The Influence of Perceived Attributes and Political Identity on the Intention to Adopt a Car-Free Lifestyle

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Abstract

This research paper investigates factors influencing individuals' intention to adopt a car-free lifestyle for commuting. We built upon the ISE model (Noppers et al., 2014), which predicts the likelihood of adopting sustainable innovations based on evaluations regarding the instrumental, symbolic, and environmental attributes of this innovation, and applied it to the adoption of a car-free lifestyle. Additionally, we examined the role of political identity in the intention to adopt a car-free lifestyle. Previous studies suggest that left-leaning individuals are more likely to engage in pro-environmental behavior than right-leaning individuals. A questionnaire study was conducted using a sample from the Netherlands. The results showed that a right-leaning political identity was negatively correlated with the intention to live a car-free lifestyle, indicating that right-leaning individuals were less likely to adopt this lifestyle. Regression analysis revealed that political identity was a significant predictor of the intention to adopt a car-free lifestyle, while instrumental and symbolic attributes were partially significant in predicting the intention to adopt a car-free lifestyle, meaning positive evaluations of attributes were related to a higher intention to adopt a car-free lifestyle. The study contributes to understanding the factors influencing the adoption of a car-free lifestyle and highlights the importance of considering political identity in promoting pro-environmental behavior.

Keywords: Car-free lifestyle, pro-environmental behavior, political identity, ISE model

The Influence of Perceived Attributes and Political Identity on the Intention to Adopt a Car-Free Lifestyle

Man-made carbon emissions from the burning of fossil fuels like oil and coal are causing a phenomenon known as rapid climate change (Healey, 2014). This phenomenon is characterized by an increase in global temperatures, which can result in severe ecological disasters such as crop failures in warmer and drier regions, loss of biodiversity, and extreme weather events. In developed countries around 20% of carbon emissions come from transportation and out of that percentage, private car use makes up the majority of these (European Environment Agency, 2021). Looking at these statistics it is apparent that reducing private car usage is an important step towards a sustainable society (Sperling & Cannon, 2007).

Adopting a car-free lifestyle is extremely difficult in some countries due to the car-centric nature of the environment which can be seen in the USA and Canada for example. Due to its population density and street design the Netherlands is one of the easiest countries in the world to live car-free (Saeidizand et al., 2022). Car ownership in Dutch cities is steadily declining and biking has long since overtaken the car as the most common mode of transportation in urban areas. There are however significant differences when looking at urban and rural areas. Living car-free in a rural area is still challenging (Shergold et al., 2012). Common alternatives include walking, biking and public transportation, which have significantly lower carbon emissions than driving a car. So which factors motivate people to switch their transportation behavior from driving a private car to other, more sustainable modes of transit? Answering this question is the aim of our research project and this paper.

As living car-free is generally way more sustainable than driving, it can be described as pro-environmental behavior. Pro-environmental behavior describes a conduct that has

positive outcomes for the environment and the climate compared to the emission norm (Zhong, 2020). To promote pro-environmental behavior it is most important to understand which factors motivate it.

To measure and predict pro-environmental behavior there exist several models and theories. The ISE model is a framework used to predict the likelihood of adoption of sustainable innovations (Noppers et al., 2019). Precisely, it has also been used to predict the likelihood of switching from fossil fueled cars to electric cars. The factors predicting this switch in Noppers et al., (2019) model are: the individual's evaluation of so-called instrumental attributes, symbolic attributes and environmental attributes. Instrumental attributes refer to utility a given innovation provides the user, and includes, for example, the convenience of use, range (in the case of an electric vehicle), price or comfort of a vehicle. Symbolic attributes concern how a given innovation signals one's status, values, virtues or identity to the social environment. Sustainable innovations signal one's identity as an environmentally conscious person. Lastly environmental attributes describe how the individual evaluates the environmental friendliness of an innovation or how much of a difference in environmental impact there is between, for example, driving a fossil fueled car versus an electric car (Noppers et al., 2014).

Noppers et al., (2014, 2019) concluded that the ISE model was useful for both the adoption of smart energy systems and electric cars. However, in their 2019 paper, Nopper et al. showed that out of the three variables included in the model only the symbolic attributes were significant in predicting the adoption of sustainable innovations, while in their 2014 evaluations of both symbolic and environmental attributes were significant predictors. The researchers theorized that this might be due to multicollinearity between evaluations of environmental attributes and the newly added variable of adoption norms.

