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How should cities respond to CAVs?

Five things I learnt during a visit to the UK's Cape Canaveral for autonomous vehicle research, at the University of Warwick
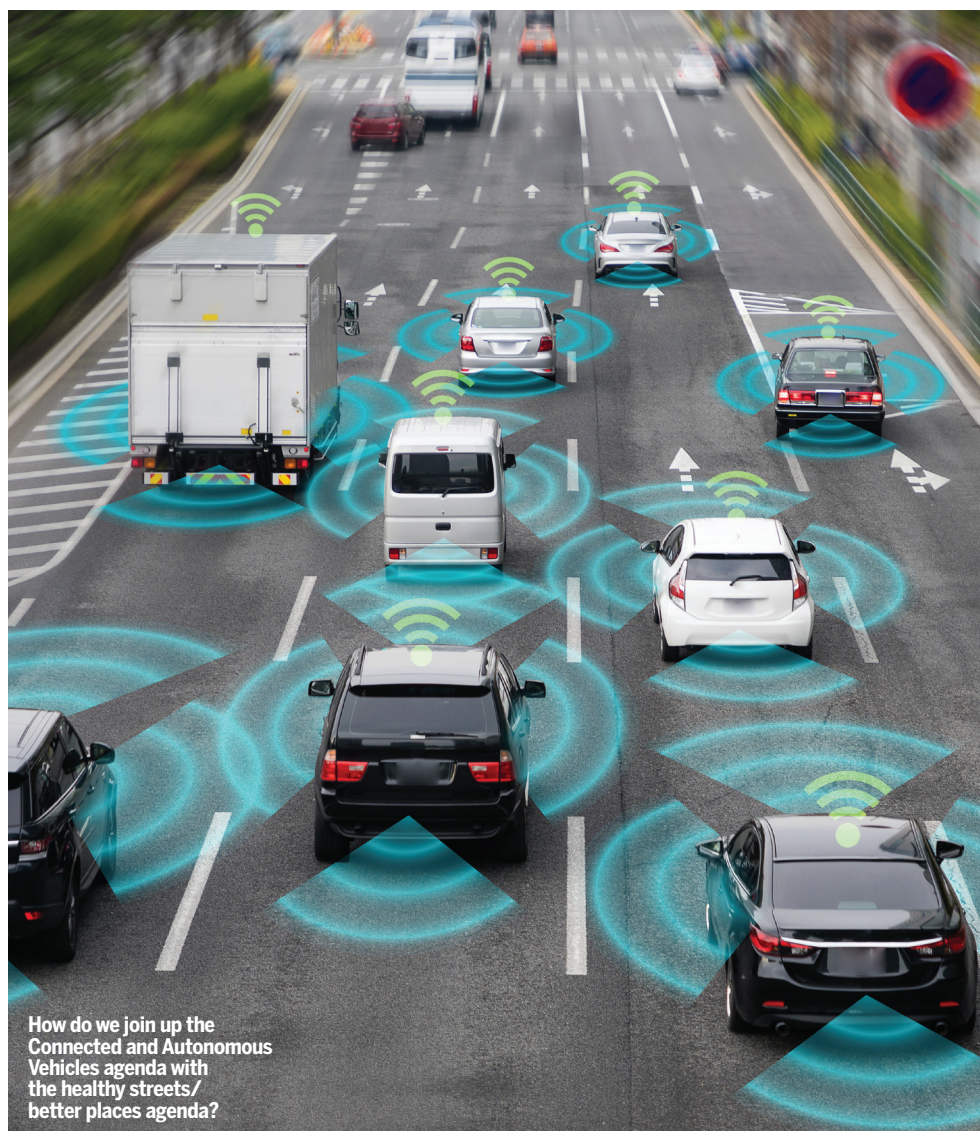

How do we join up the Connected and Autonomous Vehicles agenda with the healthy streets/ better places agenda?

Money is no object for research and development on one form of urban transport right now. But it isn't flowing into perfecting a 21st Century bus - it's all going into Connected and Autonomous Vehicles (CAVs).

As we all know Elon Musk recently put a car into space. Indicative perhaps of the wall of money available for another 'space race' equivalent now underway. A race between shifting alliances of tech giants, car manufacturers and nation states to put cars on the roads which will drive themselves - or at least drive themselves for some of the time. Maybe. Sometime. Because all this money is betting on future rewards predicated on a somewhat malleable and uncertain vision of the future of autonomous vehicles which is also myopically focussed on vehicles and tech - not the roads or cities which autonomous vehicles would use. The latter is where the Urban Transport Group comes in. So the week before last our smart futures strategy group met at the UK's Cape Canaveral for autonomous vehicle research and exploration, the Warwick Manufacturing Group at the University of Warwick, to find out more. Here are five things I learned...

(1.) The UK does joined up industrial strategy - when it wants to. There's some serious money going into CAV development and problem solving (including a big expansion of the CAV facility at the University of Warwick). There's also a serious ambition to make the UK a world leader (headquartered in the West Midlands) based on a less siloed and more co-operative approach than other nations which embraces testing, law and ethics, software and hardware. This is not a drill.

