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## Article

# "Doing gender" by sharing: Examining the gender gap in the European sharing economy

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# “Doing gender” by sharing: examining the gender gap in the European sharing economy

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**Keywords:** Sharing economy, Digital inequality, Intersectionality, gender, Habitus

**Abstract:** In this study, based on survey data collected from twelve European countries (N=6111), we build on the digital technology access model to examine the role of gender in access to the sharing economy. Applying a “doing gender” perspective, we find that men capitalise on a stronger economic position and a more pronounced orientation to explore new technology to gain access to sharing services, while women rely more on cultural and social capital. We relate our findings to intersectionality theory by discussing how class and gender intersect in facilitating access to the sharing economy.

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## Introduction

Research on digital inequality has discussed a gender gap in a range of different online contexts (Winker, 2005). The gender gap is considered problematic as it represents persistent structural inequalities in access to resources ostensibly facilitated by digital media. The sharing economy is an important emerging sector of online commerce, providing various opportunities for digital work and consumption (Gerwe & Silva, 2020). However, recent studies (Edelman & Luca, 2014; Schor, 2014; Schor et al., 2016) point out the potential of sharing platforms to “reproduce class, gender, and racial biases” (Schor, 2014, p. 8). Various survey studies illustrate a gendered approach to the sharing economy (Eurobarometer, 2016; Smith, 2016).

The perspective of “doing gender” (West & Zimmerman, 1987) emphasises that media use is not merely the product of a gender attribute, but actually (re-)produces gender identity through a limitation of gender-specific habitus and social practices (Bourdieu, 2002). In addition, intersectionality theory sheds light on social-structural disadvantages associated with and fostering gender disadvantages (Winker & Degele, 2011; Yuval-Davis, 2006). We apply both of these theoretical considerations to analyse gender differences in the use of sharing economy platforms in Europe.

We rely on the “digital technology access” model by Van Dijk (2005) to conceptualise access to sharing services as a multi-faceted construct encompassing motivational, material, and skills access. We focus on access to the sharing economy as all potential benefits accrued through sharing presuppose access—in fact, some benefits such as a broader choice, are centred in access to sharing platforms (Botsman & Rogers, 2010; Gerwe & Silva, 2020). The “digital technology access” model can be considered the most comprehensive conceptualisation of access to digital services in the digital inequalities literature, facilitating a fine-grained understanding of gender gaps. Our analysis is based on survey data (Andreotti et al., 2017) collected from twelve European countries (N=6111).

We relate our findings to intersectionality theory by discussing how class and gender intersect in facilitating sharing platform access. Furthermore, we highlight how the use of sharing platforms may both represent and reinforce gender identities—and thereby, ‘do gender’—through distinct gender-specific habitual orienta-

tions. We argue that participation in the sharing economy entails gendered practices that reinforce gender roles. Our analysis allows for a differentiated understanding of the cause and shape of the gender gap in access to the European sharing economy.

## Inequalities in access to the sharing economy

Studies focusing on digital participation in a commercial domain tend to focus on asymmetric relationships between companies and stakeholders (Hoffmann & Lutz, 2015). Some studies, however, explore forms of online participation that imply an empowerment of stakeholders. Terms such as ‘co-creation’ (Ind & Coates, 2013) or ‘prosumer’ (Ritzer, 2015) indicate that, in an online environment, individuals may evolve beyond a passive consumer role to adopt a degree of responsibility and ownership for the goods being exchanged (Sawhney et al., 2005). An online context that is characterised by such a potential empowerment of users is the sharing economy.

The concept of the sharing economy is rooted in the sharing paradigm (Belk, 1985, 2010, 2014) or sharing turn (Grassmuck, 2012), whereby ever larger numbers of individuals, instead of buying, gain temporary access to goods provided by others, frequently strangers. The emergence of the sharing economy is facilitated by the establishment of digital platforms that connect providers and consumers of sharing offers. Providers commonly offer access to their personal goods—in some instances based on mutuality, in some cases to earn a side income, in others even as a main source of income (Gansky, 2010; Grassmuck, 2012). For this study, we follow Gerwe and Silva’s (2020) definition of the sharing economy “as a socioeconomic system that allows peers to grant temporary access to their underutilised physical and human assets through online platforms” (p. 71). This definition distinguishes the sharing economy from related concepts such as peer production where *ownership* of resources is shared or dispersed (Benkler & Nissenbaum, 2006). It highlights the crucial role of digital platforms as facilitators of gaining access to private resources.

