News

Harry Dunn's family seek remote trial

Neil Johnston
Midlands Correspondent

The government has been urged to consider a trial via videolink for the wife of an American diplomat who fled after the death of Harry Dunn.

Mr Dunn, a 19-year-old motorcyclist, was killed last August in a head-on collision with Anne Sacoolas's car shortly after she turned out of RAF Croughton in Northamptonshire.

Mrs Sacoolas, 42, left the country, claiming diplomatic immunity. She was charged with causing death by dangerous driving but the United States rejected an extradition request.

Now Mr Dunn's local MP, Andrea Leadsom, has asked for a remote trial. In a letter to the home secretary, foreign secretary, attorney general and crown prosecution service, she said Mrs Sacoolas could remain on US soil. "Should there be a custodial sentence, she could serve it in the US."

Mr Dunn's mother, Charlotte Charles, said that she wanted justice for her son and that a trial via videolink could be a step towards closure.

TONY FRANCIS

In a spin An anti-clockwise roundabout appeared in Berkhamsted, Hertfordshire, yesterday. The error was fixed hours later

This Country team to make period comedy

Matthew Moore
Media Correspondent

The siblings behind the BBC mockumentary *This Country* have revealed their next project: a period comedy.

Daisy May Cooper, 34 and Charlie Cooper, 31, endeared themselves to millions as Kerry and Kurtan Mucklowe, a bumbling pair of Cotswolds ne'er-do-wells, in the Bafta-winning show. They are swapping village life for a historical romp after the third and final series of *This Country* was broadcast earlier this year.

"Charlie and I have started writing our new thing, which is very, very different," Daisy May told the *White Wine Question Time* podcast, hosted by Kate Thornton. "It's a period thing … but it's funny.

"For *This Country*, we couldn't write for 'names', like for famous actors, it would have to be [for] unknowns. So this is actually quite funny to have an actor in mind and be able to write a part for them specifically. It's very, very early days but we're really enjoying it."

Virtual GP that beats the doctor to right diagnosis

Tom Whipple Science Editor

Are you feeling ill? The computer will see you now. And just like a human doctor this medical app will use "imagination" when making a diagnosis.

The result is a program that can diagnose illness with greater accuracy than a GP — achieved thanks to an approach that lets it think like a GP.

In 1,671 test cases the program, from the British healthcare company Babylon Health working with colleagues at UCL, correctly diagnosed a disease 77 per cent of the time, compared with 71 per cent by doctors.

But the most significant achievement, outlined in the journal *Nature Communications*, was not its accuracy, but the way it made its decisions.

Conventional artificial intelligence has progressed by applying more and more computer power to look for correlations. This has produced programs that can outclass people at radiography, mammography and even in previously impregnable arenas such as the games chess and Go.

Some scientists have worried that there is a flaw in the approach that will ultimately limit it: computers see correlation, they don't see causation.

Judea Pearl, an artificial intelligence pioneer at the University of California Los Angeles, calls this the problem of "why". People know that a disease causes symptoms, computers know that there are symptoms people have when they also have a disease. The difference is crucial.

"This is about the soul of data science," Professor Pearl, who was not involved in the research, said. AI has found the "low hanging fruit", but expecting true intelligence to emerge is, he says, a little like "simulating evolution and expecting to get Einstein from an amoeba. It takes too long".

Consider a computer program trained to look for the cause of flooding on roads. It might see that when streets are waterlogged lots of people also use umbrellas, and conclude that umbrellas cause floods. In fact both have a deeper cause: rain.

Similarly, imagine an elderly smoker with chest pain, nausea and fatigue. Many people with those symptoms have emphysema, and a computer might conclude that this was the cause. A GP would know it is angina. Lots of people have emphysema and those symptoms not because one causes the other but because both have a deeper cause: smoking.

To train a computer not to fall into this trap, to help it spot causation, involves teaching it to consider "counterfactuals". Would there still be floods without umbrellas? What if the patient did not have emphysema? Would the symptoms go away?

Using medical modelling the computer is able to "imagine" what would happen if a disease was magically cured. Did the symptoms go too?

"If the symptoms did go away then we'd know the thing that generated them was the disease," Jonathan Richens, the lead author, said. "In the case of emphysema, they won't go away because it doesn't make you have chest pain or dizziness."

Professor Pearl said that it was early days but he was "very hopeful they have broken a barrier here."

"I'm going to use it as a warning to machine learning enthusiasts in the US — you're going to be made obsolete by companies in the UK."

Prenatal depression affects boys' brains

Greg Hurst Social Affairs Editor

Boys whose mothers suffer depression during pregnancy are more likely to be aggressive and hyperactive as they are about to start school, a study has found.

Brain scans showed that they had altered connections between the parts of the brain that affect emotion. Their mothers also reported child behavioural problems.

One in five women experience depressive symptoms during pregnancy.

Researchers asked women a series of questions to check for depressive symptoms three times during their pregnancy and after their babies were born. Once the children were aged four they were given an MRI scan to assess their white matter connections between brain regions that are involved in emotional processing. Their parents also completed a survey asking about behaviour.

The research, by the University of Calgary, Canada, and two medical research institutes and published in the *Journal of Neuroscience*, found that boys whose mothers experienced prenatal depression were more likely to show altered brain connectivity which could affect the regulation of their emotional state and was associated with increased aggression and hyperactivity.

The correlation between higher levels of depressive symptoms among mothers during pregnancy and disruptive behaviour was less strong among girls.

The study involved 54 mothers and their children, of whom 30 were boys. Given its small scale some caution should be attached its findings.

Prenatal depression has been linked previously to behavioural problems in children but the latest research highlights weakened brain connections as an explanation for how this happens.