In the present study we will not try and predict the adoption of a specific innovation but rather predict the adoption of a certain behavior. As the topics are closely related and are both focused towards pro-environmental behavior we will use the ISE model as the basis of our theoretical framework and test its predictive power in the context of switching to a car-free lifestyle. Applying the ISE-model to seizing to use a non-sustainable travel alternative (i.e. the car) means the instrumental attributes now describe evaluations of how convenient and useful not using the car is. Evaluations of symbolic attributes, in this case means assessing how not using a car signals identity and status. Last, evaluations of environmental attributes, in this case, describe how an individual perceives the environmental benefits of not using the car.

Nopper et al. (2019) extended the ISE model they introduced in Noppers et al. (2014) to also include adoption norms (i.e. the rate of adoption of a given innovation in the social environment of the individual) as a moderator on the relationship between symbolic attributes and the adoption of electric cars, hypothesizing that low adoption norms lead to a stronger association between symbolic attributes and the adoption of this innovation. The reasoning was that low adoption norms mean that one would be a pioneer of the innovation if adopted, which leads to higher importance of symbolic attributes for the adoption of the innovation, strengthening the association between evaluations of symbolic attributes and the intention to adopt. In our study we excluded adoption norms as the concept was less useful in the context of adopting a specific lifestyle rather than a specific innovation. We did this because we expected adoption norms to be harder to define when it comes to adopting a car-free lifestyle. That is because there are different extents to which people live car-free and it might be more difficult for an individual to assess to which degree one's social environment lives car-free. Due to previous research in this context we found it interesting to include another variable in our model, namely political identity.

There is strong evidence suggesting that political identity and the political environment have an influence on the adoption of pro-environmental behavior such as choosing sustainable modes of transportation over a car (Panno et al., 2018). Environmental protection has been an issue that has typically seen more political engagement by the leftist parties ever since the emergence of climate change as a political topic in the 1980s and 1990s (Aldridge.,2015). Several studies suggest that politically left-leaning individuals are more likely to engage in pro-environmental behavior than right-leaning individuals (Klein et al.,2019, Lubin et al., 2023). It is this evidence which suggests that political identity has a direct association with the intention to live car-free and that left-leaning people would be more inclined to live car-free than those on the opposite side of the political spectrum. This explicit relationship however, has never been studied before, hence we decided to do so.

We also investigate the relationship between political identity and the evaluations of symbolic attributes since there is evidence that suggests that signaling virtues and values through pro-environmental behavior is only desirable for individuals if their values align with their political identity (Kaida & Kaida, 2016). This means that if the individual rejects a behavior on political grounds, they won't implement such behavior to show their self-identity as an environmentally conscious person. This is because they don't identify as such due to a conflict with their values (Courtice et al., 2023). Signaling values and status in this case refers to the symbolic attributes that Noppers et al. (2014) investigated. It thus seems likely that there also is a relationship between the political identity and the evaluations of symbolic attributes of living car-free, as more right-leaning people might not want to signal pro-environmental behavior outwards because these values are less likely to align with their political identity. This leads to the following research question:

Which factors influence an individual's intention to adopt a car-free lifestyle?

First, we expect that the evaluations of symbolic, instrumental attributes and environmental attributes (independent measures) are positively correlated with the intention to live car-free (Hypothesis 1). This hypothesis functions as a replication of Noppers et al., (2014) original study. They hypothesized these variables to be important in the adoption model but evaluations of instrumental and partially environmental attributes turned out to be non-significant. We want to find out if this is different in our study, given the context change from specific innovations, that Noppers et al. (2014) investigated, to our focus, the adoption of a car-free lifestyle.