Whether these resources can adequately be described as underutilised remains contentious. On the one hand, the opportunity to temporarily access goods reduces the necessity to buy, thereby countering ever-growing levels of consumption, and potentially increasing the efficiency of resource allocation. On the other hand, providers of sharing offers may face an increased incentive to obtain shareable goods, leading to a more dispersed structure of supply (e.g. Airbnb apartments vs. hotels) that is less efficient and more resource-intensive than their established,

professional and more centralised alternative (Curtis & Mont, 2020). From a consumer perspective however, sharing platforms widen the diversity of supply, increase competition among suppliers, and thereby tend to lower prices. Access to the sharing economy, which is the focus of this study, is therefore associated with tangible and intangible benefits to users (Botsman & Rogers, 2010; Gerwe & Silva, 2020).

Recent studies indicate a small, but growing segment of the population engaging in sharing. As of 2019, Eurostat data show that 17 percent of EU citizens have used a dedicated online platform to book a peer-to-peer accommodation, six percent engaged in ride sharing. These values exhibit a slow increase over the previous three years, with 15 percent engaging in accommodation sharing in 2018 and 12 percent in 2017 (6 and 4 percent for ridesharing, respectively). Eurobarometer (2018) data indicate that most employ sharing services only occasionally, with only 4% of surveyed users reporting regular use of a collaborative platform (i.e. once a month or more often). Extant data indicate that consumption of sharing services is significantly more widespread than their provision: Eurobarometer (2018) finds that only 6% of surveyed Europeans participate in the sharing economy as providers. According to a PwC (2015) study of ride sharing in the US, 8% of survey respondents participate as 'consumers and only 1% as 'producers' (accommodation sharing: 6% vs. 1.4%). This indicates higher levels of adoption among US consumers compared to the EU.

The digital inequalities literature has come a long way in exploring the antecedents of online participation and differentiating effects on distinct segments of the population. A sizeable stream of research focuses on the socio-economic antecedents of online participation, mostly finding that male, younger, higher educated, and higher income individuals tend to be more engaged online (Correa, 2010; Hargittai & Walejko, 2008; Schradie, 2011). Commonly, this is framed as a disadvantage to older, female, lower educated, and lower income citizens, thus rendering the 'participation divide' a salient socio-political challenge. More recent analyses, however, have called for a careful and differentiated understanding of the 'participation divide', as socio-economic effects may differ by form and context of participation (Blank, 2013; Hoffmann et al., 2015).

We apply a digital inequalities perspective to examine gender differences in sharing participation. As noted, participation in the sharing economy tends to be associated with socio-economic benefits: participants enjoy more convenient access to a wide(r) selection of goods and services, frequently at lower prices (Belk, 2010; Botsman & Rogers, 2010; Gerwe & Silva, 2020). Those providing sharing services

gain access to (complementary) income opportunities. As a result, those participating in the sharing economy can be conceptualised as enjoying socio-economic advantages over those who are excluded from online sharing (Bucher, Fieseler, & Lutz, 2016; Hawlitschek et al., 2016; Bardhi & Eckhardt, 2012).

Initial studies indicate that participation in the sharing economy is, indeed, gendered. A Eurobarometer survey (2016) found that men (21%) are more likely than women (15%) to have heard of sharing economy platforms. Yet, Smith (2016) found that men and women in the US exhibit a similar intensity of use. Even if there is no profound gap in access to the sharing economy, men and women have been shown to participate in different ways, frequently in accordance to traditional gender roles. Schor et al. (2016), for instance, found that men are overrepresented in both the makerspace CraftWork and in the open education initiative Wintrepreneur. Women, however, participate more on food swap platforms to trade and share homegrown and homemade food and in time banks, where time is an object of trading and sharing.

## **Gender divide(s) in the sharing economy**

In this analysis, we apply the concepts of “doing gender” and intersectionality theory to examine the gendered access to the European sharing economy. We suggest that both theoretical approaches provide diverging explanations of gender differences in the use of sharing platforms, allowing for a fine-grained and differentiated understanding of the gender gap in the European sharing economy. While “doing gender” traces the experience of discrimination or disadvantage back to the (re-)production of social practices due to specific gender attributes (West & Zimmerman, 1987), intersectionality theory highlights how the overlapping of different social or cultural categories that by themselves discriminate, results in potential discrimination (Crenshaw, 1993). We follow an understanding of intersectionality as the overlapping, combining effect of multiple social categories, such as gender and class, resulting in specific disadvantages that can neither be reduced to a simpler category nor be interpreted separately as cumulating effects of independent dimensions of social inequality (Yuval-Davis, 2006; Cole, 2009).

