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HSE University, Russia

Driverless cars: between public trust and anxiety

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Moscow, 2021

The coming commercialisation of driverless cars



2018 – Russia launched an experiment to test driverless vehicles on public roads with an engineer on board (Government Resolution No. 1415 of 26.11.2018).

2019 – draft law No. 710083-7 "On the experimental operation of innovative vehicles and amendments to certain legislative acts of the Russian Federation" was developed (updated versions in 2020 and 2021).

2020 – A concept for ensuring road safety with the use of driverless vehicles on public roads has been approved (decree of the Government of the Russian Federation No. 724-r of 25 March 2020).

2021 – A plan for testing and deployment of driverless vehicles on public roads (without a test engineer in the passenger compartment) has been approved.

A programme for launching commercial driverless taxis in Russia has been developed (draft Government Resolution "On Establishing an Experimental Legal Regime in Digital Innovation and Approving a Programme for an Experimental Legal Regime in Digital Innovation on the Operation of Highly Automated Vehicles").

Controversies generated by driverless cars



Infrastructure

Safety

Responsibility

Privacy

Public acceptance

Life style changes

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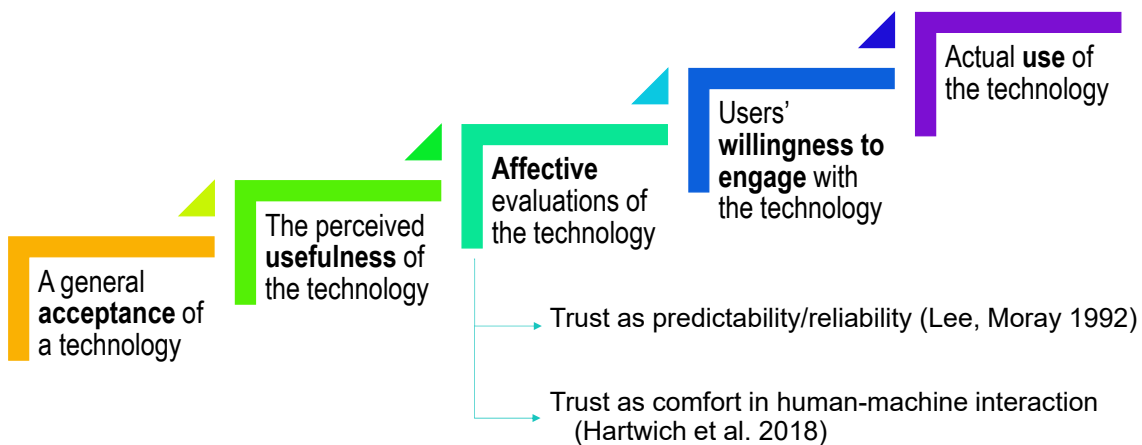
Favorable attitudes mobilise the activity surrounding the technology by attracting different types of actors and investments and networking interest groups among science, business, government and society (Brown et al., 2003).

Social expectations help to manage risks and confront opponents and competitors (Adam, 2005).

Theoretical framework



Degrees of technology acceptance (Adell, Várhelyi, and Nilsson 2014)



Empirical base



2015

A standard representative survey of the Russian population was conducted within the framework of the Monitoring Survey of Innovative Behavior of the Population, 1671 respondents aged 16+, F2F interviews.

Q1. Would you like to use a service of driverless taxi if you have a chance?

Q2. Why wouldn't you use a driverless taxi?

2018-19

The project's questions were integrated in the questionnaire of The Russian Longitudinal Monitoring Survey (a series of nationally representative surveys designed to monitor the effects of Russian reforms on the health and economic welfare of households and individuals in the Russian Federation).

7584 respondents aged 18-65, F2F interviews.

Q3. How comfortable or uncomfortable would personally feel travelling in a driverless car? (scale from 1 to 4)

2020

1. Online survey of regular Internet users

3000 respondents aged 14+

Q4. How comfortable or uncomfortable would you feel on the road where driverless vehicles are already driving? (four situations)

Q5. How comfortable or uncomfortable would feel travelling in a driverless car? (five situations)

2. The Monitoring Survey of Innovative Behavior of the Population within RLMS

7467 respondents aged 18-65, F2F interviews.

