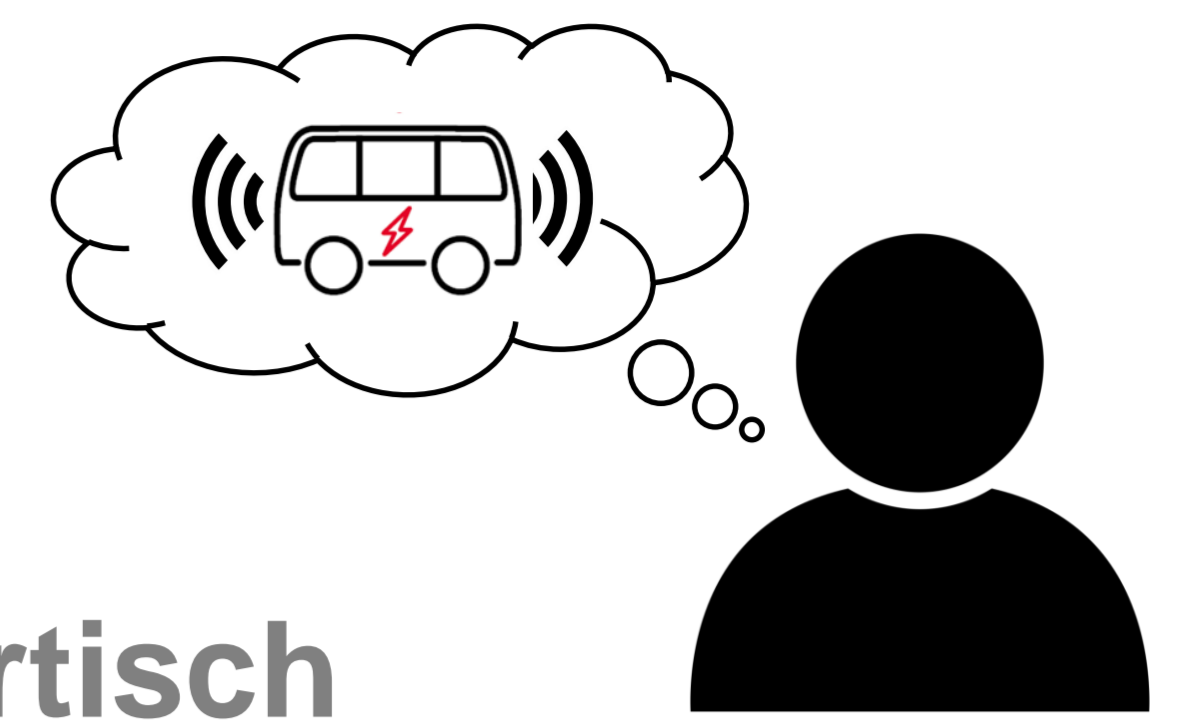


What do people think about autonomous minibuses in Germany?

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Abstract

By conducting a Germany-wide online survey, we examined the acceptance of autonomous minibuses based on a large, heterogeneous sample (n=1078). People are in general in favor of the introduction of minibuses and can imagine to use them. Men would use an autonomous minibus little more than women. Also previous knowledge of the technology increases future use intention. Further, we performed a principal component analysis to condense attitude-related items. A positive attitude towards autonomous minibuses correlates highly with the intention to use a bus in the future.



Object of Research

The autonomous minibus...

- is powered by **electricity**.
- can transport approx. **10 people**.
- operates **driverless** and is monitored by a central control station.
- can operate in **different forms**, e.g. with a fixed schedule or on demand.



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Survey & Sample

The online survey comprises questions about:

- Socio-demographics
- Household situation
- Mobility behavior & available mobility tools
- Attitudes towards current modes of transport, technical innovations & autonomous minibuses
- Use intentions for different purposes and different operation types



1078 people completed the online survey. Respondents were recruited by Research Now (meanwhile Dynata). Quotas were assigned to age, gender and residence in accordance with the German population.