The perspective of “doing gender” (West & Zimmerman, 1987) emphasises that media use is not merely the product of a gender attribute, but actually (re-)produces gender identity through shaping gender-specific habitus and social practices (Bourdieu, 1977). In this perspective, gender categories are not naturally predetermined, but socially constructed through everyday interactions (Butler, 1990). Consequently, gender is not seen as an attribute that individuals possess. Instead, they

perform their gender role in the way they use, for instance, new media infrastructure and in their expressed interests and preferences regarding them. West and Fenstermaker (1995) point out that everyday interactions are oriented towards established gender-specific categories and expectations they support with every reiteration.

Within the area of digital inequality research, several studies either investigate access to (Wasserman & Richmond-Abbott, 2005) or varying usage patterns (Ahrens, 2009) on the internet across the boundaries of gender groups. As an example for how gender is “done” in the digital sphere, studies claim that gender-specific social role expectations expressed towards women result in multiple challenges with regard to women’s usage of online tools. Gender stereotypes, attribution patterns, and stereotype threat as antecedents of ICT-critical attitudes (Cooper, 2006) and lower self-efficacy result in lower degrees of online engagement (Hargittai & Shafer, 2006; Van Deursen & Van Dijk, 2010; Hargittai & Shaw, 2015; Hoffmann et al., 2015). For example, studies have found that social loads, such as care work, lead to gendered digital activities like digital caretaking (Kennedy et al., 2003; Bode, 2020).

This perspective allows for an understanding of gender as a category that is socially produced or ascribed in ways that affect women’s and men’s social resources and habitual dispositions fundamentally differently. These differences in resources and dispositions hence result in gender-specific opportunity structures, capabilities and motivations when it comes to media usage. Applied to the sharing economy, this implies that while women and men may enjoy similar levels of engagement in the sharing economy, they may still access these services in different ways and, importantly, for different—gendered—reasons. Thus, based on the “doing gender” approach, we expect gender-specific differences in access to the sharing economy to be related to the differing availability of social resources and habitual orientations that themselves are unequally distributed gender-specifically due to differing social practices.

From a structural perspective, the intersectional approach highlights the potentiating role of overlapping social categories like class, socio-economic status, educational background, or social capital foster gender-related differences. However, the overlapping categories within intersectionality theory are not necessarily causally linked in a chronological manner (Mullings & Schulz, 2006). Intersectional perspectives emphasise how differences stem from the mutual constitution of distinct categories or identities in relationship with one another (Crenshaw, 1991; 1993; Collins, 2000). The concept of intersectionality comes into play, as, aside from gen-



der, previous studies on the use of sharing economy platforms have identified age, ethnicity, socio-economic status (education and income), and urbanity as important predictors of sharing participation (Schor et al., 2016; Schor, 2017). Typical intersections of socio-economic factors with gender that result in gendered patterns of internet access and usage include age, socio-economic resources and education (Bimber, 2000; Hilbert, 2011). The importance of this approach lies in its focus on socio-demographic factors that, in an interplay with gender, produce more pronounced inequalities, than just gender by itself. Contrarily to the “doing gender” approach, based on the intersectionality approach, we assume that gender differences in access to the European sharing economy rely on the interaction of gender and further social categories like social class.

## Research model

We base our examination of the gender gap in access to the European sharing economy, applying both the ‘doing gender’ and intersectionality perspectives, on a well-established model of access to digital services. The “digital technology access” model developed by Van Dijk (e.g. 2005) and colleagues (e.g. Van Deursen et al., 2017), differentiates distinct levels of access necessary for online participation to occur: motivational, material, skills, and usage access. According to this model, not all individuals may wish to participate actively; some may simply lack the motivation to do so. In other cases, individuals may wish to participate but lack the material resources necessary to do so. Van Dijk embeds his model into a wider framework incorporating positional and personal categories that determine the availability of distinct resources and their reproduction through participation. While positional categories focus on an individual’s social status (labour position and education), personal categories comprise key socio-demographic attributes like age, gender, and ethnicity as well as psychological attributes like intelligence or personality. Both positional and personal categories determine the availability of resources required to obtain the stages of access incorporated in the model.

