



**Louvain School of Management
and
Norwegian School of Economics**

**Racial Discrimination in the Sharing Economy
Evidence from online experiments**

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Abstract

Racial discrimination in the sharing economy is a topic drawing increasing attention. The short-term rental company Airbnb implemented several initiatives aiming to limit discrimination on its platform. Yet, it did not solve the issue and the users' social responsibility involved in the peer-to-peer service adds complexity to the case.

Recent studies assessed racial discrimination in the sharing economy, and more particularly on Airbnb. This thesis analyses discrimination based on host's ethnicity in Airbnb's services with data from 2 online experiments in the aim to understand *who* discriminates, *why* do people discriminate and *what service* triggers discriminatory outcomes.

Data analysis provided cross-cultural insights between Norway and Belgium. Right-wingers and individuals with a high level of perceived outgroup threat appeared to discriminate against the outgroup host. Oppositely, left-wingers and individuals with a low level of perceived outgroup threat appeared to discriminate in favor the outgroup host. Results showed that people discriminate based on their self-connection with the apartment. In the home swap service context, the self-other overlap was also a basis for discrimination.

Finally, three nudges to tackle racial discrimination on Airbnb are suggested: encouraging mutual reviews, rating the accuracy of accommodation's pictures, and increasing information about the host. Further research is needed to assess their power in reducing implicit bias in the decision process.

Key words: Racial discrimination, Sharing economy, Airbnb, Users' social responsibility, Social identity, Self-object connection, Self-other overlap, Trust, Risk, Intimacy, Contamination, Political orientation, Perceived outgroup threat, Consumer Outcomes, Home Swap service, Outgroup favoritism, Nudges, Reputation mechanism, Reviews, Priming.

Preface

This thesis was written as part of the Double Degree Program between Louvain School of Management (LSM) and Norwegian School of Economics (NHH). It is part of a broader research project on digital discrimination conducted by the Department of Strategy and Marketing of NHH, and follows up a previous study realized by Klemsdal and Sundt (2017) for their master thesis.

This master thesis is one of a series of papers and reports published by the Center for Service Innovation (CSI). Centre for Service Innovation (CSI) is a coordinated effort by NHH to focus on the innovation challenges facing the service sector and involves 15 business and academic partners. It aims to increase the quality, efficiency and commercial success of service innovations and to enhance the innovation capabilities of its business and academic partners. CSI is funded through a significant eight year grant from the Research Council of Norway and has recently obtained status as a Centre for Research-based Innovation (SFI).

In this thesis, discrimination in the sharing economy and particularly on the Airbnb platform is discussed. This issue is drawing increasing attention nowadays both from Airbnb's users and academic researchers. Numerous articles and studies were published during the writing of this thesis, which made it both challenging and exciting. Hopefully, the findings and insights from the experiments reported, as well as the suggestions for further research, will help advance the research field.

Bergen, Norway – May 2018

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1 Introduction

1.1 Context

The sharing economy is growing and transforms consumption with new advanced ways to share (Belk, 2009). New technologies keep pushing the boundaries of possible interactions further than the limit imposed by physical contact. In this fast-moving era, internet and emerging technologies have enabled and eased transactions in new market places. Lots of businesses have arisen from that context, enabling strangers to e.g. share cars (RelayRides, Getaround) and car rides (BlaBlaCar, Uber, Lyft, SideCar), share or rent homes (CouchSurfing, Airbnb).

Airbnb operates in this context. The platform acts as an intermediary, connecting people looking for accommodation with private home's owners for short-term rentals. Compared to normal hotel bookings and stays, these peer-to-peer (P2P) transactions increase social connections (Schor, 2016). With Airbnb, travelers enjoy the social atmosphere and familiarity of the service (Möhlmann, 2015). Plus, they can get local insights and tips from their host (J. Kim, Yoon, & Zo, 2015; Zhu, So, & Hudson, 2017). In return, hosts get extra revenues and social gratification (Lampinen & Cheshire, 2016). In May 2017, Airbnb was valued at 31 billion U.S. dollars (Statista, 2018), which is more than the majority of hotel brands (Fraiberger & Sundararajan, 2015). Yet, Airbnb argues it does not aim to be a competitor of hotels, and rather generate a new market, based on the idea of "bringing people together through the better use of empty rooms" (Pickel, 2017, §2).

On paper, the sharing economy and services, such as Airbnb, develop *social solidarity*, *democracy*, and *sustainability* (Schor, 2016, p. 20), while creating a feeling of global community. In reality, this is not exactly the case.

The services offered by Airbnb are subject to discrimination based on sexual orientation (e.g. Ahuja and Lyons (2017); Cheng and Foley (2018)), gender (e.g. Gallagher (2017)), disabilities (e.g. Boxall, Nyanjom, and Slaven (2018)), and race (e.g. Edelman, Luca, and Svirsky (2017); Fisman and Luca (2016); Kakar, Voelz, Wu, and Franco (2017)). The P2P economy constitutes a regulatory dilemma due to the private status of the actors involved (Aloni, 2016). Unlike housing and hotel industry, Airbnb is not regulated by anti-discrimination laws (Jefferson-Jones, 2016; Todisco, 2014). The challenge lies in the transfer

of the social responsibility. Discrimination is not only a matter of *corporate* social responsibility in the traditional sense. In turn, the P2P context drives *user* social responsibility. Users are the ones deciding with whom they want to do business, and discrimination by customer is seldom regulated (Bartlett & Gulati, 2016). Airbnb implemented several initiatives and actions aiming at reducing discrimination. Yet, they mainly focus on discrimination towards guests, not towards hosts, and their actions do not yield satisfying results.

1.2 Research question

This situation sheds light on the need for a deeper comprehension of the mechanisms behind discrimination and the examination of potential solutions to eliminate biases. Racial discrimination on Airbnb has been the focus of several research (e.g. Edelman et al. (2017); Fisman and Luca (2016); Kakar et al. (2017)), but still lack understanding: some effects remain unclear and would require further investigation. In particular, the discrimination towards hosts is seldom addressed. It will be the focal point in this thesis. Throughout this paper, discrimination will refer to racial discrimination, unless otherwise specified.

First, uncertainty remains regarding the role of personal traits in discrimination in peer-to-peer online transaction. Second, the reasons why people discriminate are hypothesized but remain untested. Third, little is known about the difference in discriminatory outcome regarding the type of service (e.g. home sharing, home exchange). In addition, the global character of Airbnb questions the cross-cultural generalization of the findings. Finally, the higher-purpose of this stream of research is to tackle racial discrimination in online market places. Therefore, solutions to eliminate racial discrimination should be further developed and tested, in the perspective of being effectively implemented.

On this basis, this thesis focuses on the following research questions:

RQ1: Do people discriminate hosts based on race in the services offered on Airbnb?

RQ2: Do individuals' political orientation and outgroup threat perceptions moderate racial discrimination?

RQ3: Why do people discriminate based on host ethnicity?

RQ4: How does the type of service influence the manifestation of racial discrimination?

RQ5: What findings on racial discrimination can be cross-culturally generalized?

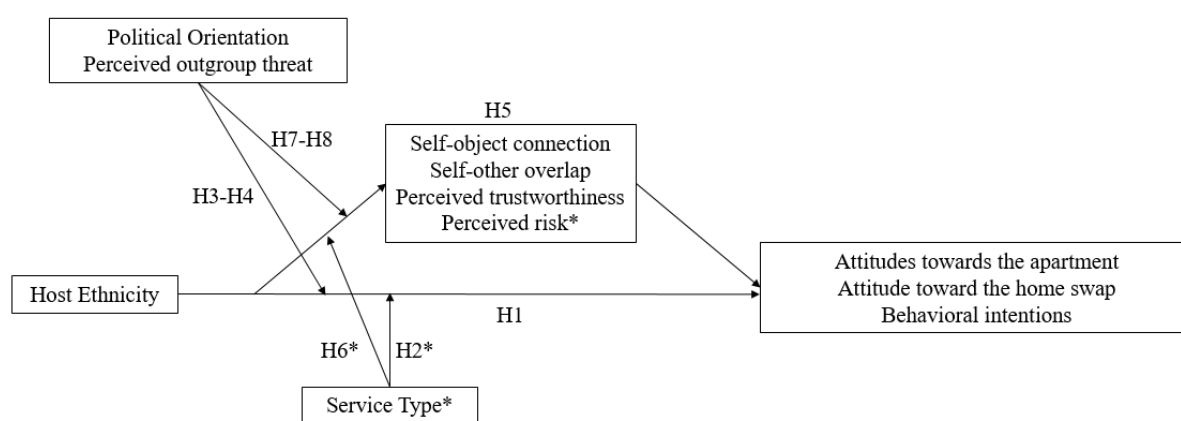
RQ6: How could racial discrimination against host in the services offered on Airbnb be tackled?