(2.) There is no shortage of problems to crack and no guarantees that enough of them are soluble any time soon. There are lots of obvious ones about speed and safety, but there are plenty of less obvious ones too. For example, say the phrase 'autonomous vehicles' and the associated image is often of someone reading a book in what used to be the driving seat. Yet I'm not the only one who can't read a book as a passenger in a car, for more than 30 seconds without getting motion sickness. Good luck with sorting that conundrum out.

(3.) The number one obsession on CAVs is safety. Compare and contrast with the relative apathy that exists around tackling the carnage currently taking place on the roads. Yet existing road vehicles are already becoming

incrementally more connected and intelligent. And life saving technology like speed limiters is already available. Could some of the focus on safety which applies to future CAVs not filter through to present day connected vehicles? Or does the conventional car's role in wider culture wars make that too hard? But for how much longer given how cars are changing and the scale of the suffering that car crashes cause?

(4.) There's a nagging feeling that, for many politicians at least, CAVs are about taking the current format for cars on the current format for roads - and making the cars autonomous. And that's it - job done. But that doesn't fit with the way streets are changing. In particular, the way in which in city centres at least, space for vehicles is being reduced in favour of space for people. Or initiatives like healthy streets which London is now seeking to make part of the DNA of its transport planning. In fact there's no real interaction at all between the thinking around the healthy streets/better places agenda and the CAVs agenda. Indeed, if you want CAVs quick and you don't want the accidents then bringing back pedestrian guardrails and criminalising jaywalking could help. But that's not the kind of spaces between buildings that people want anymore. On the other hand you could see electric CAVs for logistics deliveries and street cleaning that could fit with the healthy streets/better places agenda... as well as being easier to achieve than a go-anywhere autonomous saloon car.

(5.) Does the CAV debate need some re-framing around what is the problem that CAVs are trying to fix, in what circumstances and on what kind of timeframe? For example you could envisage CAVs platooning on motorways or shuttling in urban areas on fixed routes for particular purposes (such as hospitals, universities), or cleaning the surface of a pedestrianised area more readily than you could envisage the speculative remaking of an entire city's streets around the need to make the considerable difficulties of go-anywhere CAV saloon cars a little easier.

All this is food for thought for a project we will be initiating soon on issues and options for cities on CAVs. We will focus not on the tech per se but on what the implications of CAVs are for the places that cities want to be, what are the options on the role they may want to play on CAVs, and how cities in the UK and the wider world are responding so far on CAVs.

The new sound of the suburbs
I nipped up to Walthamstow between London meetings to check out the mini-Holland last week. Here's a few thoughts that flickered around my brain as I wondered around in a semi-random way.

Firstly, do these things at scale and start with entry and exit treatments. So it's not as if all of the area's suburban streets are now things of beauty - with elegant blockwork and planters worthy of the Dutch masters. Many are as scruffy and scuffed as they were before. But the entry and exit to these former suburban cut throughs has been treated to dam, slow and channel the flow of traffic. Instead of being culverts for distracting traffic the streets are now more like linked ponds for traffic. More reflective and calm. And also creating a sense of expectation for what could follow later in terms of their beautification and socialisation.

Secondly, there are all sorts of interesting things going on out there which are changing cities (or London at least) from being predominantly a nine-to-five hub and spoke, city and suburb place, into somewhere where new geographies of transport, lifestyle and economies are emerging. For example, in Walthamstow it was noticeable that hipsterification is starting to come to the suburbs - free book exchange boxes by the front gate, and cycle parking pods in former car parking places alongside house restorations which echo the brownstones of Brooklyn rather than the values of Metroland.

Whilst swathes of central London's streets risk becoming a Prets/hotel chain/luxury flats/chain store/Harry Potter-fan-with-selfie-stick (and repeat) kind of place - is there an argument now that it's the sub-centres and the hipper suburbs that are now more interesting places to hang out, with their hand crafted and indie high streets? And more interesting, and carefully curated, places to work too - as fewer people work five days in the office and spend more time in their own house and hood. Indeed some are now saying that, in London, Wednesday is the new Monday (the day in which most people are in the office) and Thursday is the new Friday (because people don't work, or work from home, on Friday). And it's not only for work that people don't have to move so far. As you can watch anything you like on your own screen and buy anything you want and have it delivered - why go out so

Walthamstow's 'mini-Holland': a new model for the suburbs?

much? And the figures show that people aren't going out as much for shopping and leisure. But if you do go out far better orbital public transport links (like the London Overground), well connected high end malls in the sub centres (like the Westfields) and Uber also start to shift the balance away from the domination of radial travel. All in all it feels like something is happening out there. It feels like some of the theoretical changes to transport patterns that should flow from transformative social and technological change are now actually happening at scale, with huge implications for the future of public transport. This is something that the UTG research group is taking a long hard look at and on which we will have more to say soon. Meanwhile, after we have finished our current research into what transport policy can do for urban towns maybe we should turn our attention to uncovering the transport secrets of the suburbs... ∎

ABOUT THE AUTHOR
▶ Jonathan Bray is the director of the Urban Transport Group. Throughout his career in policy and lobbying roles he has been at the frontline in bringing about more effective, sustainable and equitable transport policies.