Applying the Van Dijk’s access model allows us to investigate gender inequalities regarding access to the sharing economy on a broader basis. Instead of comparing users and non-users of sharing services, the model considers access as a multi-dimensional phenomenon covering contemporary gender inequalities in motivation to use ICTs, ownership of necessary technical devices, digital skills, and use frequency (Barbieri et al., 2020). Several studies have pointed out that socio-economic and psychological antecedents of online participation are closely related and frequently difficult to distinguish (Hargittai & Hinnant, 2008; Van Deursen & Van



Dijk, 2010). Lower levels of education, for example, may be associated with motivational divides, while gender and income may be related to skills divides. Cultural context can also be held to play a crucial mediating role in these relationships, as cultural codes affect how socio-economic properties translate into motivational, attitudinal, skills, or resource divides.

Furthermore, we use the conception of habitus to refer to personal categories that, besides positional categories, influence the use of sharing platforms. According to Bourdieu (1995), habitus indicates a semi- or a-theoretical disposition, which can be distinguished from the more explicit considerations encompassed in the notion of motives (or motivational access). Contrary to the latter, habitual dispositions guide actors in their decision-making by incorporated, but not further explicable, social rules and preferences (Robinson, 2009). In the qualitative part of their study, Bucher, Fieseler, and Lutz (2016) find three dispositions that engender differences in sharing motivation: materialism, volunteering, and sociability and validate the influence of them on sharing attitudes and sharing intention using survey data. We take these dispositions into consideration and complement them with openness to change or innovations as an important disposition that has been shown to affect sharing engagement as well (Piscicelli et al., 2015; Eichhorn et al., 2020). In this study, however, we investigate if these dispositions mediate or, otherwise, moderate gender-specific differences in access to the sharing economy as part of a gender-specific habitus (Bourdieu, 1977).

To summarise, our research model conceptualises access to the European sharing economy based on Van Dijk's (2015) "digital technology access" model. Aside from the personal category of gender, we analyse positional categories, focusing on education, income, working status, urbanity, and social capital. We complement this model with four habitual dispositions – materialism, volunteering, sociability, and innovativeness – to account for a habitual reproduction of gender in the context of the sharing economy. Within this access model, we follow the approaches of "doing gender" and intersectional theory to explain gender-specific differences of access. To do so, we explore the mediation as well as the intersection of positional and personal/habitual categories along gender categories. From the perspective of "doing gender", we expect positional and personal/habitual categories that are relevant antecedents for access in general to significantly vary between men and women and, thus, indicate different levels of access as a result of gender-specific practices of social status and habitus. From the perspective of intersectional theory, we expect positional and personal/habitual categories to be relevant for men and women in different compositions, that is, to interact with gender. This would

indicate an intersection of social inequality enhancing or reducing social categories that result in gender differences in access.

## Methods

This study is based on data collected between June and August of 2017 from more than 6,000 individuals across 12 European countries (Denmark, France, Germany, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Spain, Switzerland, United Kingdom) in an online survey (Andreotti et al., 2017). Participants were recruited from a high-quality consumer panel provided by a market research institute. Sample selection was based on quotas on age, gender, and region, which were defined by equivalence to each country's population. The panel included a target of 500 respondents in each country, resulting in 6,111 participants overall (due to slight oversampling).

We apply structural equation modelling (SEM) to address our research questions. We use Chi-squared ( $X^2$ ) and Root Mean Square Error of Approximation (RMSEA) as absolute as well as Normed Fit Index (NFI) and the Comparative Fit Index (CFI) as relative fit indices to cover widely used fit indices that furthermore combine the strengths of insensitivity to sample size (CFI) as well as penalising model complexity (RMSEA and NFI) (West, Taylor, & Wu, 2015). To carry out the analyses we used the lavaan package (Rosseel, 2012) for R (R Core Team, 2017). First, we analyse a full SEM for all respondents to investigate mediation effects for differences between gender groups. Second, we calculate separated models for each gender group to reveal possible interaction effects of the gender category and other covariates. As we analyse cross-sectional data, we do not test for the sequential effects implied in the original model. Table 1 provides an overview of all variables. In the following, we will not differentiate between the different countries in our sample. When testing the models for each country separately, we did not find any systematic variation between countries.