1.3 Structure

The body of this thesis is composed of 3 parts.

The first one is the literature review, which aims to give the reader the theoretical background to understand the concepts and challenges behind the terms *sharing economy* and *discrimination*. In addition, specific constructs related to mechanisms behind discrimination are discussed. They are essential to approach the experiments, which are dealt with in the second part.

The second part reports two studies – the first one conducted in Norway, and the second in Belgium – analysing the relation between host ethnicity and consumer outcomes. The proposed model (Figure 1.1) shows direct and indirect effects tested. The findings are expected to answer the first 5 research questions.



* Only tested in Study 2

Figure 1.1. Proposed model

The third part aims to answer the last research question and offers nudges to fight discrimination based on the literature and the results from the experiments. Directions for further research are also suggested.

2 Literature Review

The literature review covers the main topics in this thesis, i.e. sharing economy and discrimination. The case of Airbnb is discussed. In addition, a theoretical background is presented, and will further be used in the experiments reported.

2.1 The sharing economy

This section first defines the meaning of “sharing economy”. Then, the challenges related and their implications are discussed.

2.1.1 Definition

The concept of sharing economy was introduced by Lessig in 2008, referring to “collaborative consumption made by the activities of sharing, exchanging, and rental of resources without owning the goods” (Lessig, 2008, p. 143). Since then, new wordings related to sharing economy and collaborative experiences have emerged, such as “*collaborative economy*”, “*peer-economy*”, “*on-demand economy*”, “*platform economy*”, etc. These words are commonly misused as synonyms, while they are substantially distinct. The inaccurate interchangeability of the concepts has led the delimitation of the term “*sharing economy*” to be blurry (Botsman, 2015; Gobble, 2017; Petrini, Freitas, & Silveira, 2017; Schor, 2016). In fact, “*sharing economy*” has become the default term in the literature, with the advantage of encompassing all the other concepts, but the disadvantage to be imprecise and ambiguous (Gobble, 2017).

Highlighting this weakness, multiple articles focused on refining the definition. However, as pointed out by Schor (2016), designing a definition that would be both robust, and inclusive is complex. Rachel Botsman, author of “*What’s mine is yours*” (Botsman & Rogers, 2010), clarified what sharing economy encompasses and what it does not incorporate through contrasting the term with the definition of related concepts, as following.

Collaborative Economy: *An economic system of decentralized networks and marketplaces that unlocks the value of underused assets by matching needs and haves, in ways that bypass traditional middlemen.*

Sharing Economy: *An economic system based on sharing underused assets or services, for free or for a fee, directly from individuals.*

Collaborative Consumption: *The reinvention of traditional market behaviors—renting, lending, swapping, sharing, bartering, gifting—through technology, taking place in ways and on a scale not possible before the internet.*

On-Demand Services: *Platforms that directly match customer needs with providers to immediately deliver goods and services.* (Botsman, 2015)

As can be seen, contrary to what Belk (2007) claimed, the sharing economy can also implicate financial remuneration (Frenken & Schor, 2017).

The difference between *collaborative economy* and sharing economy is the emphasize put on the sharing aspect of the systems. Collaborative economy is a broader concept encompassing sharing economy (Petropoulos, 2017). Sharing economy also differs from *collaborative consumption*, which can be a part of the sharing economy, but focuses on consumption (Petrini et al., 2017, p. 43). In the collaborative consumption, emphasize is put on the peer-to-peer (or C2C) relation, without intermediary (Petrini et al., 2017).

On-demand service has been associated with sharing economy. However, these two words have to be handled carefully. Botsman (2015) cites *Instacart*, *Uber*, *Washio*, *Shuttlecook*, *DeskBeers*, *WunWun* as good examples of on-demand services in the sharing economy. Yet, some on-demand services can operate in traditional economy. It is the case for Pizza Hut and Amazon-one hour delivery, which are not based on the principle of sharing underused assets (Botsman, 2015).

Overall, the definition Botsman developed for sharing economy underlines two major elements: “sharing underused assets or services” and “directly from individual”.

The first aspect refers to the tendency to go against overconsumption, and to move toward collaborative economy. In fact, as stated by Schor (2016), businesses operating in the sharing economy create “markets in sharing” (p.11), where ownership is not the foundation anymore (Puschmann & Alt, 2016).

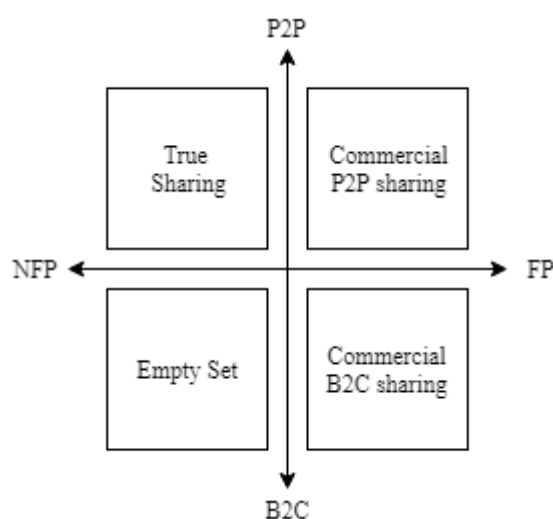
The second aspect of the definition highlights the difference with traditional economy and B2C companies. Indeed, here the main actors of the sharing economy are individuals,

creating consumer-to-consumer, also referred to as “peer-to-peer”, interactions through corporate actors facilitating the transactions. In the case of Airbnb, P2P business means that the company does not own the housing offered on the website, but only the platform and manages the transactions. In fact, Airbnb created a market place for people in demand of housing to meet people with matching offering. In the manner of social networks with user-generated content, Airbnb constitutes the ground hosting interactions.

2.1.1.1. Previous research on typology and frameworks

Schor (2016) identified four areas in which sharing economy activities can be found: recirculation of goods, increased utilization of durable assets, exchange of services, and sharing of productive assets (Schor, 2016, p. 9).

The literature tends to categorize businesses according to two criteria (Codagnone & Martens, 2016; Petropoulos, 2017; Schor, 2016). First, the type of provider can differ, being either peer-to-peer (P2P) or business-to-peer (B2P)/business-to-customer (B2C). Second, the platform orientation can be either for-profit (FP), either non-for-profit (NFP). Figure 2.1 presents a visual representation of this categorization.



**Figure 2.1. Typology of activities in the sharing economy
based on Codagnone and Martens (2016); Petropoulos (2017); Schor (2016)**

This framework allows us to refine the definition of the sharing economy, while distinguishing different activities operating under the same circumstances (Codagnone & Martens, 2016). Following this typology, Airbnb is identified as a peer-to-peer provider, for-profit oriented operating in a commercial P2P sharing setting.

Another way of mapping the sharing economy is the categorization of Acquier, Daudigeos, and Pinkse (2017). Figure 2.2 gives a visual overview of their approach.