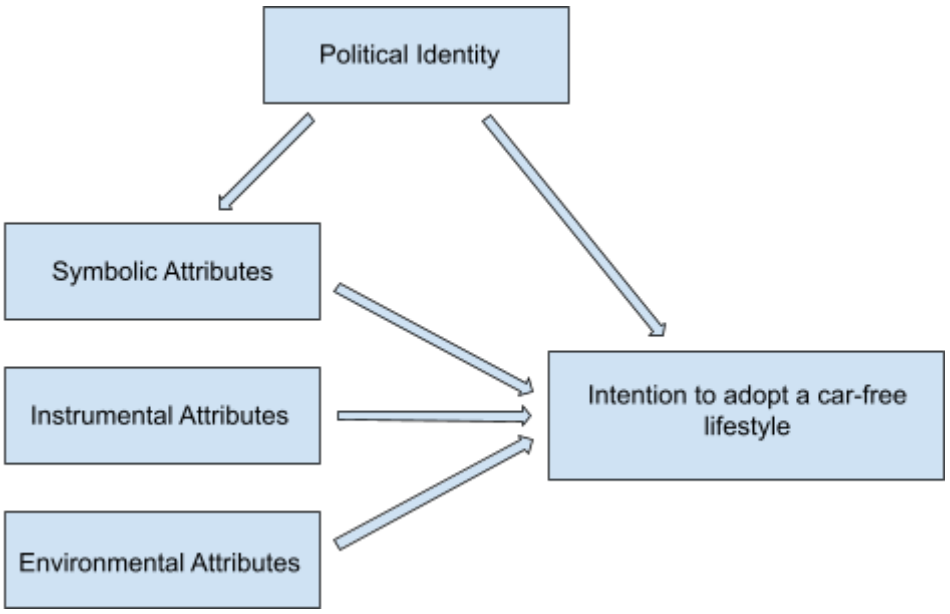
Secondly, we expect that political identity is negatively correlated with the intention to adopt a car free lifestyle. Meaning, that we expect that when an individual is more politically right-leaning they are less likely to adopt a car-free lifestyle (Hypothesis 2).

Third, we expect that (measurable) political identity (independent measure) is negatively related to evaluations of the symbolic attributes regarding to live car-free (dependent measure). Meaning, that we expect that when people are more right-leaning they are less likely to evaluate the symbolic attributes of living car-free positively (Hypothesis 3).

Lastly, we expect that there will be a partial mediation effect of the evaluations of symbolic attributes regarding a car-free lifestyle on the relationship between political identity (independent measure) and the intention to adapt to a car-free lifestyle (dependent measure) (Hypothesis 4).

Figure 1

ISE model extended with political identity



To investigate these hypotheses a questionnaire study will be put together involving questions about commuting and transport behavior, questions about the symbolic, environmental and instrumental attributes of living car-free in their respective scales, as used by Noppers et al. (2014, 2019), political identity, the intention to adopt a car-free lifestyle and some general questions about demographics. Due to distributing the questionnaire publicly in Groningen, most participants are from the city of Groningen, although everyone who lives in the Netherlands and has both access to a car and a job to commute to is eligible as a participant for our study.

Methods

Participants

The data collection took place from May 19th to May 25th, 2023. A total of 207 participants accessed the questionnaire, with 15 individuals (7.2%) using the QR code and 192 individuals (92.3%) using the provided link. Among them, 157 participants (75.8%) completed the questionnaire, while two other participants (1%) did not complete it entirely but answered enough questions to be included in this study. Out of the initial 159 participants,

43 individuals (20.7%) were excluded for various reasons: 6 participants (3.8%) did not provide consent, 19 participants (11.9%) reported not having access to a car, and 18 (8.7%) answered that they did not know or preferred not to answer at least one of the relevant items for the analysis. Consequently, the final sample consisted of 116 participants, comprising 64.8% females, 34.4% males, and 0.8% unspecified. The majority of participants (25.0%) fell within the 46 to 55 years age group. Furthermore, it is worth noting that the sample's income and education levels were higher than the national average for the Netherlands (CBS, 2018).

Design

This study has a between-subjects correlational design. The aim of this study is to test the influence of symbolic, environmental and instrumental attributes on the intention to abandon the car and the moderating effect that political identity has on the relationship between symbolic attributes and the intention to abandon the car.