To analyse the influence of positional categories, we will test for an effect of SES, social capital, and urbanity. To measure SES, we use participants' highest level of education, working status, and annual household net income as exogenous variables. Level of education is measured on a seven-point scale from 'no formal education' to 'primary school', 'lower' and 'higher secondary' to 'Bachelor', 'Master' and 'Doctorate or higher'. Working status was provided by the survey provider as a binary variable ('not working'/'working'). The annual household net income was measured using country-specific currencies. To form a single variable, we created a standard score so that the income value for every case represents the distance

from the country-specific mean income in standard deviations. Social capital denotes the opportunity to receive help from others facing everyday problems (Van der Gaag & Snijders, 2005). Social capital was measured based on a single item addressing one's ability to count on others for help in times of need (based on a five-point scale from 'never' to 'always'). To measure urbanity, we use a four-point scale that asked survey respondents to classify their area of residence as 'big city (more than 500,000 inhabitants)', 'suburb or outskirts of a city', 'small to medium city (fewer than 500,000 inhabitants)', or 'rural area (town or village in the countryside)'.

We operationalised the four habitual dispositions based on established measures: Voluntarism items were derived from Flanagan, Syvertsen, and Stout (2007), addressing the engagement of individuals in community issues. Materialism was measured based on Richins' (2004) scale capturing if respondents prefer material wealth and a higher amount of consumption. To capture habitual sociability, we apply a measure of general trust derived from Gefen (2000). This concept measures how likely respondents are to have faith in other people or to mistrust them. Finally, the measure for innovativeness was adapted from Agarwal and Prasad (1998) to address respondents' tendency to try out new things and services. All habitual dispositions were measured based on the agreement with three attitudinal and/or behavioural statements each, rated on five-point Likert scales (Table 1). For each orientation, indicator variables measure the orientation as a latent construct using tau-congeneric measurement models. Based on standardised factor loadings, composite reliability, and average variance extracted, all constructs provide high internal consistency (Netemeyer et al., 2003).

We use access to the sharing economy as a latent construct comprising five indicative dimensions: knowledge, motivation, available devices, digital skills, and use of at least one type of platform. To measure knowledge, respondents were asked to indicate how many of a list of different branches of the sharing economy they had already heard of. Furthermore, respondents were asked whether they expect financial and immaterial benefits from participating in the sharing economy (meeting new people, acting in a more sustainable way, having fun) to estimate motivational effects (Bucher et al., 2016). To measure motivational access, respondents were asked what they expect from using sharing platforms on a five point scale ranging from 'not important at all' to 'very important': financial benefits, meeting new people, acting in a more sustainable way, or having fun. We considered the highest score given to any of the motivational items to form a single index of motivational access to avoid an unbalanced sum index due to an overall stronger representation

of immaterial expectations. To measure material access, we asked respondents what devices they use to access the internet ('Desktop PC', 'Smartphone', 'Lap-top', 'Tablet', 'Gaming console') and how frequently each device is used on a five-point scale (from 'never' to 'always'). We calculated an aggregate index of these five items. To measure skills access, we use a short scale developed by Hargittai and Hsieh (2010) where respondents are asked to rate their familiarity with six internet-related terms ('Advanced search', 'PDF', 'Spyware', 'Wiki', 'Cache', 'Phishing') on a five-point scale (from 'not familiar at all' to 'extremely familiar'). To measure usage access, respondents were asked to rate if they had used the sharing economy (same branches as with knowledge access) as providers and/or consumers. We found the usage variable to be strongly skewed towards non-usage.

**TABLE 1:** Descriptive statistics of all variables

Variable	Mean	Median	Min	Max	SD	Std. Factor loading
<b>Education</b>	4.40	4.00	1.00	7.00	1.09	
<b>Household income (std. score)</b>	-0.01	-0.09	-2.15	4.50	1.00	
<b>Working status</b>	1.66		1.00	2.00		
<b>Urbanity</b>	2.49	3.00	1.00	4.00	1.09	
<b>Social capital</b>	3.13	3.00	1.00	5.00	1.24	
<b>Men</b>	1.49		1.00	2.00		
<b>General trust</b> (Reliability: 0.917, AVE: 0.787)*						
GT1: General trust in people	3.34	4.00	1.00	5.00	1.03	0.892
GT2: General faith in humanity	3.32	4.00	1.00	5.00	1.02	0.859
GT3: General reliability of people	3.28	3.00	1.00	5.00	1.00	0.910
<b>Personal innovativeness</b> (Reliability: 0.923, AVE: 0.820)						
I1: Look for ways to experiment	3.19	3.00	1.00	5.00	1.17	0.936
I2: The first to try out new things	2.84	3.00	1.00	5.00	1.22	0.856
I3: Like to experiment	3.41	4.00	1.00	5.00	1.16	0.923
<b>Voluntarism</b> (Reliability: 0.866, AVE: 0.683)						
V1: Volunteering to help others	2.52	2.00	1.00	5.00	1.32	0.758
V2: Involved in societal issues	2.64	3.00	1.00	5.00	1.22	0.831
V3: Working with a group to solve a problem	2.30	2.00	1.00	5.00	1.20	0.887
<b>Materialism</b> (Reliability: 0.784, AVE: 0.549)						