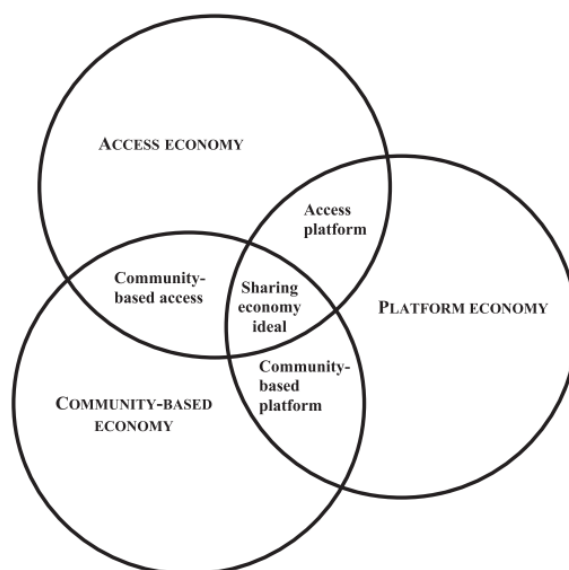


Figure 2.2. Cores of the Sharing Economy by Acquier et al. (2017, p. 7)

Acquier et al. (2017) distinguish access economy, community-based economy and platform economy based on the definition, advantages, inconvenient and paradoxes of the constructs. In the intersection of all three concepts is the ideal of the sharing economy. According to this framework, Airbnb can be categorized has an access platform. The P2P exchange takes place through an intermediary, i.e. the online platform, allowing peers to share and optimize the use of under-utilised assets. However, because of the monetary aspect involved, Airbnb cannot be identified as an example of sharing economy ideal.

2.1.1.2. Concluding highlights

To conclude, the definition of Richardson (2015) gives an upright general overview of the sharing economy, while encompassing both the definitions and typologies considered.

The sharing economy refers to forms of exchange facilitated through online platforms, encompassing a diversity of for-profit and non-profit activities that all broadly aim to open access to under-utilised resources through what is termed 'sharing'. (Richardson, 2015, p. 121)

2.1.2 Challenges

The sharing economy changed the way of doing business, faster than the environment could adapt. This is creating challenges regarding regulations and responsibility, trust, and – in the case of Airbnb – home sharing.

2.1.2.1. *Regulations and responsibility*

The peer-to-peer economy has known a recent rise facilitated by the consumerization of digital technologies (Sundararajan, 2014). Yet, current regulations are established with the aim of dealing with the traditional economy and do not necessarily suit the characteristics of the new economies. For example, most guidelines apply to professional service providers but not to *personal* providers. Hence, they do not apply to Airbnb, as hosts are not professional hotelier providers (Cohen & Sundararajan, 2015). Regulations must consider contemporary contexts and challenges. The debate concerns how to adapt: should the government or Airbnb have more regulatory power? (Pickel, 2017).

Sundararajan (2014) argues for less regulation not to impede innovation and opportunities in the share of services. Cohen and Sundararajan (2015) bring up the solution of self-regulatory approaches, underlining the difference between deregulation or no regulation, and the need of some form of regulation. Rather than having a supreme authority assessing the control and rules, they suggest a redistribution of the responsibility between the actors involved. In the case of Airbnb, the responsibility should then be managed by the hosts, guests and the company as the intermediary platform. Nevertheless, they affirm the need of some governmental regulatory policies to counter balance potential mismatch between the interests of the company and the society.

This debate about regulations is particularly important because the peer-to-peer economy implies a shift in responsibility. Hosts and guests have the freedom to choose the people they deal with (Bartlett & Gulati, 2016), which leaves the door open for discrimination without control from the intermediary.

2.1.2.2. *Trust*

Trust is multidimensional and complex (Botsman, 2012; Mittendorf & Ostermann, 2017). In the sharing economy, trust encompasses the reliance in the website's design (Yoon, 2002), the confidence in the technology and the faith in co-contracting parties, i.e. strangers (Dillahunst & Malone, 2015; Schor, 2016).

For example, some websites require credit card information to proceed to the payment (e.g. Airbnb, Uber, BlaBlaCar). The ease-of-use is important from a technical perspective. Yet, in terms of trust, the perceived risk appears as a driver for decision making (Van der Heijden, Verhagen, & Creemers, 2003). Hence, to overcome the fear of sharing this information, building online trust is crucial (Botsman, 2012; Hoffman, Novak, & Peralta, 1999).

In the sharing economy, trust in strangers is also decisive. Online strangers' trust is mitigated by the fear of other users in disguise (Friedman, Khan Jr, & Howe, 2000), and the imperfect information context possibly triggering moral hazard and adverse selection (Resnick & Zeckhauser, 2002). The perceived risk is a central consideration in the intention to share a room or apartment with a stranger (Mittendorf, 2017). In Western cultures, people tend to trust more ingroup members, compared to outgroup (Yuki, Maddux, Brewer, & Takemura, 2005). This means that, with equal information and in similar context, people tend to trust more strangers with closer nationalities or cultures, than culturally distant strangers. This, added to the arbitrary selection of co-contracting parties, lead trust mechanisms to produce discrimination.

2.1.2.3. *Home sharing*

2.1.2.3.1. **A different approach of intimacy**

A particularity of the sharing economy is its rule-changing character. In the sharing economy, *intimate* and *commercial* do not have antonymous meanings anymore (Kreiczer-Levy, 2015). Traditionally, intimacy occurred in *close relationships* and involved *self-disclosure*, *interdependence* and *trust* (Hahn, 2005; Prager, 2009; Sanderson, 2009), as opposed to commercial relations. The same requirement of proximity is found as a prerequisite of trust (Luhmann, 2017).

Belk (2014b) spotlighted: “sharing is more likely to take place within family, close kin, and friends than among strangers” (p. 1596). When it occurs, sharing takes a self-defining role (Belk, 1988) (see 2.4.2. Self-concept and self-congruence, p. 20), and is defined as “*sharing-in*” (Belk, 2014b; Ingold, 1986). However, when sharing involves strangers it becomes “*sharing-out*” (Belk, 2014b). In that sense, the literature argues for different level of intimacy in the sharing economy.

2.1.2.3.2. Home vs. House

Homes are self-meaning, which makes exchange and rental services of homes even more personal than e.g. car-sharing. The personhood theory developed by Margareth Radin (1982) asserts that property plays a role in individuals' self-development. Radin distinguishes two types of property: the "*personal*" which is essential to the identification, and the "*fungible*" which can be transferred innocuously (Schnably, 1993). In this framework, home is defined as personal and is intimately related to personhood as it carries memories, experiences and daily-life mental associations (Kreiczer-Levy, 2015; Radin, 1982).

However, one can also see the home as a house, without interrelation to personal identity. The level of attachment and identification to objects is subjective, and hence, objects are not equally important in the self-definition (Kreiczer-Levy, 2015; Stern, 2009).

The literature strongly agrees that the home acts as "a platform of human relations [...], presumed to foster intimate relations founded on familiarity, closeness, and trust" (Kreiczer-Levy, 2015, p. 72). In that sense, the home is more of a place than a thing, which provide a ground for social relations under the control of its owner (Austin, 2010). This vision distances the self-defining aspect of the home while still emphasizing closeness and intimacy. Hence, the renting of homes in the sharing economy is challenging the traditional definition of intimacy.

2.2 Racial discrimination

Racism and discrimination based on race are present in everyday life, including in online market places. Yet studied in multiple fields and with various approaches, the literature acknowledges the complexity of the case, which favors the persistence of discrimination and inequalities. Even though mentalities have evolved throughout decades, racial discrimination did not vanish. On the contrary, it evolved toward new forms of discriminatory actions adapted to the prevailing context. To understand this, some underlying concepts will first be clarified, i.e. discrimination and racism. Then the state of racial discrimination in online market places will briefly be examined.

2.2.1 Discrimination

Discrimination counts a considerable number of definitions across research fields. From a report of the National Research Council (2004), discrimination refers to “(1) differential treatment on the basis of race that disadvantages a racial group and (2) treatment on the basis of inadequately justified factors other than race that disadvantages a racial group” (Blank, Dabady, & Citro, 2004). This formalization has the advantage to be precise and complete for both social sciences and familiar usage (Quillian, 2006). Therefore, this understanding will be adopted throughout this paper, with a focus on racial discrimination.

