 'remembering' things that had taken place in our future.

'There's plenty of evidence that time may run backwards,' says Prof Bierman at the University of Amsterdam.

'And if it's possible for it to happen in physics, then it can happen in our minds, too.' In other words, Prof Bierman believes that we are all capable of looking into the future, if only we could tap into the hidden power of our minds. And there is a tantalizing body of evidence to support this theory.

Dr John Hartwell, working at the University of Utrecht in the Netherlands, was the first to uncover evidence that people could sense the future. In the mid-1970s he hooked people up to hospital scanning machines so that he could study their brainwave patterns.

He began by showing them a sequence of provocative cartoon drawings.

When the pictures were shown, the machines registered the subject's brainwaves as they reacted strongly to the images before them. This was to be expected.

Far less easy to explain was the fact that in many cases, these dramatic patterns began to register a few seconds before each of the pictures were even flashed up.

It was as though Dr Hartwell's case studies were somehow seeing into the future, and detecting when the next shocking image would be shown next.

It was extraordinary - and seemingly inexplicable.

But it was to be another 15 years before anyone else took Dr Hartwell's work further when Dean Radin, a researcher working in America, connected people up to a machine that measured their skin's resistance to electricity. This is known to fluctuate in tandem with our moods - indeed, it's this principle that underlies many lie detectors.

Radin repeated Dr Hartwell's 'image response' experiments while measuring skin resistance. Again, people began reacting a few seconds before they were shown the provocative pictures. This was clearly impossible, or so he thought, so he kept on repeating the experiments. And he kept getting the same results.

'I didn't believe it either,' says Prof Bierman. 'So I also repeated the experiment myself and got the same results. I was shocked. After this I started to think more deeply about the nature of time.' To make matters even more intriguing, Prof Bierman says that other mainstream labs have now produced similar results but are yet to go public.

'They don't want to be ridiculed so they won't release their findings,' he says. 'So I'm trying to persuade all of them to release their results at the same time. That would at least spread the ridicule a little more thinly!' If Prof Bierman is right, though, then the experiments are no laughing matter.

They might help provide a solid scientific grounding for such strange phenomena as 'Deja vu', intuition and a host of other curiosities that we have all experienced from time to time.

They may also open up a far more interesting possibility - that one day we might be able to enhance psychic powers using machines that can 'tune in' to our subconscious mind, machines like the little black box in Edinburgh.

Just as we have built mechanical engines to replace muscle power, could we one day build a device to enhance and interpret our hidden psychic abilities?

Dr Nelson is optimistic - but not for the short term. 'We may be able to predict that a major world event is going to happen. But we won't know exactly what will happen or where it's going to happen,' he says.

'Put it this way - we haven't yet got a machine we could sell to the CIA.'

But for Dr Nelson, talk of such psychic machines - with the potential to detect global catastrophes or terrorist outrages - is of far less importance than the implications of his work in terms of the human race.

For what his experiments appear to demonstrate is that while we may all operate as individuals, we also appear to share something far, far greater - a global consciousness. Some might call it the mind of God.

'We're taught to be individualistic monsters,' he says. 'We're driven by society to separate ourselves from each other. That's not right.

We may be connected together far more intimately than we realize.'