M1: Happier if I could afford more	3.32	4.00	1.00	5.00	1.20	0.642
M2: Like a lot of luxury	2.67	3.00	1.00	5.00	1.18	0.780
M3 Admire people with expensive things	2.44	2.00	1.00	5.00	1.19	0.792
<b>Access</b>						
(Reliability: 0.698, AVE: 0.528)						
Knowledge access	2.68	2.00	0.00	5.00	1.61	0.513
Motivational access	3.25	3.00	1.00	5.00	1.27	0.552
Material access	12.75	12.00	5.00	25.00	3.23	0.583
Skills access	12.11	12.00	0.00	24.00	6.85	0.622
Usage access	0.26		0.00	1.00		0.540
N	5712					

*Note: standardised factor loadings calculated for each latent variable separately (measurement model), \*reliability (convergent validity) and average variance extracted (Fornell & Larcker, 1981)*

## Results

In the first step of the analysis (Table 1), we examine the gender participation gap and the effects that mediate it. The raw gender participation gap within our sample achieved a statistically significant, standardised marginal effect of 0.147 in favour of men. With the addition of socio-structural covariables on SES, urbanity, social capital, and habitual orientations, the residual gender effect drops to a standardised value of 0.030, which is still slightly significant. The added mediators thus explain about 80% of the original gender-specific effect size. Applying a ‘doing gender’ perspective, we find that men mainly benefit from a better employment and income situation, women exhibit a higher level of education and more pronounced support networks that help gain access to sharing platforms. The mediating effects of some habitual orientations turn out to be more pronounced. Men are particularly interested in trying out technical innovations, which in turn is the strongest predictor of access to the sharing economy. In addition, there is a stronger tendency towards a material consumption orientation among men, which also predicts sharing use positively.

**TABLE 2:** Structural equation model estimates

ENDOGENOUS VARIABLE	EXOGENOUS VARIABLE	B	SE	BETA	P	R <sup>2</sup>
Education	Men	-0.055	0.028	-0.028	*	0.001

ENDOGENOUS VARIABLE	EXOGENOUS VARIABLE	B	SE	BETA	P	R <sup>2</sup>
Working status	Men	0.187	0.034	0.093	***	0.009
Income	Men	0.166	0.026	0.083	***	0.007
Urbanity	Men	0.041	0.029	0.020		0.000
Social capital	Men	-0.278	0.028	-0.138	***	0.019
General trust	Men	-0.024	0.029	-0.012		0.000
Innovativeness	Men	0.359	0.028	0.177	***	0.031
Voluntarism	Men	-0.046	0.029	-0.023		0.001
Materialism	Men	0.090	0.030	0.045	**	0.002
Access	Education	0.615	0.042	0.366	***	0.647
	Working status	0.338	0.040	0.201	***	
	Income	0.314	0.031	0.186	***	
	Urbanity	0.356	0.034	0.212	***	
	Social capital	0.113	0.028	0.068	***	
	Men	0.100	0.050	0.030	*	
	General trust	0.010	0.025	0.006		
	Innovativeness	0.919	0.049	0.554	***	
	Voluntarism	0.170	0.028	0.101	***	
	Materialism	0.104	0.028	0.062	***	
<b>Covariances:</b>						
General trust	Innovativeness	0.110	0.014	0.110	***	
	Voluntarism	0.245	0.014	0.245	***	
	Materialism	0.027	0.015	0.027		
Innovativeness	Voluntarism	0.284	0.014	0.284	***	
	Materialism	0.344	0.014	0.344	***	
Voluntarism	Materialism	0.087	0.016	0.087	***	
<b>Indirect and total effect:</b>						
Men indirect		0.396	0.051	0.118	***	
Men total		0.496	0.056	0.147	***	
N		5712				
$\chi^2$		5589.154			***	
df		211				
CFI		0.979				
NFI		0.978				

ENDOGENOUS VARIABLE	EXOGENOUS VARIABLE	B	SE	BETA	P	R <sup>2</sup>
RMSEA		0.067				

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . No estimated constants and variances reported.