In the literature, the term *discrimination* is often presented along with *prejudice*. While both discrimination and prejudice encounter generalization, the major difference between those two constructs is that prejudice refers to *attitude* whilst discrimination concerns *behavior* (Quillian, 2006). According to consumer behavior theories, such as the Theory of Reasoned Actions; attitude can predict behavior (Ajzen & Fishbein, 1977; Fishbein, 1967). As stated by Quillian (2006), “in most accounts, prejudice is the principal motivating force behind discrimination” (p. 301). Previous studies showed that stereotypes, as implicit and explicit attitudes, impact perceptions and judgement, which may turn into discriminating behaviors (Duncan, 1976; Quillian, 2006; Sagar & Schofield, 1980). However, the literature also acknowledges an attitude-behavior gap (Liska, 1984; Sheeran, 2002), i.e. attitude-behavior inconsistency. This implies that prejudice does not lead per se to discriminatory behavior (Quillian, 2006).

2.2.2 Forms of racism

According to Quillian (2006), “racism and associated terms are often taken to be practices and beliefs consistent with a system of racial oppression of one racial group by another” (p. 301). The term “*racism*” encompasses antagonistic convictions and actions towards a group defined as different based on race.

Dovidio, Gaertner, and Pearson (2017) suggest that manifestations of *old-fashioned racism* decreased in the last years to leave the floor to other subtle forms of racism instead. *Symbolic racism* comes from the perception of one group as a threat by the other, and is justified by political conservative values. *Modern racism* takes its roots in the persisting negative feelings acquired by individuals. *Ambivalent racism* refers to ambivalent attitudes conducting to negative treatment of certain people based on their race, but then compensated by more positive retro-actions. *Aversive racism* “characterizes the biases of those who are politically liberal (Nail, Harton, & Becker, 2003) and believe that they are not prejudiced, but whose unconscious negative feelings and beliefs get expressed in subtle, indirect, and often rationalizable ways” (Dovidio et al., 2017, p. 270). People subject to this kind of racism tend to react with discomfort, anxiety or fear (Dovidio et al., 2017).

Another form of subtle racism is *color blind racism*, which refers to the legitimization of racist actions or beliefs by abstract liberalism, naturalization, cultural racism or minimization of racism (Bonilla-Silva, 2002, 2017). Among these justifications, *abstract liberalism* constitutes the prevalent explanation, using political and economic liberalisms’ principles as diffuse reasons justifying racism (Bonilla-Silva, 2017).

As can be seen, various justificatory motives are hidden behind discriminatory outcomes, but all lead to the same consequence, i.e. discrimination.

2.2.3 Discrimination in online market places

Discrimination based on race is present in traditional market places (Riach & Rich, 2002). The rise of the web drove expectations for more equality (Leong, 2015). Yet, studies showed that online transactions comprised racial discrimination (Doleac & Stein, 2013), and as online market places are growing, it becomes crucial to raise the issue. In the labour market, racial discrimination arises from consumers, employers and fellow workers (Becker, 2010). In the sharing economy, consumer discrimination seems to prevail (Sundararajan, 2014).

2.3 The case of Airbnb

Operating in the sharing economy, the short-term rental platform Airbnb is evolving in a challenging context. The company is facing *functional* issues such as the lack of regulation (Pickel, 2017), and building trust in the technology and payment facilities (Newman & Antin, 2016). Yet, there are also issues related to *interpersonal relationships* between hosts and guests, leading to discriminatory outcomes. These involve safety and trust, as well as users' responsibility, which are discussed in this section. Since its creation, Airbnb undertook several actions and created guidelines to improve the sharing experience through their platform and reduce discrimination. These are also discussed further on.

2.3.1 Safety and trust

Safety and trust are crucial and closely related matters. In the beginning of Airbnb, one of the most important challenge was to create trust between users. The founders of Airbnb had to find ways to reduce the "stranger danger bias" (Newman & Antin, 2016). The design of the profile pages helped overcome anonymity as they include pictures, descriptions, social network links, and reviews. Yet, trust issues persist, partly due to perceived risk and uncertainty around safety.

Even though safety issues might only occur in a small proportion of the stays concluded through Airbnb (Pickel, 2017), some scary stories happened both to hosts and guests (e.g. Fergusson (2017); Lieber (2015)). In reaction to that, Airbnb increased the size and availability of its customer-service (Cohen & Sundararajan, 2015). They also worked on 6 initiatives presented on their website (Airbnb, 2018g). For instance, they implemented digital verification of identity (Sundararajan, 2014) and made the use of profile pictures of hosts and guests a mandatory requirement. Nevertheless, Airbnb's efforts do not seem to prevent utterly negative experiences from happening. Morgan Stanly has even forecasted a premature decline in growth for 2018 due to the customers' increasing concerns about privacy and safety (Fickenscher, 2017).

The actions taken aim to reduce anonymity and increase trust. Yet, a potential discrimination can arise from the pictures acting as racial cues (Ert, Fleischer, & Magen, 2016), and the increase propensity for trusting ingroup members (Yuki et al., 2005). In this sense, the

initiatives implemented provide ground for discriminatory outcomes (Edelman & Luca, 2014; Ert et al., 2016).

2.3.2 Users' responsibility

The sharing economy is challenging the classical frame of corporate responsibility. In 2017, a host got banned from Airbnb and was later fined by the Californian justice for discriminatory motives (Park, 2017). Discrimination arose between users, and even if it took place through the platform Airbnb, the company was not judged responsible for the discriminatory outcome. The shift from the *corporate* social responsibility to a *user* social responsibility is here clearly represented. The users' freedom to choose with whom they want to do business facilitates and maintains discrimination. Regulations related to discrimination by customers are weak (Bartlett & Gulati, 2016), and not adapted to the context of peer-to-peer market places.

2.3.3 Discrimination

Online market places have been thought of as having the potential to reduce racial discrimination (Leong, 2015). Yet, studies showed evidence of the persistence of discrimination, particularly on Airbnb (e.g. Edelman and Luca (2014); Edelman et al. (2017); Fisman and Luca (2016); Johnson and Guillard (2017); Kakar et al. (2017); Todisco (2014)).

When launching the platform, Airbnb's founders were not fully aware of this problematic and hence, were struggling to deal with discrimination as issues arose (Murphy, 2016). After receiving several law suits for discriminatory motives (e.g. Vara (2016)), Airbnb created its own nondiscrimination policy (Airbnb, 2016). Since November 1st, 2016, to use the platform, hosts must agree to rules encouraging them not to discriminate against guests (Fingas, 2016). Besides, other initiatives have been implemented such as the creation of "a permanent, full-time product team [of engineers, data scientists, researchers, and designers] to fight bias and promote diversity" (Murphy, 2016, p. 11). The company also offers online toolkits helping users uncover bias, e.g. *Another Lens* (News Deeply, n.d.) which brings users into self-reflection to "foster empathy and inclusion" (Cleave, n.d.), and the recently launched *Understanding bias and belonging Toolkit* (Airbnb, 2018h), which aims to "explore bias, discrimination, and their impact on belonging" (Airbnb, 2018a). Users are encouraged to sign up, but the completion of the toolkits is not required to use the platform.

The design of Airbnb's website has been modified to no longer display the host's picture in the search list, but only after the selection of a particular housing. A study showed that making the pictures less prominent reduced the gap of number of bookings between hosts' ethnicity in New York City (Mohammed, 2017).

2.3.3.1. *“Super” status and programs*

Since 2016, hosts can acquire the status of “superhost” by “providing great stays for every guest” (Airbnb, 2018f). In practice, superhosts are hosts achieving 4.8+ ratings overall, replying in less than 24 hours 90% of the time, hosting more than 10 bookings a year, and without any cancellations (Airbnb, 2018f), except under the conditions specified in their *Extenuating Circumstances Policy* (Airbnb, 2018i). The program rewards the most outstanding hosts (Roelofsen & Minca, 2018), with 4 types of benefits: “Increased visibility”, “Exclusive perks”, “Insider access”, and “Tools for their business” (Airbnb, 2018f).

