Assessing the role of trust in the adoption of peer-to-peer mobility innovations, as a pathway to reduce CO2 emissions
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Background
Changing patterns of consumption can offer a potential pathway to the reduction of emissions. The sharing economy challenges pre-existing perceptions of the relationship between ownership and use, and could confer a reduction in emissions through harnessing idle capacity.

Peer-to-peer mobility innovations
There are numerous potentially disruptive, low carbon innovations in the mobility sector which are positioned as being alternatives to the current regime of the exclusive use of personal cars. My research focusses on two peer-to-peer (P2P) mobility innovations.

Peer-to-peer ride sharing
An individual granting temporary access of a seat in their vehicle, and sharing a journey, with another individual, often for payment

Peer-to-peer car sharing
An individual granting temporary access of their vehicle to another individual, often for payment

The potential impacts P2P mobility innovations could have on CO2 emissions is limited by their diffusion potential. Trust is vital in the context of the sharing economy, and has been identified as a barrier to adoption in numerous P2P contexts. However, little is known about how trust is formed in these contexts. Here I investigate the role of trust in the adoption of P2P mobility innovations.

Methods
Phase 1: Online survey
Online survey with 600 respondents (311 adopters of P2P ride sharing, 62 adopters of P2P car sharing, and 233 adopters of neither innovation – i.e. non-adopters). The aim of this survey was to compare how adopters perceive the attributes of P2P mobility innovations.

Adopters of each innovation are not a heterogeneous group. The survey identified 4 distinct adopter profiles, each with their own socio-economic, and motivational, characteristics, and influenced by different contextual factors.

Peer-to-peer ride sharers
Providers
• Fleet providers and personal providers
• Mid - high income
• Households with multiple cars

Users
• Younger (under 35)
• Car-free households
• Middle income
• Use monthly or less

Peer-to-peer car sharers
Commuters
• Middle aged (35 – 65)
• Middle income
• Use regularly with same people
• Commuting

One-off users
• Younger (under 35)
• Lower income
• Car-free households
• Use monthly or less
• One-off journeys

Providers
• Fleet providers and personal providers
• Mid - high income
• Households with multiple cars

Users
• Younger (under 35)
• Car-free households
• Middle income
• Use monthly or less

Phase 2: Online focus groups
7 online focus groups with the 4 adopter groups identified in phase 1. The aim of these focus groups was to distil the role of trust in someone’s decision to adopt P2P mobility.

The concept of trust was explored using the framework of the three targets of trust: “trust in person”, “trust in platform”, and “trust in product”.

I analysed using a-priori and in-vivo codes, and conducted the process using “constant comparison”, at both intra- and inter-group level, to draw out similarities and differences at these different levels.

Adopter group
P2P ride sharing
Commuters (3 groups) 13
One-off users (2 groups) 8
P2P car sharing
Users 6
Providers 4

Key findings
Different adopter groups value different aspects of trust, to varying degrees of importance.

The table shows the relative importance of aspects of trust, which emerged from the focus groups. These aspects of trust map onto the 3 targets of trust.

<table>
<thead>
<tr>
<th>Trust in person</th>
<th>Trust in platform</th>
<th>Trust in product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal safety</td>
<td>Interactions with others</td>
<td>Driving quality</td>
</tr>
<tr>
<td>Reputation of the platform</td>
<td>Reviews and ratings</td>
<td>Finding matches</td>
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These differences can be generalised to reflect the differences in the business models of the innovation, where P2P car sharing is a service –system, and P2P ride sharing is a product – service system.

There are also differences in the “objects” of trust of the 2 innovations, which is expressed through these differences.

P2P ride sharing:
Trusting a potential stranger to drive you to the destination safely
“I think sometimes you can get tied into something... and you don’t realise in the beginning what that person might do while they’re driving”

P2P car sharing:
Trusting a stranger with a high value, and symbolic object – your car
“That’s my car, and I want you to take good care of it and return it so that I can continue to use because it is my car”

Key message
Both P2P car sharing and P2P ride sharing require high levels of trust; however a key difference stems from the emphasis on “sharing” lies.

Understanding the differences between how adopters perceive and these three targets, where these differences come from and how they are shaped, and the relative importance that each of them play for different groups of adopters is vital to helping us understand the diffusion potential of P2P mobility innovations.