Descriptive Results

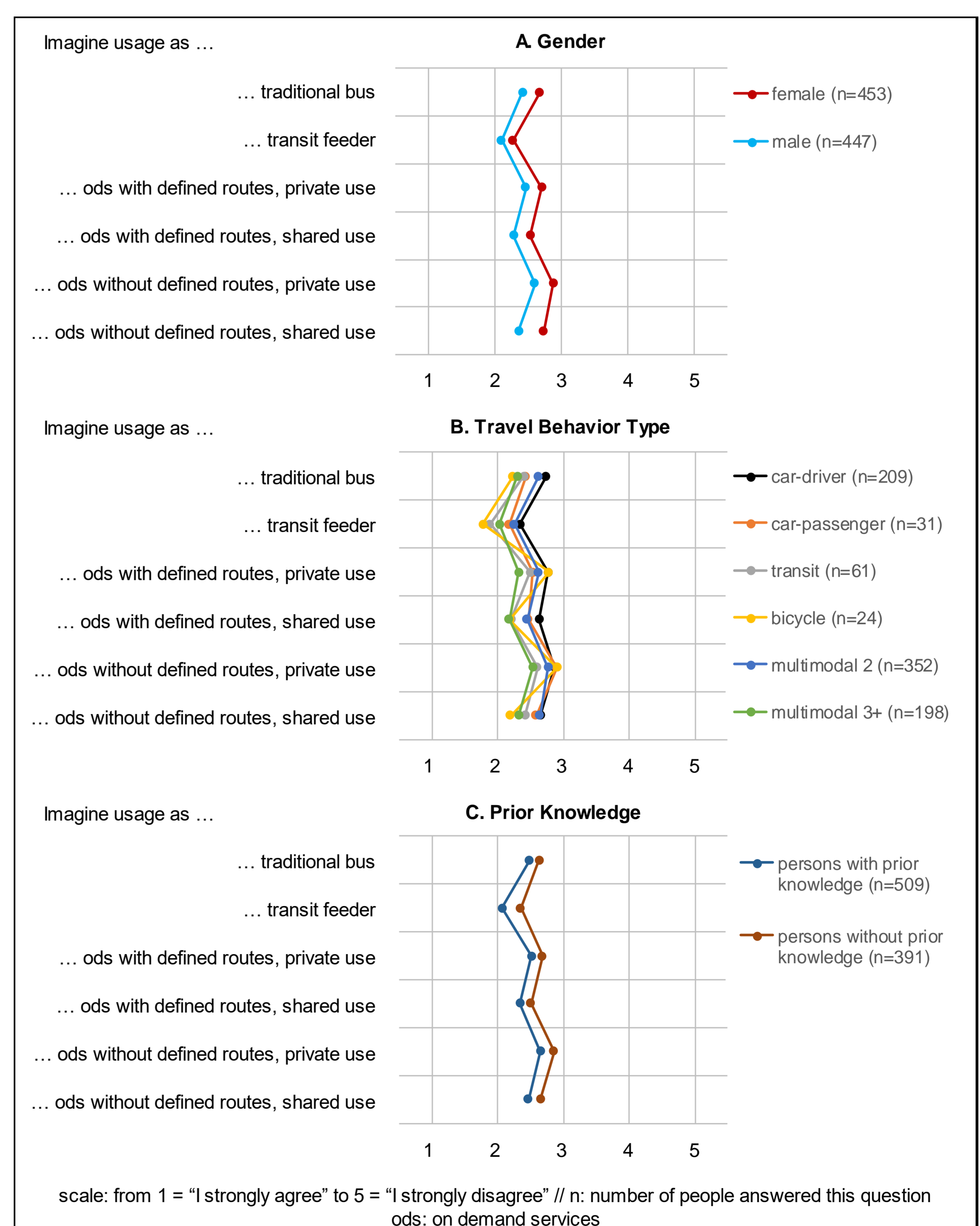
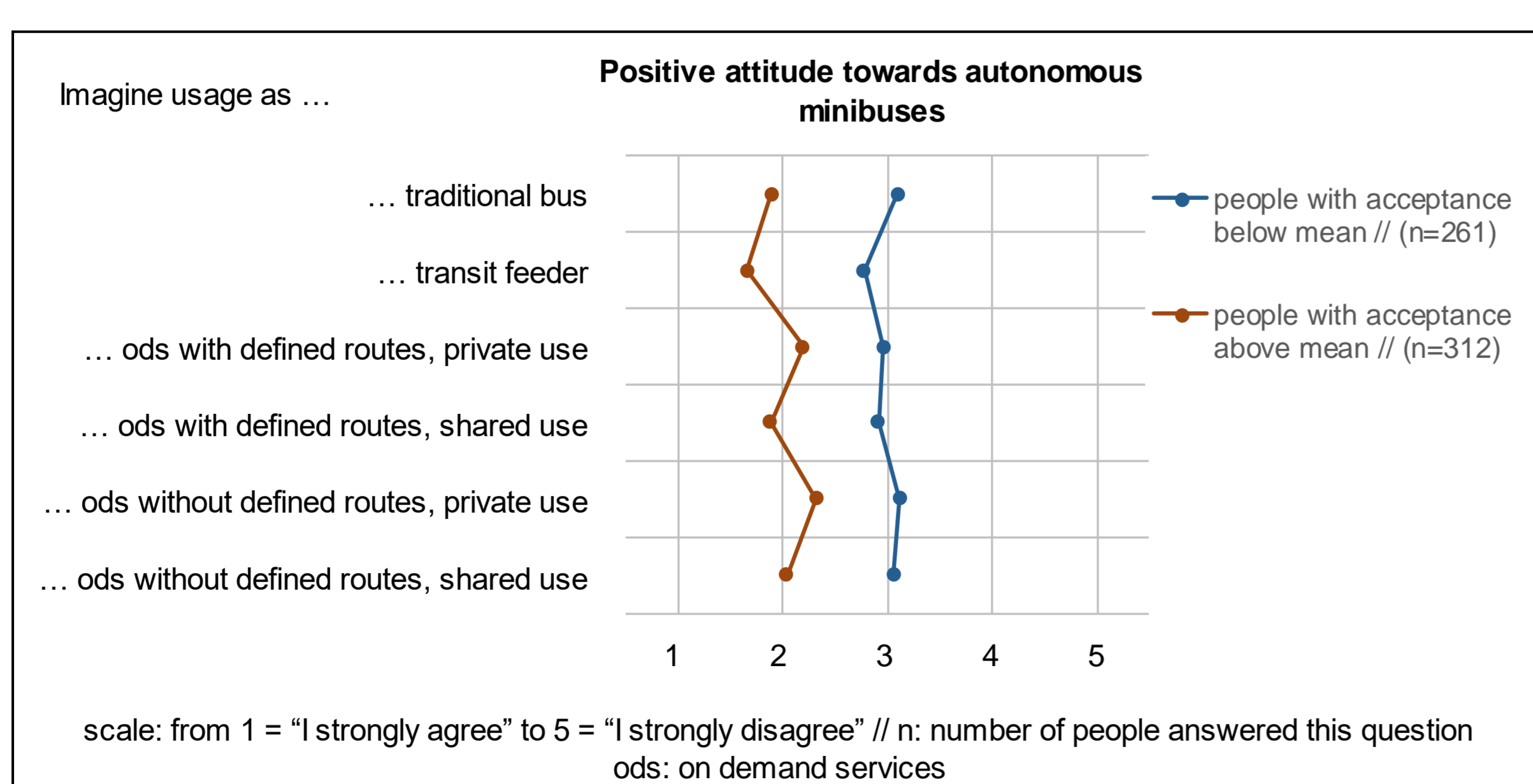
- People are **open** towards the new technology. Over 60% think introducing autonomous minibuses is a **good idea**.
- Men** are more willing to use minibuses than women (p between 0.02 and <0.0001). No other significant influence of socio-demographics was found.
- Highly multimodal** people would rather use a minibus than e.g., car-drivers.
- Prior **knowledge increases** future use intention.
- Safety** and security are crucial for future use.
- Respondents perceive the use of minibuses conceivable in **urban and rural areas**.

Principal Component Analysis

A **Principal Component Analysis** with Varimax rotation comprising all attitude-related items resulted in 5 consistent components:

- Positive attitude towards autonomous minibuses
- Positive attitudes towards public transport in general
- Feeling comfortable in a car
- Expected high effort to use an autonomous minibuses
- Interest in technical innovations

A **positive attitude** towards autonomous minibuses **correlates highly** ($p < 0.005$) with the intention to use a minibus.



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