This program has been launched to encourage and distinguish hosts who thrive to provide “consistent and professional experiences” (Shatford, 2018). Several researchers showed that response time, as well as acceptance and cancellation rates vary with guest's ethnicity (Edelman et al., 2017; Johnson & Guillard, 2017), indicating discrimination. Moreover, ratings on Airbnb are considerably high; 4.5/5 on average – in comparison, TripAdvisor's mean is 3.8/5 (Zervas, Proserpio, & Byers, 2015). On Airbnb, experiences are reported strongly positive (Newman & Antin, 2016). Hence, ratings do not enable users to distinguish outstanding hosts (Shatford, 2018). With this program bringing a more commercial approach (Gunter, 2018), hosts are evaluated on all requests they get, which should reduce the differences of treatment between guests. Similarly, Airbnb plans to launch a “superguest” loyalty program, offering bonuses to Airbnb's top guests (Bell, 2018). This program will be launched as a pilot in Spring and Summer 2018 and will be extended later on (Ducharme, 2018).

Pushing the concept further, Airbnb is currently working on launching “Airbnb Plus”. The “plus” status will be given to a “selection of high-quality, well-equipped homes with hosts known for great reviews and attention to detail” (Airbnb, 2018e) where each of these homes will be verified in person. In addition, “Beyond by Airbnb” is announced to be launched later this year (2018), and will focus on luxury resorts and “high-end homes: beachside villas

and mountaintop mansions” (Bell, 2018). By moving towards the standards of the hotels industry, discrimination is likely to be reduced.

2.3.3.2. *Instant book*

In 2016, Airbnb implemented the “Instant Book” in a perspective to reduce discrimination (Murphy, 2016). With the Instant Book, “guests who meet all [the host’s] requirements can book without requesting approval” (Airbnb, 2018b). This means that hosts accept the booking prior to getting access to the guests’ identity. This feature speeds up the reservation process and obstructs the participation of implicit biases in the decision making. Instant Book is set as a default option both for guests – at the searching stage –, and hosts – when listing their housing on the platform. The default option is nudging people to use the feature (Thaler & Sunstein, 2008), and incentivize hosts to use it by making their housing more prominent on research list. This action should help overcoming discrimination on Airbnb (Murphy, 2016), but accounts missteps.

First, hosts see disadvantages in the initiative. Because they are renting out their own home, hosts may want to avoid guests looking for a place to host parties (Airbnb Community, 2017; Breese, 2016). Hence, they would prefer to talk with the guests prior to accepting the booking, rather than cancelling the reservation. Trust-related issues persist. This decrease the willingness to enable Instant Book.

Second, to regulate cancellations, Airbnb set penalties and strict rules in their *Extenuating Circumstances Policy* (Airbnb, 2018i). Yet, for the Instant Book, hosts can still cancel the reservation, free of penalty, if they feel “*uncomfortable with a reservation*” (Airbnb, 2018d). This reason is broad enough to allow racial discrimination.

2.3.4 Remaining challenges

Overall, Airbnb undertook several actions but failed at eradicating discrimination. The initiatives are mainly aiming at reducing discrimination towards *guests*. The only action tackling discrimination towards *hosts* is decreasing the salience of hosts’ pictures.

This shows the complexity of the latter case where the shift from corporate social responsibility to user responsibility exacerbates the dilemma. In other words, it is normal that guests choose by themselves the house they want to rent, but this can lead to discrimination against some hosts. The freedom of choice of the customers makes it hard to

regulate discrimination (Bartlett & Gulati, 2016). As law struggles to punish discriminatory outcomes, other mechanisms should be developed to prevent discrimination to happen. Therefore, a deeper understanding of the mechanisms behind discrimination is needed and is addressed in this thesis.

The theoretical background developed in the next section, as well as the experiments reported further in this thesis and the nudges suggested, aim to provide insights to tackle discrimination.

2.4 Theoretical background

This chapter discusses underlying psychological mechanisms and theories explaining the persistence of discrimination. Social identity and intergroup theories examine discrimination through intergroup behavior, and the creation of group-related favoritism. Then come self-concept and self-congruence, explaining racial discrimination through self-distance. Trust and risk are also discussed as reasons behind outgroup derogation and discrimination. Finally, intimacy and contamination are considered due to their relevance in home rental and sharing services discrimination.

2.4.1 Social identity and intergroup theories

Groups create frames of self-reference, which allow individuals to identify themselves relatively to the other groups, as better or worse (Tajfel & Turner, 1979). Not only the group shapes identity, but also intergroup interactions, perceptions and behaviors, as well as intragroup influence (Terry, Hogg, & White, 1999).

Before going further in the topic, the terms *ingroup* and *outgroup* need clarification. An ingroup is defined as “any cluster of people who can use the term “we” with the same significance” (Allport, 1954, p. 37). This definition narrows the scope of ingroup to an aggregation of individuals united by relative oneness. By comparison, the outgroup consists of those not included in the ingroup. As can be seen, cognitive consistency is a key element of both inter- and intragroup relations (Cooper & Kugler, 2010).

2.4.1.1. *Social identity theory*

The social identity theory suggests that one’s identity is formed by a collective identification to a group (Tajfel, 1982). This theory highlights the importance of membership and its double role in identity construction (Terry et al., 1999).

First, group-references create *categorization* (Hogg & Terry, 2000), which emphasizes the difference between ingroup and outgroup. Each group develops their own shared codes, beliefs, and standards, which regulate experience and behavior of their members. The attitude-formation towards outgroup is influenced by the collectivity and their common norms (Hogg & Reid, 2006). It becomes a source of concerns when the group establishes common enemies acknowledged as such by all members due to peer pressure. This understanding is known as the *Group-Norm Theory of Prejudice* (Allport, 1954). This must

be nuanced as individuals comply to “a range of tolerable behavior” and not unconditional obedience (Allport, 1954).

Second, groups are a place of action for *self-enhancement*, implying one “seeks to favor the ingroup over the outgroup” (Terry et al., 1999, p. 228). Therefore, the simple existence of different groups induces ingroup favorable behaviors, i.e. ingroup favoritism (Böhm, Rusch, & Baron, 2018). In that sense, the foundation of the ingroup cohesion creates discrimination.

2.4.1.2. *Discriminatory outcomes*

According to (Brewer & Brown, 1998), there are two grounds for discriminating on intergroup basis: *ingroup favoritism* and *outgroup derogation*. Overall, individuals prefer to avoid threatening experiences. When there is fear associated with the outgroup, this creates perceived outgroup threat. A high degree of perceived outgroup threat, regardless of the origin, increases outgroup derogation and discrimination (Florack, Piontkowski, Rohmann, Balzer, & Perzig, 2003). Yet, Brewer (1999) argued that motivational factors for discrimination are rather positively directed toward the ingroup than invariably negatively directed toward the outgroup. The membership and sense of belonging to a group lead its members to discriminate the outgroup to promote the ingroup loyalty, power and existence, rather than direct antagonism and skepticism towards the outgroup.

According to Becker (2010), the greater a minority group (outgroup), the more likely discrimination will occur, as a response from the majority who fears their increasing power. Yet, the same situation could lead to a growth in awareness and understanding of this minority, reducing discrimination. Similarly, closeness and interaction reduce likeliness of prejudice.

There are many reasons why intergroup threat emerges in intergroup settings (Riek, Mania, & Gaertner, 2006). The literature contains many different intergroup theories, each aiming at identifying the profound source of group divergency and discrimination (see Böhm et al. (2018) for review of theories).

All in all, the social identity theory helps to understand society dynamics involved in identity shaping, while suggesting ingroup-outgroup setting as an underlying cause of the persistence of discrimination.

2.4.2 Self-concepts and self-congruence

Self-concept refers to one's perception of oneself (Shavelson, Hubner, & Stanton, 1976). More precisely, the self-concept is defined as the "totality of the individual's thoughts and feelings having reference to himself as an object" (Rosenberg 1979, p. 7). Nowadays, most studies agree on the multi-dimensional character of the self, and particularly on two components: the actual self and the ideal self (Astakhova, Swimberghe, & Wooldridge, 2017; Hosany & Martin, 2012; Rosenberg, 1989; Sirgy, 1982).