Procedure

The data was collected with an online questionnaire using a convenience sample. The questionnaire took around 10-15 minutes to complete. Participation in this study was completely voluntary and there was no monetary incentive or reward for the participants. There was however the incentive that for every participant the researchers would donate 1€ to Voedselbanken Groningen, a charity organization. We did not use deception but some information about the purpose of the study was withheld in order not to prime the subjects through words such as “sustainable” etc. The participants were properly briefed about the study and filled out a form of consent. If participants answered that they did not have a car or did not consent, they were directly sent to the end of the questionnaire. This study was approved by the Ethics Committee of the Department of Psychology of the University of Groningen.

Measures

The questionnaire was divided into different sections to measure each variable independently. In the beginning there was a briefing and the informed consent followed by some filtering questions to ensure participants meet the requirements. The sections measuring the variables followed and, in the end, came the demographic questions.

Attributes scale: This section of the questionnaire consisted of nine questions of which three corresponded to each attribute scale, namely symbolic, environmental and instrumental attributes. Respondents were asked to what extent they agreed with the statements on a 5-point Likert scale with 1 meaning that they strongly disagreed and 5 meaning that they strongly agreed. On average the participants evaluated the instrumental attributes slightly negatively ($M = 2.98$, $SD = 1.02$, Cronbach's $\alpha = 0.77$). The environmental attributes were rated positively ($M = 4.18$, $SD = 0.81$, Cronbachs's $\alpha = 0.81$) and the symbolic attributes also slightly positively ($M = 3.21$, $SD = 1.02$, Cronbach's $\alpha = 0.85$).

Political identity: Participants were asked to indicate their political identity on a 5-point Likert scale ranging from left winged to right winged, where left was coded as 1 and right was coded as 5. The participants on average were slightly leaning towards the political left ($M = 2.50$, $SD = 1.22$).

Intention to adopt a car-free lifestyle: We measured the intention to live car-free on a 5-point Likert scale as well. Respondents needed to indicate to what extent they agreed with the statement "I intend not to use a car in the future." The scale ranged from strongly disagree, coded as 1, to strongly agree, coded as 5. The responses were, on average, slightly opposed to adopting a car-free lifestyle ($M = 2.66$, $SD = 1.26$).

Results

Bivariate relationships

Table 1 shows that, as expected, political identity was negatively correlated with the intention to live car-free, meaning that left-leaning individuals were slightly more likely to intent the adoption of a car-free lifestyle. From this table we can also derive that symbolic attributes as well as instrumental and environmental attributes all have significant positive correlations with the intention to live car-free. Meaning that, as expected, higher evaluation of these attributes are correlated with a higher intention to adopt a car-free lifestyle. Out of these the evaluations of symbolic attributes were most strongly correlated to the intention to adopt a car-free lifestyle, shortly followed by the evaluations of instrumental attributes and environmental attributes.

Table 1

Bivariate correlations of the independent variables with the intention to adopt a car-free lifestyle.

Varíable	Variable 2	Correlation	Count	Lower CI	Upper CI
Environmental Attributes	Car-Free Lifestyle	0.345	133	0.185	0.486
Instrumental Attributes	Car-Free Lifestyle	0.442	133	0.294	0.570
Symbolic Attributes	Car-Free Lifestyle	0.469	133	0.324	0.592
Political Identity	Car-Free Lifestyle	-0.345	116	-0.496	-0.174

Table 2

Model summary of the regression of intention to adopt a car-free lifestyle on political identity and evaluations of symbolic, instrumental and environmental attributes.

R	*R* Square	Adj. *R* Square	Std. Error	*df*1	*df*2	Sig. *F* Change
0.544	0.296	0.271	1.068	4	111	0.001

Table 3

Variables of the regression of intention to adopt a car-free lifestyle on political identity and evaluations of symbolic, instrumental and environmental attributes.

Model	*B*	Std. Error	*t*	Sig.	Partial Correlation	Semipartial Correlation
(Constant)	1.108	0.682	1.626	0.107		
Political Identity	-0.202	0.087	-2.310	0.023	-0.214	-0.184
Instrumental Attributes	0.232	0.132	1.762	0.081	0.165	0.140
Environmental Attributes	0.121	0.169	0.716	0.476	0.068	0.057
Symbolic Attributes	0.284	0.156	1.823	0.071	0.170	0.145

Table 4

Mediation analysis describing the indirect effect of Political Identity on the Intention to Adopt a Car-free Lifestyle through Evaluations of Symbolic Attributes