In the second part of the analysis, we examine to what extent the socio-structural and habitual covariables of gender not only act as mediators but also as multipliers of social inequality in the sense of the intersectional approach. For this purpose, we focus on the interaction effects between gender and the covariables. The model calculated in the first step of the analysis is again calculated separately for both gender groups (whereby the mediation effects as well as the main effect of gender are removed; see Table 3). In the separate models for women and men, we find differences in some point estimators on access. While for men, having a job and helpful acquaintances as well as a positive orientation towards interactions with others facilitate access to sharing services, women attain more access when having a materialistic orientation towards sharing. Both men and women gain higher levels of access when possessing a higher degree of education and income, living in urban areas and exhibiting a heightened interest in trying out new things. However, comparing the strength of the gender-specific estimators (delta), only the effects of social capital and voluntarism can be interpreted as substantially different. Thus, the analysis supports that men benefit from helpful others and an orientation towards engagement in community issues while women do not.

**TABLE 3:** Structural equation model by gender

ENDOGENOUS: ACCESS	WOMEN				MEN				WALD TEST	
	B	SE	BETA	P	B	SE	BETA	P	DELTA	P
Education	0.368	0.030	0.291	***	0.368	0.030	0.293	***	0.000	
Working status	0.107	0.062	0.039		0.238	0.069	0.079	***	0.131	
Income	0.148	0.030	0.108	***	0.109	0.032	0.078	***	-0.038	
Urbanity	0.197	0.027	0.162	***	0.185	0.028	0.144	***	-0.012	
Social capital	0.028	0.023	0.025		0.118	0.024	0.103	***	0.091	**
General trust	-0.040	0.027	-0.030		0.018	0.028	0.013		0.058	
Innovativeness	0.666	0.037	0.495	***	0.732	0.039	0.523	***	0.066	
Voluntarism	0.045	0.029	0.033		0.128	0.030	0.091	***	0.083	*
Materialism	0.103	0.032	0.077	***	0.053	0.030	0.038		-0.050	
N	2895				2817					



ENDOGENOUS: ACCESS	WOMEN				MEN				WALD TEST	
	B	SE	BETA	P	B	SE	BETA	P	DELTA	P
$\chi^2$	3473.966									
p	0.000									
df	378									
CFI	0.987									
RMSEA	0.054									

*Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . No estimated constants and variances reported.*

## Discussion

In line with previous empirical examinations, we find a small raw gender gap in participation in the European sharing economy (in line with Eurobarometer, 2016). Previous studies in the US-context have found that age, ethnicity, socio-economic status (education and income), and urbanity are important predictors of sharing participation (Schor et al., 2016; Schor, 2017). Taking socio-structural covariables, such as SES, urbanity, or social capital, and also habitual orientations into consideration, the residual gender effect is smaller still, but remains significant. Thereby, our study based on a large-scale survey of European internet users confirms previous findings on the gender and social divides in sharing participation, which largely rely on data collected in the US (Smith, 2016).

Our analysis is based on Van Dijk's (2005) "digital technology access" model, which incorporates distinct and subsequent levels of access. We focus on the role of gender in sharing participation by examining both the effect of positional variables, such as socio-economic status, urbanity and social capital, and habitual dispositions. The latter were derived from research on the role of habitual predictors of sharing participation (Bucher et al., 2016; Eichhorn et al., 2020). Incorporating the habitus concept (Bourdieu, 1977) in our analysis allows for a more fine-grained understanding of how access to the sharing economy is gendered (Schor et al., 2016).

From a "doing gender" perspective (West & Zimmerman, 1987), our findings highlight the role of gender-specific habitus and social practices (Bourdieu, 1977). Prior research on the gender digital divide found that gender-specific social role expectations result in multiple challenges with regard to women's usage of online tools. Among those are gender stereotypes, attribution patterns, and stereotype threat as antecedents of ICT-critical attitudes (Cooper, 2006) and lower self-efficacy with re-

gard to handling technology resulting in a lower degree of online activities (Hargittai & Shafer, 2006; Van Deursen & Van Dijk, 2010; Hargittai & Shaw, 2015; Hoffmann et al., 2015). Following Bourdieu's (2002) notion of a gender-specific habitus, we find that men develop a stronger orientation towards the exploration and use of new technological assets and services. In the context of the sharing economy, these gendered patterns of habitus explain the largest part of the participation gap between women and men. Thus, innovation orientation as a gender-specific aspect of the ICT-related social habitus respectively facilitates or hampers the likelihood of men and women to engage in the appropriation of technical capabilities like usage of sharing platform services. Use of sharing services constitutes an instantiation of the more general use of technological assets that men utilise as a social practice to perform their gender role by expressing their orientation towards the appropriation of technology.