According to the self-congruity theory (Sirgy, 1982), consumers' behavior is influenced by the congruence between the self and the consumption object. Indeed, consumers compare the reflected image of an object to their self before considering its use or purchase (Cowart, Fox, & Wilson, 2007). In addition, consumer outcomes vary depending on whether the fit taps into the actual or ideal self (Astakhova et al., 2017). Overall, people thrive to maintain and enhance their self (Graeff, 1996; Sirgy, 1982), and consequently strive for self-congruity and cognitive consistency (Abelson et al., 1968; Cooper & Kugler, 2010; Sirgy, 1982). According to Sirgy (1982), this is referred to as "*self-consistency*", i.e. the "tendency for an individual to behave consistently with her view of herself" (p. 287).

For these reasons, self-congruence theories provide explanatory potential in assessing persistence of discrimination, and have been used in research on discriminatory outcomes (e.g. Amiot, Sansfaçon, Louis, and Yelle (2012); Boyanowsky and Allen (1973)). According to intergroup theories and the pursuit of ingroup conformity (Allport, 1954), self-categorization (Hogg & Terry, 2000), and self-distance from the outgroup (Quillian & Pager, 2010), self-congruence is less likely to target an outgroup. Two self-related concepts will be discussed in this section: *self-object connection* and *self-other overlap*.

2.4.2.1. *Self-object connection*

According to Belk (1988), material possessions are significant in the construction and the expression of the self. Consumption does not only define the self, but also communicates it to others – this is referred to as symbolic consumption (Hosany & Martin, 2012; Serpe, 1987; Wattanasuwan, 2005). Indeed, as stated, objects can have self-maintaining or self-enhancing roles. Furthermore, they can help identify an individual in the eyes of others, while transferring the main attributes from the object to the owner's personality (Kreiczer-Levy, 2015). Objects have aspects that are recognizable by others, and that individuals

choose to own in the aim of being identified with them (Knowles, 1983). In that sense, Kreiczer-Levy (2015) states: “objects reveal an owner’s likes and dislikes, her tastes and preferences, her status in life, or the choices she has made” (p. 69). Individuals make consumption choices with regards to what and who they want to be associated with and distanced from (Hosany & Martin, 2012). When a brand or an object is used as part of the self, a connection is created (Escalas & Bettman, 2005).

Prior research showed that the perceived reference group associated to a product or brand impacted consumer decisions (Bearden & Etzel, 1982; Swaminathan, Page, & Gürhan-Canli, 2007). Particularly, congruency between the ingroup and a brand leads to improved self-connection (Escalas & Bettman, 2005). Besides, when an outgroup is identified as dissociative, i.e. that a group wants to ward off, related products are unlikely to be chosen (White & Dahl, 2006). This implies that, due to the cognitive consistency previously mentioned, individuals would rather choose products they associate with the ingroup and deflect from outgroup related products. This influence will be stronger for individuals who see themselves with an interdependent self-construal view, as compared to an independent self-construal view (Swaminathan et al., 2007).

The literature mainly investigated brand-connection focusing on products (Astakhova et al., 2017; Rindfleisch, Burroughs, & Wong, 2008). However, Dwivedi (2014) examined brand-connection and self-concept implications regarding service, which allows the application of the theory to Airbnb.

2.4.2.2. *Self-other overlap*

Like the self-object connection, individuals create connections with each other, and sometimes to the point of “including the others in the self” (Aron & Aron, 1986, p. 19). This is the idea behind self-overlap: parts of identities are combined or inter-appropriated, creating a feeling of “*oneness*” (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997). Sense of self-other overlap can be created by i.a. feeling close, behave similarly, psychological connections, and similarities such as common values and interests (Aron, Aron, & Smollan, 1992). This psychological construct may occur between any individuals, regardless of their relationship (Myers & Hodges, 2012). Moreover, it can be more or less automatic (Galinsky & Moskowitz, 2000), depending on “differences in cognitive accessibility that are created by priming the self-construct” (Davis, Conklin, Smith, & Luce, 1996, p. 723).

The self-overlap lowers the distinction between the self and the other (Aron et al., 1992; Aron, Aron, Tudor, & Nelson, 1991; Myers & Hodges, 2012). Through a mediation effect on the perspective-taking (Galinsky & Moskowitz, 2000), the self-overlap leads to “more positive evaluations of another person, as well as less stereotypical judgments of that person’s group” (Myers & Hodges, 2012, p. 663). As a matter of fact, perspective-taking related to another person induces more empathy and compassion towards the person (Myers & Hodges, 2012). In an intergroup setting, self-overlap with the outgroup reduces the intragroup bias and enhances esteem for the outgroup (Galinsky & Moskowitz, 2000). However, Galinsky, Ku, and Wang (2005) argue that the outcomes are “*target-specific*”, rather than producing a general improvement in behaviors towards others. This implies that a self-overlap with a person from an outgroup will not necessarily lead to positive feeling towards the outgroup as a whole.

The literature also discusses the inclusion of ingroup in the self as ingroup identification (Ong, Burrow, & Cerrada, 2016; Tropp & Wright, 2001), and hence ingroup self-overlap. A high degree of self-overlap in an ingroup strengthens ingroup favoritism (Wright, Aron, & Tropp, 2002), which has been identified as potentially harmful for the outgroup (Terry et al., 1999) (see 2.4.1. Social identity and intergroup theories, p. 18).

2.4.3 Trust and risk

Trust is essential in building social and commercial relationships (Kramer, 2010; Mittendorf, 2016a). Trust has been studied across various fields and accounts many definitions (see e.g. Beldad, De Jong, and Steehouder (2010), Taddeo (2011), and Huurne, Ronteltap, Corten, and Buskens (2017) for overviews). One definition of trust widely used in the literature was developed by Mayer, Davis, and Schoorman (1995) as:

[...]the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party. (Mayer et al., 1995, p. 712)

This definition depicts four features of trust: the presence of a *trustor* and a *trustee*, *vulnerability*, *produced actions*, and *subjective matters* (Y. D. Wang & Emurian, 2005, p. 111). Those characteristics are also valid when it comes to online trust (Y. D. Wang & Emurian, 2005), and are inherent to the relations involved in the sharing economy (Huurne et al., 2017). As highlighted by Botsman and Rogers (2010), trust is a key component of

collaborative consumption as it creates relationships that would not have taken place outside of the sharing economy (Luca, 2017).

Previously, familiarity has been assessed as a condition for trust (Luhmann, 2017), particularly in the context of decision making (Gefen, 2000). However, nowadays, in the sharing economy and especially on peer-to-peer platforms, relations involves strangers (J. Wu, Ma, & Xie, 2017). Those relationships are traditionally based on *repel* and distance (Tonner, Hamilton, & Hewer, 2016). In addition, environments such as online platform accounts increase complexity and uncertainty (McKnight & Chervany, 2001; Mittendorf, 2016a). Managing the uncertainty requires building *trust* in combination with decreasing *perceived risk* (Nicolaou & McKnight, 2006).

Therefore, there is an extensive need for trust in order to proceed to the transaction (M.-J. Kim, Chung, & Lee, 2011; Luca, 2017). Trust decreases the perceived complexity in the society (Luhmann, 2017) and hence, helps overcome uncertainty and risk (Mittendorf, 2016a; Schoorman, Mayer, & Davis, 2007). Several studies have shown that trust is a predictor of consumer purchase attitudes (Teo & Liu, 2007), intentions (Oliveira, Alinho, Rita, & Dhillon, 2017; Ponte, Carvajal-Trujillo, & Escobar-Rodríguez, 2015), and behavior (Gefen, 2000; H.-W. Kim, Xu, & Gupta, 2012; S. W. Wang, Ngamsiriudom, & Hsieh, 2015).

2.4.3.1. *Perceived trustworthiness*

In the model of trust developed by Mayer et al. (1995), three items are suggested as influencing the perceived trustworthiness of the trustor. These are: ability, benevolence and integrity.