	Effect	BootSE	BootLLCI	BootULCI
Symbolic Attributes	-0.028	0.027	-0.103	0.007

Table 5

Regression of Political Identity on the Evaluation of Symbolic Attributes

Model	Unstandardized *B*	Coefficients Std. Error	Standardized Coefficients Beta	*t*	Sig.
(Constant)	4.014	0.208		19.291	0.001
Political Identity	-0.298	0.075	-0.347	-3.969	0.001

Testing the model

After assessing the direction of relationships, we tested via regression analysis if evaluations of symbolic, environmental and instrumental attributes as well as political identity significantly predicted the intention to adopt a car-free lifestyle. The overall regression was statistically significant ($R^2 = 0.296$, $F(4, 111)= 11.663$, $p= 0.001$), meaning that our model explained 29.6% of the variance in the intention to adopt a car-free lifestyle. Looking at the model, we see that only political identity is a significant predictor when including other independent variables ($\beta = -0.202$, $p = 0.023$). Perceptions regarding symbolic ($\beta = 0.284$, $p = 0.071$) and instrumental attributes ($\beta = 0.232$, $p = 0.081$) are non-significant. Environmental attributes also turned out to be not significantly predicting the intention to adopt a car-free lifestyle ($\beta = 0.121$, $p = 0.476$). It is also noteworthy to look at the difference between zero-order correlations and the semipartial correlations of the independent variables and the dependent variable to understand why the attribute scales are all non-significant. For the evaluation of instrumental attributes ($r = 0.435$, $sr = 0.140$) as well as environmental attributes ($r = 0.369$, $sr = 0.057$) and symbolic attributes ($r = 0.487$, $sr = 0.145$) we see that the semipartial correlations are all smaller than a third of the zero-order

correlations. This signals there is significant overlap between the variables and especially the evaluation of the attributes. Looking at the mediation matrix we see that the indirect effect of political identity on the intention to adopt (CI: LB = -0.103, UB = 0.007) is non-significant, meaning that symbolic attributes are not significantly mediating the effect political identity has on the dependent variable.

Looking at the second model, simple linear regression was used to test if political identity significantly predicted the evaluations of symbolic attributes. The regression we performed was statistically significant ($R^2 = 0.121$, $F(1, 115) = 15.765$, $p = 0.001$). It was found that political identity significantly predicts the evaluations of symbolic attributes ($\beta = -0.298$, $p = 0.001$). The model and therefore political identity explains 12.1% of the variance in the symbolic attributes.

Discussion

From the bivariate correlations we can see that, as expected, all attribute scales are positively correlated with the intention to adopt a car-free lifestyle, meaning that higher evaluations of the symbolic, instrumental and environmental attributes are related to higher intentions to adopt a car-free lifestyle. This provides partial support for the hypothesis that the evaluations of symbolic, instrumental and environmental attributes are positively associated with the intention to adopt a car-free lifestyle (H1). Additionally, we can see that political identity is negatively correlated with the intention to adopt a car-free lifestyle. This means that leaning politically left is associated with a higher intention to adopt a car-free lifestyle, providing partial support for our hypothesis that political identity is negatively associated with the intention to adopt a car-free lifestyle (H2).

The regression model showed that, when taking the unique contributions in the whole model into account, only political identity was significant in predicting the intention to adopt

a car–free lifestyle. This confirms hypothesis 2 as political identity is both negatively correlated with the dependent variable and significant as a predictor in the whole model, meaning that a left-leaning political identity predicts an above average intention to adopt a car-free lifestyle. These findings do show support for previous frameworks that used political identity as a means of predicting pro-environmental behavior (Klein et al.,2019, Lubin et al., 2023). Hypothesis 1 on the other hand is not supported by the whole model. Despite each being positively correlated separately with the dependent variable, evaluations of symbolic, instrumental and environmental attributes fail to contribute significantly to the overall model. Meaning that higher evaluations of instrumental and environmental attributes don't uniquely predict a higher intention to adopt a car-free lifestyle.

