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Sharing the road with driverless cars



This is not a word-for-word transcript.

Phil

Hello, this is 6 Minute English from BBC Learning English. I'm Phil.

Pippa

And I'm Pippa.

Phil

Here at 6 Minute English, we love discussing new tech. One of the most controversial technologies of recent years is driverless cars, also known as self-driving cars, autonomous cars or robotaxis.

Pippa

Many people say they wouldn't feel safe in a car without a human driver, but there are concerns from other road users too – pedestrians, runners and cyclists. How will driverless cars interact with them? It's a problem Professor Stephen Brewster, from Glasgow University, has been working on. He explained more to BBC World Service programme Tech Life.

Stephen Brewster

If you're outside a vehicle right now, you can see the driver inside the vehicle, you can **wave** to them, they can see you, you can **make eye contact**. But when you come to an autonomous vehicle, there's no person in the driving seat, so how do you negotiate whether they're going to go, whether they're going to let you go?

Phil

On my walk to work, I need to cross the road. Usually, a driver **makes eye contact** with me. They look directly into my eyes and then **wave** me across. To **wave** means to raise your hand and move it from side to side. It's a gesture for saying hello, or a way of telling a person to do something.

Pippa

Luckily, Phil, you usually arrive safely at work and as yet there are no driverless cars in London. But, Phil, how would you feel about crossing that road in front of a robotaxi?

Phil

Well, maybe a little bit nervous. I might wait for it to go and go behind it or something.

Pippa

Mmm... yeah, I get that. I think maybe as we get more used to these technologies, we'll get more used to how to deal with them and when to cross. But in this episode, we investigate the tech helping driverless cars communicate on the roads. We'll learn some useful new words and phrases, and as usual you'll find all the vocabulary on our website, bbclearningenglish.com.

Phil

But first, I have a question for you, Pippa. As you mentioned, we don't have self-driving cars here in London yet. So, which was the first city to have fully driverless robotaxis on the streets? Was it:

- a) Philadelphia,
- b) Phoenix, or
- c) San Francisco?

Pippa

I'm going to say b) Phoenix because I think it's quite a car-friendly city.

Phil

OK. Well, we will find out the answer, but at the end of the programme. Because accidents are often caused by not seeing the oncoming danger, Professor Brewster wants to make driverless cars more visible. He discussed his work with BBC Tech Life's presenter Chris Vallance.

Chris Vallance

What kind of signals worked in terms of **alerting** pedestrians and runners and cyclists to the intentions of the vehicle?

Stephen Brewster

We tested two things. We tested **animations** and fixed, coloured light rings. The **animations** – they work well for pedestrians, but when it came to runners and

cyclists, they have much less time to make their decisions, so if you do a quick **glance** at a vehicle, you don't really see the **animation**.

Pippa

It's important to **alert** people to driverless cars. To **alert** somebody means to warn them about a potential danger. Some cars do this with **animations** – displays of moving images. For example, a green man walking to signal it's safe to cross.

Phil

Animations alert pedestrians but are not suitable for runners and cyclists, who are travelling too fast to react. They only have time for a **glance**. A **glance** at something means a quick look. So, instead Stephen's team used coloured light rings, similar to traffic lights, to warn cyclists and runners.

Pippa

Culture is another problem. The meaning of body language can change. For example, hand waving can mean 'please proceed' in one culture, but 'thank you' in another.

Phil

Ammar Al-Taie is a researcher at the Advanced Institute of Science and Technology in South Korea. Here, Ammar tells BBC World Service's Tech Life why Korean culture is especially suited to self-driving cars.

Ammar Al-Taie

In South Korea, for example, **jaywalking** is illegal, whereas in the UK, you know, we tend to **jaywalk** a lot.

Pippa

Jaywalking is an American English word. It means crossing the road at a place where crossing is not allowed or without taking care. Unlike Britain, **jaywalking** is rare in South Korea, making the country safer for autonomous cars.

Phil

We've heard a lot about making driverless cars safer, and with plans to introduce them to London later this year, we'll soon see how safe they really are.

Pippa

Now, isn't it time to reveal the answer to your question, Phil?

Phil

I asked you which city was the first to have self-driving cars on the road, and you said it was Phoenix... and that is the correct answer. Phoenix, Arizona, was the first city in the world to have self-driving cars operating on public roads without a human safety driver, and that was in 2017. Let's recap the vocabulary we've learned, starting with **eye contact** – looking directly into someone's eyes.

Pippa

To **wave** at someone is a way of saying hi, by raising your hand and waving it from side to side.

Phil

If you **alert** someone, you warn them of potential danger.

Pippa

An **animation** is a display made up of moving images.

Phil

A **glance** is a quick, brief look at something.

Pippa

And finally, the American English term **jaywalking** means crossing the road where you're not supposed to. Once again, our six minutes are up. If you'd like to hear more programmes about technology, you'll find plenty on our tech topic page, all on our website. And there you'll also find a quiz and worksheet for this episode. Visit bbclearningenglish.com. We'll see you again soon, but for now it's goodbye.

Phil

Goodbye!

VOCABULARY

(make) eye contact

look directly into someone's eyes

wave

raise your hand and move it from side to side as a greeting or to communicate with someone

alert

warn someone of potential danger

animation

display of moving images

glance

quick and brief look

jaywalking

(American English) crossing the road where it is not allowed or without taking care



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