Although the three are important, benevolence – defined as “demonstrating concern for the welfare of others” (Whitener, Brodt, Korsgaard, & Werner, 1998, p. 517) – might be the most influential factor of trust on sharing economy platforms as both users and the company aim to create it (C.-C. Wu, Huang, & Hsu, 2014). Particularly, this is the kind of trust Airbnb thrives to build (Newman & Antin, 2016). Moreover, interpersonal benevolence is argued as having “a stronger effect on a buyer’s commitment” (C.-C. Wu et al., 2014, p. 191), compared to other kind of trust (Ganesan & Hess, 1997). In addition, benevolence has been assessed as a key determinant in predicting consumer outcomes (C.-C. Wu et al., 2014).

In the frame of the social identity theory, benevolence is more likely to be perceived in close interpersonal relationships, i.e. ingroup (Hofer, Chasiotis, & Campos, 2006; Weisel & Böhm, 2015), and is sometimes even depicted as a characteristic of ingroups (Brewer, 1999; Brewer & Brown, 1998). Yet, the lack of trust towards an outgroup does not always imply active distrust (Brewer, 1999).

2.4.3.2. *Perceived risk*

The literature emphasizes the relation between trust and perceived risk in the perspective of overcoming uncertainty (Huurne et al., 2017; Mittendorf & Ostermann, 2017; Nicolaou & McKnight, 2006).

It is not clear if the perceived risk influences trust (Huurne et al., 2017; Yang, Lee, Lee, Chung, & Koo, 2016), if trust influences perceived risk (Teo & Liu, 2007), or if there are moderation effect of one on the other (Mayer et al., 1995; Nicolaou & McKnight, 2006). Overall, models agree on an effect of trust and perceived risk on behavioral outcomes (Mayer et al., 1995; Mittendorf & Ostermann, 2017; Verhagen, Meents, & Tan, 2006).

Stapel, Reicher, and Spears (1994) argued the relevance of self-categorization in the perception of risk. From social identity theory, categorization increases intergroup distance (Allport, 1954; Terry et al., 1999), and hence increases the potential for risk perception towards the outgroup (Quillian & Pager, 2010; Tajfel, 1982).

2.4.4 Intimacy and contamination

Traditionally, the law distinguishes property related to private use and consumption, and commercial property (Kreiczer-Levy, 2015). The sharing economy has faded this dichotomy and services encounters, like Airbnb, allow people to rent (commercialize) their home (private place of intimacy).

Kreiczer-Levy (2015) underlines several types of housing offered on Airbnb. On one side of the scale, hosts rent a house they never used themselves to get some extra revenues. On the other hand, some people are sharing the home they live in, i.e. their “*intimate space*” (Kreiczer-Levy, 2015, p. 81), with strangers. The challenge of this latter case is that the rented housing was designed for private use, which traditionally involves family and close friends. Hence, implicating strangers may create a feeling of intrusion for the owner of the house (Lampinen, Lehtinen, Cheshire, & Suhonen, 2013). Several barriers apply to access-

based services (Hazée, Delcourt, & Van Vaerenbergh, 2017), such as those offered on Airbnb (Aloni, 2016). This complexifies the renting of a stranger's home (and the renting to a stranger).

Hazée et al. (2017) identified the four barriers of access-based services (ABS) as being *complexity*, *reliability*, *contamination*, and *responsibility*. The first two are functional, while the latter two are psychological barriers. Contamination refers to “customer's perceived contamination of the tangible features that come into actual and/or imagined physical contact with others” (Hazée et al., 2017, p. 447). This explains why most people engaging in home exchange keep their home impersonalized (Tonner et al., 2016). This theory aligns with the findings of Schroeder, Fishbach, Schein, and Gray (2017), arguing that greater distance is preferred in the case of functional intimacy.

People prefer to avoid interpersonal contamination (Bucher, Lutz, & Fleck, 2017), which can become a basis for discrimination. In particular, outgroups that are “perceived to be subjectively «foreign»” (Murray & Schaller, 2016, p. 91) are more subject to perceived contamination.

2.5 Contribution to the literature

The literature assessed the existence and persistence of discrimination in an online environment (Dovidio et al., 2017). Airbnb has already been studied in that regard (Aubry, 2017; Cui, Li, & Zhang, 2017; Edelman & Luca, 2014; Jefferson-Jones, 2016; Todisco, 2014). In the United-States, Edelman et al. (2017) found evidence of discrimination against African-American guests, compared to White guests. Kakar et al. (2017) assessed discriminatory outcomes against Hispanic and Asian hosts compared to White hosts in San Francisco. In France, Johnson and Guillard (2017) evaluated discrimination towards Muslims in the bed & breakfast industry, with implications for online market places.

Overall, these studies confirmed the existence of online discrimination towards outgroups. Yet, much of the situation remains unstudied. It has not been determined whether certain people are more likely to discriminate, i.e. whether (and which) personal traits come into play. Studies did not assess which of the various mechanisms behind discrimination described in the literature are explain online discriminatory outcomes. The research of Edelman and Luca (2014) included different types of Airbnb accommodation (entire place and shared bedroom). However, it is not clear yet to what extent the type of service influences the outcomes.

All in all, there is a gap in the literature regarding *who* discriminates and *why* does discrimination occur. Furthermore, the effect of the *type of service* remains unclear.

Klemsdal and Sundt (2017) addressed these questions in their research on the effects of the hosts' ethnicity on consumer outcomes. They demonstrated the existence of conditional effects of personal traits and mechanisms behind discrimination. They introduced a hypothetical home swap service in a within-subject design and found differences in the willingness to swap homes for the ingroup and the outgroup host. The study was conducted on a student sample in Norway, but needs replication on a larger and more representative sample to validate results (Hanel & Vione, 2016).

Hence, the first objective of this thesis is to further address the questions of *who*, *why* and in *what service*-contexts discrimination is likely to take place. Data from a larger experiment conducted in Norway are analyzed and reported, in the perspective of validating the results found by Klemsdal and Sundt (2017).

The second objective is to explore more deeply the effects of the type of service. In study 2, two different services were introduced as additional manipulated conditions to the host's ethnicity, in a between-subject design. Respondents were presented either the normal rental service Airbnb currently offers or a scenario involving a hypothetical home swap service. The procedure is further developed in Study 2, 3.3.1. Methodology, p. 49.

The third objective is to draw cross-cultural generalizations from a similar study conducted on a Belgian sample. The akin models used in both studies, later referred as Study 1 and Study 2, enabled us to draw a cross-cultural comparison of the consumer outcomes (Matsumoto, 1996).

Finally, the recent rise in interest about discrimination in online market places and number of related research express the importance of the subject. The need for actions aimed at minimizing discrimination in the sharing economy is real, and can be met only with a comprehensive understanding of the phenomenon. Therefore, the last objective of this thesis is to suggest nudges – in the sense of Thaler and Sunstein (2008) – to decrease discrimination on Airbnb, based on the experiments and the existing literature. Possible directions for further experiments will also be discussed.

3 Experiments

Two experiments were set up to further investigate the effect of the host ethnicity on the attitudes and behavioral intentions of Airbnb consumers. The first study reports results from a large sample in Norway, while the second gather data from a smaller sample in Belgium. A similar experiment was conducted by Klemsdal and Sundt (2017) for their master thesis. The present research is built on their findings for students in Norway and therefore wields a similar approach.