In part these findings showcase what Noppers et al. (2019) also described in their paper, namely that the evaluations of instrumental and environmental attributes don't significantly add to the explained variance in the intention to adopt a sustainable innovation. This is explainable in part due to overlapping independent variables, meaning that the variables are also strongly correlated with each other and explain overlapping parts of the variance of the intention to adopt a car-free lifestyle. Noppers et al. (2019) also theorized that multicollinearity might be a reason for the insignificance of the evaluations of instrumental and environmental attributes. What is different compared to both of Nopper's papers is that in our study the evaluations of symbolic attributes were also non-significant in the whole model. This might be due to the contextual change of our study compared to Nopper's studies or also due to multicollinearity, which signs can be observed when looking at the semipartial correlations. When we regressed the evaluations of the three attribute scales on the intention to adopt a car-free lifestyle, excluding political identity from the model, we saw that evaluations of instrumental and symbolic attributes turned out to be a significant predictor of the intention to adopt a car-free lifestyle, providing some support for hypothesis 1 as they are

only significant when excluding another predictor, in this case political identity. This means that higher evaluation of instrumental and symbolic attributes do predict a higher intention to adopt a car-free lifestyle if political identity is excluded from the regression.

As expected, we found that our second regression shows a significant negative relationship between the political identity and the evaluation of symbolic attributes. Meaning that being left-leaning politically predicts higher evaluations of the symbolic attributes of living car-free, confirming our hypothesis (H3). Concerning this relationship between political identity and evaluations of symbolic attributes our research has produced a new framework that might prove useful in future research. There was, however, no significant unique effect of symbolic attributes on the intention to adopt a car-free lifestyle when all independent variables were included, contrary to our hypothesis. This was that the evaluations of symbolic attributes would mediate the effect of political identity on the intention to adopt a car-free lifestyle (H4). Meaning that leaning left politically predicts a higher evaluation of the symbolic attributes of living car-free, but that higher evaluations of symbolic attributes don't uniquely predict a higher intention to adopt a car-free lifestyle, when all independent variables are included in the regression. The mediation analysis also showed that the indirect effect of political identity on the dependent variable through evaluation of symbolic attributes is also non-significant when taking the entire model into account. Meaning that in the whole model the evaluation of symbolic attributes is not mediating the effect of political identity on the intention to adopt a car-free lifestyle. However, when we exclude the covariates, namely the evaluation of instrumental and environmental attributes from the mediation analysis we see both a significant effect of symbolic attributes on the intention to adopt as well as the indirect effect of X on Y through the mediator, providing partial support for our hypothesis (H4). This means that the

mediation effect is significant when the other independent variables, the evaluations of instrumental and environmental attributes, are controlled for.

Limitations

What puts all of this data into context is the multicollinearity between the different attribute scales and political identity. When excluding political identity from the regression model, thus testing the original ISE-model (Noppers et al., 2014), evaluations of symbolic and instrumental attributes both become significant. When using a separate regression for each variable even the evaluations of environmental attributes are significant in predicting the intention to adopt a car-free lifestyle. When excluding evaluations of instrumental and environmental attributes as covariates from the mediation analysis, both the main effect of symbolic attributes and the indirect effect of political identity on the intention to live car-free are significant. We also witness the effect of multicollinearity through the difference between the zero-order correlations and the semipartial correlations where the latter are only a fraction of the former. The high multicollinearity is likely the biggest obstacle to obtaining meaningful results in this study. One factor responsible for this multicollinearity might be the similarity of the attribute scales. Meaning that the different attribute scales measure closely related constructs. As a means of receiving more varying results for the attribute scales, more questions/statements could be included per scale. To keep dropout rates low we shortened the questionnaire by removing around half of the items that Noppers et al. (2019) used for the attribute scales. This might have reduced the distinctiveness of the attribute scales which could explain the multicollinearity.

Also, by presenting all attribute-related statements on one questionnaire page, we might have increased the likelihood of participants clicking the same or similar answers for all statements which broadly fits their opinion about living car-free in general. This might

have also led to the multicollinearity we observe now. The multicollinearity suggests that combining the attribute scales into one variable might be useful to explain more variance in the intention to adopt a car-free lifestyle because no variable would be excluded for being non-significant.