Q1, Q2

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Public interest in autonomous vehicles is growing



Would like to use

23%

2015

36%

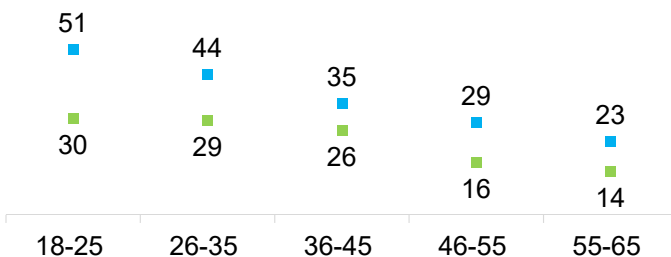
2020

Enhance willingness to engage

- Public engagement in S&T
- Digital lifestyle (especially digital transport services)
- Well-being and personal efficacy
- Concerns about traffic congestion
- Health problems

Reduce willingness to engage

- Science awareness
- Risk perception
- Older generation conservatism

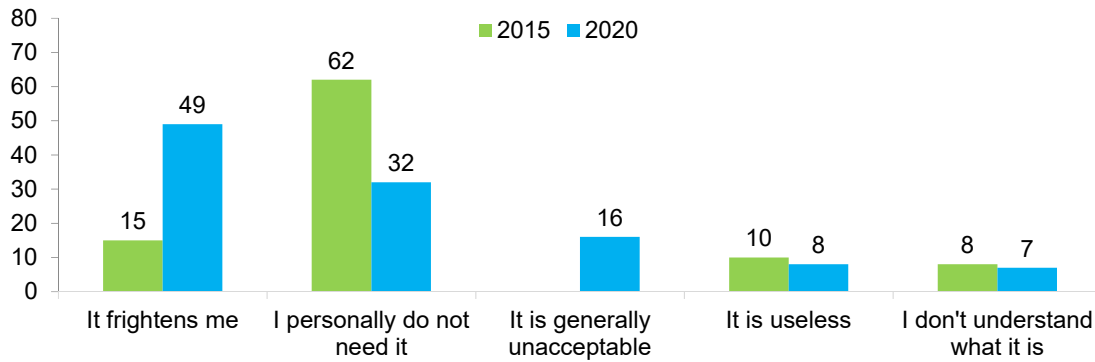


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From uselessness to fear



How respondents explain their unwillingness to use driverless cars?



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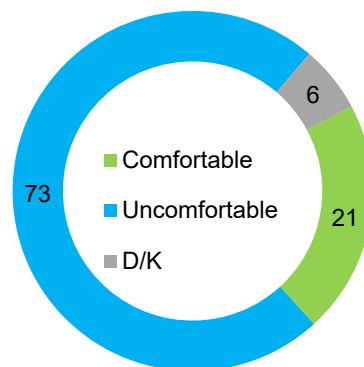
How do people imagine autonomous vehicles?



How comfortable or uncomfortable would you personally feel travelling in a driverless car?



Total Recall, 1990. Source: <http://patriot.zt.info/japonskie-inzhenery-predstavili-robotu-gumanoida-eposobnogo-vodit-obychnyj-avtomobil.html/robot-takist-iz-filma>

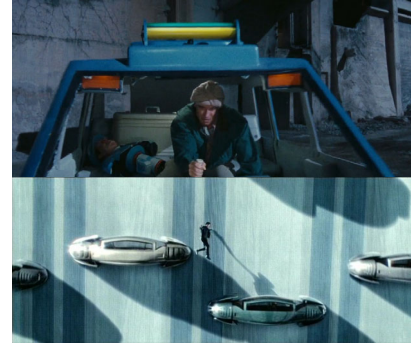
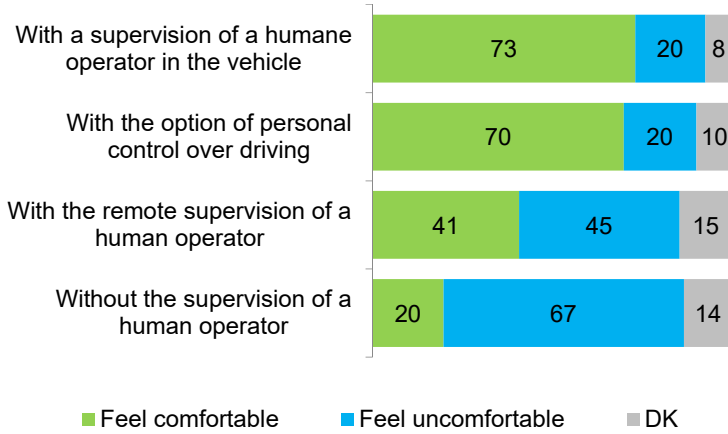