Access to the sharing economy is, to a smaller degree, also facilitated by a stronger labour market position and materialism in men. Women benefit from stronger educational and social resources. However, interaction analysis shows that women's access to sharing services is statistically unrelated to their social support network. This finding aligns with qualitative US-based work on time banks, which found shallow social networks facilitated by such sites favouring male usage (Schor & Vallas, 2021). From the perspective of intersectionality theory, women in fact dispose of stronger social capital, but are unable to convert this resource into better capabilities to utilise sharing services. In contrast, men are able to transform social capital into better access to the sharing economy, providing them with a reinforced advantage as gender and social capital are interacting positively in their case. For women on the other hand, we interpret this mechanism as a *relative* intersectional effect as they are not directly disadvantaged regarding their level of social capital. Instead, women do not utilise the opportunity to bolster access to sharing platforms through helpful others. This results in an increasing participation gap between men and women that is expanding with increasing access to social capital.

Studies on the gender digital divide have found that social loads, such as care work, lead to gendered digital activities like digital caretaking. Digital caretaking can be exemplified as researching health information or using e-mail or, in a more contemporary context, social media for kin-keeping purposes instead of leisure or entertainment (Kennedy et al., 2003; Bode, 2020). This women-specific interpretation of internet usage is also reflected in our results as we see how educational advantages instead of labour market position explain women's partaking. Hence, sharing is not a male practice *per se* that only coalesces with labour and material-

istic consumption practices, but also with traditional female practices.

Some limitations should be noted when interpreting the presented findings: First, we used cross-sectional data that does not allow realising a longitudinal perspective. Therefore, we had to simplify Van Dijk's model, especially regarding its sequential and iterative components. Second, we used data from an online consumer panel that allows for only limited inferences to the general population. Consumer panels tend to include younger and better-educated individuals with higher incomes (Bandilla et al., 2003; Lee & Valliant, 2009) and stronger interests in and practical experience with new information and communication technologies (Duffy et al., 2005; Fan & Yan, 2010). Thus, the recruitment of online participants likely reduced variance in online skills and material access. A middle-class bias is also to be expected with this type of survey (Wuggenig, 2007). As a result, status differences can be underestimated. Another aspect that deserves attention, especially in a study with a specific focus on the role of gender, is the conceptualisation and, ultimately, measurement of gender. While more recent work in this field suggests non-binary gender concepts that emphasise not only the difference between sex and gender but also between gender, gender identity and gender expression (for an overview, see Steidl & Werum, 2019), we apply the common binary gender concept as we study it as a socio-structural phenomenon that refers to the two socially or culturally objectified groups of men and women; and particularly the aspect of social objectification that gender still entails. In addition, non-dichotomous gender measures applied in cross-sectional surveys tend to result in small-n problems.

Finally, conceptualisations such as social habitus (Bourdieu, 1977) refer to an understanding of individual or group-specific pre-dispositions of decision-making that, at least in part, defy an interpretation and intensionalisation by the agent. Thus, studies of habitual differences typically rely on interpretive and reconstructive methodology (Ignatow & Robinson, 2017) that derives habitus as an open set of orientations. In our study, we use standardised survey methodology and theoretical deduction on the basis of previous qualitative studies (especially Bucher et al., 2016) to derive and test the statistical relevance of a limited set of dimensions of the social habitus of (potential) sharing service users. Further research into habitual orientations shaping differences in the use of new media services like sharing platforms would certainly be worthwhile, but are beyond the scope of the present study.

To summarise, the value of the theoretical and empirical approach and the findings and interpretations developed in this study lies in the successful application of

two established gender theories, ‘doing gender’ and intersectionality theory, to the contemporary social phenomenon of the sharing economy. By examining access to the European sharing economy based on the digital technology access model, we are able to gain a differentiated understanding of how personal, positional and habitual categories serve to shape a gendered use of sharing services. This novel combination of gender theories and quantitative empirical analysis demonstrates the complementary explanatory relevance of distinct gender theories for even the most recent of social and technological dynamics. It helps shed some light on both the traditionality and multidimensionality of gendered structures in the digital age.

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