Furthermore, we observed a dropout rate of almost 24.2% (50 out of 207) added by a couple participants who skipped one or more statements important for the analysis which is higher than average when it comes to online questionnaires of this size (Hoerger, 2010). For this questionnaire a dropout rate around 10% would be average. The aforementioned dropout rate led to a decrease in power. This could've been counteracted by constructing a shorter questionnaire, which generally leads to much lower dropout rates (Edwards et al., 2004, Hoerger, 2010).

Lastly the sample consists of a convenience sample with the majority of participants coming from the extended social environment of the researchers' families, reflecting the above average educational level and income compared to the Netherlands. This might have skewed the results as the sample doesn't reflect the whole population of the Netherlands objectively. Education for example is associated with political identity (Weakliem, 2002).

Future research directions

Future research could combine the attribute scales into one variable. This could help to avoid possible problems with multicollinearity in the attribute scales and ensure that evaluations of every attribute is part of the final model. It could be useful when comparing effects of other variables to the effect of evaluation of attributes. When comparing evaluations of different attributes they have to be kept separate. In that case the original number of items per scale that Noppers et al. (2014, 2019) used might be more useful.

As we studied the effects of political identity on evaluations of symbolic attributes and the intention to adopt a car-free lifestyle, more variables that were beyond the scope of our research project seem promising in predicting the adoption of a car-free lifestyle. Researchers in the future could investigate possible interaction effects of the evaluations of attributes with different independent variables such as gender, education or commuting distance to arrive at a more complete model of the adoption of a car-free lifestyle. Previous studies show that car ownership can be predicted through gender and education (Sovacool et al., 2018). Applying these findings to predict the adoption of a car-free lifestyle through gender and education might yield similar results. Also, for commuting distance, which we did not include in our hypotheses it would be interesting to study possible main effects and interactions with the evaluation of attributes, as commuting distance is related to the instrumental attributes of using a mode of transport (Buehler, 2011). We did not evaluate commuting distance as a separate variable because we investigated the evaluations of instrumental attributes of adopting a car-free lifestyle. This lifestyle includes all other modes of transportation where some are useful for short distances while others are useful for longer distances. Future research that compares specific modes of transport could include this and study the importance of commuting distance on the evaluations of instrumental attributes of a given mode of transport.

Practical implications

Incentivizing as many people as possible to make the switch from primarily depending on their car to using sustainable modes of transportation is in the public interest as it helps us to reduce our carbon footprint as well as noise and air pollution (Teske et al., 2022). Our findings give some important implications on how this can be done more effectively. The results support that left-leaning individuals have a higher intention to live

car-free than right-leaning individuals. This implies that advertising sustainable alternatives to left-leaning people might be more effective than to right-leaning people (Išoaitrė, 2023). There is also some evidence that appealing to the symbolic attributes of a car-free lifestyle is important when advertising alternatives. Meaning that advertisers could put emphasis on how adopting a car-free lifestyle fits with the individual's identity, which is part of the symbolic attributes. Furthermore we gathered some evidence that emphasizing symbolic attributes for advertising a car-free lifestyle is more effective when this is directed towards left-leaning individuals. This describes the mediation effect of hypothesis 3, where symbolic attributes mediate the relationship between political identity and the intention to live car-free.

We also found partial evidence for the effect of instrumental attributes on the intention to adopt a car-free lifestyle. This implies that the convenience of living car-free is an important factor in adopting this lifestyle. This could be pursued by policy-makers to make sustainable modes of transportation easier to access than driving a private car. Possible measures include increasing the frequency and speed of public transportation, lowering fares for commuters, increasing cycling safety through separated bike lanes (Verma, 2018).

Conclusion

The results suggest that people on the left side of the political spectrum have stronger intentions to live car-free in the future than people who are more right winged. They are also more likely to evaluate the symbolic attributes of living car-free higher, meaning that they have a stronger belief that switching towards a car-free lifestyle represents their values. To a lesser extent, the results also support that higher evaluations of instrumental and symbolic attributes lead to a higher intention to adopt a car-free lifestyle and that the relationship between political identity and this intention is mediated by the evaluation of symbolic attributes. This implies that the convenience of living car-free as well as the alignment of

personal values with living car-free are important in the adoption of a car-free lifestyle. Future research could investigate the associations between political identity, personal values and the intention to adopt a car-free lifestyle as our research only touched on the representation of values but not which values these are.

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