Source: the Monitoring Survey of Innovative Behavior of the Population within RLMS 2018-19

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Human intervention is required

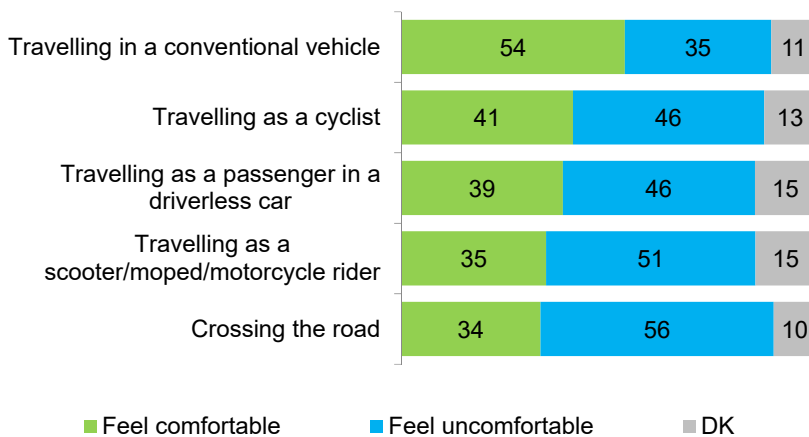


Total Recall, 1990. Source: <https://www.drive2.ru/b/46717507001227358/>
 Minority Report, 2002. Source: <https://kinotachki.com/vse-mashiny-iz-filma-osboe-mnenie-2002/>

Source: Online survey, 2020

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Driverless vehicles and road safety



Source: Online survey, 2020

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Concluding remarks



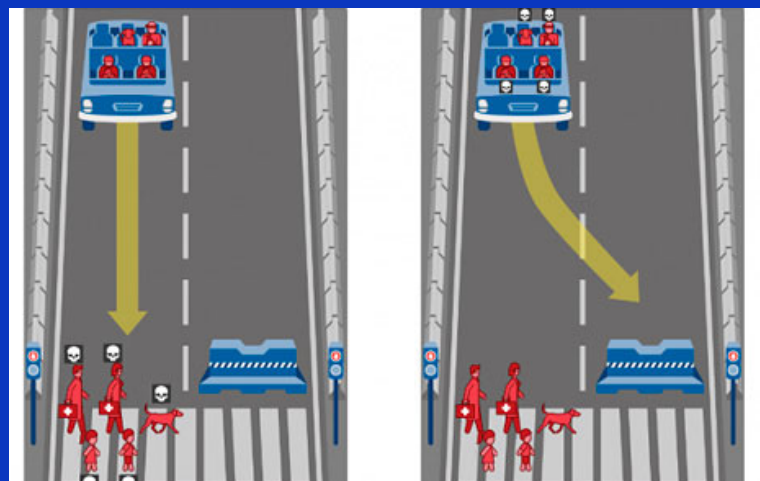
We see two opposite trends. Within a digitalisation of our lives public acceptance is growing in dimension of the perceived usefulness of the technology and willingness to engage with it.

At the same time, on an affective level, there is growing anxiety about the high degree of vehicle automation.

Such a trend is typical of technologies that challenge our common understanding of technology and its role in the human relationship.

However, technology itself also influences us, inducing changes in attitudes and behaviour through the embedded scripts. It is likely that the further digitalisation of different areas of life as well as the diffusion of smart technology will facilitate the normalisation of driverless cars.

Thank you for
attention!



Source: <https://bespiol.com/chaetyevoproxykto-pogibnet-v-avari-passazhir-ba-iv-peshkeirod>