3.1 Introduction

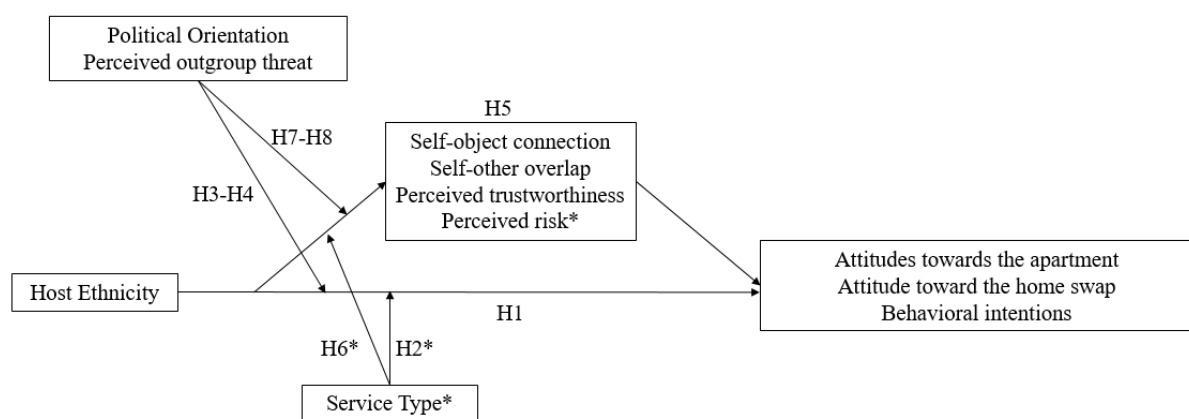
There are several purposes to these experiments. The first study aims at overcoming the weaknesses of the student sample used in a previous research in Norway done by Klemsdal and Sundt (2017). The purpose is to validate the results with a larger, more representative sample of Norway. The second study was designed to test the moderation effect of the type of service on the attitudes and behavioral intentions of the consumers, and its interaction effect with the host's ethnicity. Furthermore, this study aims to assess the cross-cultural validity of the results on a Belgian sample.

Study 1 aims to validate the results found in Klemsdal and Sundt (2017) in a larger and more representative sample in Norway. In Klemsdal and Sundt (2017), the sample was only made of students, which can carry age-effects (Srivastava, John, Gosling, & Potter, 2003) and be problematic for result inference to a population (Hanel & Vione, 2016). Particularly when it comes to *political orientation* and *perceived outgroup threat*, students may have different attitudes than the rest of the population (Hanel & Vione, 2016), which may impact the results. Moreover, the outgroup host's ethnicity tested has been changed. Klemsdal and Sundt (2017) presented an Iraqi outgroup host, as they argue Iraqis are one of most represented group of Muslim immigrants (IMDi, 2014; SSB, 2017b), known to be more subject to negative attitudes in Norway than other groups of immigrants (IMDi, 2014). For this study, the chosen outgroup host is Somalian. Reports showed a larger representation of Somalian immigrants and higher degree of negative attitudes towards Somalians than other immigrants groups (ECRI, 2015; IMDi, 2010; OSF, 2013; SSB, 2017a). By choosing this ethnicity for the outgroup host, the mono-operationalization of the independent variable, i.e. testing only one example of the treatment (Heppner, Wampold, & Kivlighan, 2007), is

avoided. Participants were asked about their attitudes towards a potential home swap service, as a supplementary consumer outcome.

The Study 2 aims to test the cross-cultural validity of these results in Belgium, using a between-subject design for stronger results (Campbell & Stanley, 2015; Christensen, Johnson, Turner, & Christensen, 2011). The chosen ethnicity for the outgroup host is Moroccan. Moroccans are the largest group of immigrants in Belgium (De Witte & Charlier, 2014; Manço, 2015; MPI, 2012; World Population Review, 2018), and one of the least integrated (ILO, 2011; Okkerse & Termote, 2004; Ouali & Cennicola, 2013; SPF Emploi Travail et Concertation sociale, 2017; UNIA, 2017). Besides ethnicity, the service type to which participants were exposed was also manipulated. Respondents were either presented the normal rental service that Airbnb currently offers, or a hypothetical home swap service of Airbnb. This design of study was chosen to test the existence of moderating effects of the different levels of intimacy embedded in each type of service.

3.1.1 Conceptual model



* Only tested in Study 2

Figure 3.1. Proposed model

The proposed model (Figure 3.1) presents the different hypotheses about the effect of the *host ethnicity* (independent variable) on the *attitudes and behavioral intentions* of the consumers (dependent variables). Both direct and indirect causal relationships are expected. The effect of the host's ethnicity is hypothesized as being mediated by four variables, identified as *self-object connection*, *self-other overlap*, *perceived trustworthiness* and *perceived risk*. Both direct and indirect effects are also hypothesized as being moderated

by two individual difference factors; *political orientation* and *outgroup threat*. In study 2, the *service type* manipulated was added as a third moderator.

3.1.2 Hypothesis

The model is made up of 8 hypotheses. They are all built on the theory developed in 2.4. Theoretical background, p. 18. The first hypothesis postulates the main effects of the independent variable, the host ethnicity, on the consumer outcomes. Hypotheses 2 to 4 refer to moderation effects. Hypothesis 5 focused on mediation effects. Lastly, hypotheses 6 to 8 investigate further indirect effects of the moderators through their influence on the mediators. The hypotheses 2, 5d, 6, 7d and 8d will only be tested in Study 2 as the variables involved – service type and perceived risk – were not tested in Study 1. Those are marked with an asterisk throughout the paper.

3.1.2.1. *Main effect*

The literature about intergroup theories drives expectations in terms of consumer outcomes. In particular, the social identity theory assessed ingroup favoritism (Böhm et al., 2018; Brewer & Brown, 1998). In addition, racial discrimination has been identified to exist in the sharing economy (Edelman et al., 2017; Fisman & Luca, 2016; Klemsdal & Sundt, 2017; Todisco, 2014). The studies aim to further test the discriminatory effect of the outgroup host on different consumer outcomes, i.e. *attitude towards the apartment*, *attitude towards the home swap service* and *behavioral intentions* towards using the service. Therefore, the following is hypothesized:

H1: The outgroup host will have a more negative effect than the ingroup host on a) the attitude toward the apartment, b) the attitude toward the home swap service, and c) the behavioral intentions.

3.1.2.2. *Moderation effect*

In Study 2, the *service type* to which participants have been exposed, i.e. normal rental or home swap service, implied different levels of involved risk, intimacy intrusion, and required trust, to only mention a few (Andriotis & Agiomirgianakis, 2014; Forno & Garibaldi, 2015; Hazée et al., 2017; Huurne et al., 2017; Tonner et al., 2016). In particular, the home swap service includes several specific barriers to adoption such as *complexity*, *reliability*, *contamination*, and *responsibility* (Hazée et al., 2017). Those barriers are generally more difficult to overcome when they are linked to the outgroup as compared to

the ingroup (Murray & Schaller, 2016) (also see Social identity theory: Tajfel (1982); Tajfel and Turner (1979)). Based on these arguments, a moderation effect of the service type is expected and is formulated in the following hypothesis:

H2*: The negative effect of the outgroup host postulated in H1 will be stronger in the home swap service.

Prior studies assessed the impact of personal characteristics on consumer outcomes (e.g. Homburg and Giering (2001), Im, Bayus, and Mason (2003)). Therefore, personal characteristics are expected to come indirectly into play.

The *political orientation* relates to how people tend to reason. Left-wingers use moral reasoning (Emler, Renwick, & Malone, 1983), while right-wingers tend to be driven by fear and uncertainty (Jost, Glaser, Kruglanski, & Sulloway, 2003b), and aims to protect conformity of traditional social norms (Murray & Schaller, 2016). As an illustration in terms of consumer outcomes, politically left-oriented people have been proven as discriminating in favor of outgroup (based on race) – which is known as the *reverse discrimination¹ effect* (Nail et al., 2008). This leads us to hypothesize the moderation effect of the political orientation as follows:

H3: The negative effect of the outgroup host postulated in H1 will be stronger for right-wing participants.

Besides that, outgroup threat has been assessed as impacting consumer outcomes (Stephan & Stephan, 2000, 2009). However, the degree of *perceived outgroup threat* is personal. The potential underlying discriminatory behavior dwells in the social, economic, and physical distance between individuals (Becker, 2010), which varies for everyone. Therefore, the moderation effect of the perceived outgroup threat in H4 is hypothesized.

H4: The negative effect of the outgroup host postulated in H1 will be stronger for participants with higher degree of perceived outgroup threat.

¹ Reverse discrimination can also refer to racial discrimination against White (Pincus, 2008). Yet, throughout this thesis, the reverse discrimination *effect* in the sense of Nail, Harton, and Barnes (2008) will be used.

3.1.2.3. *Mediation effect*

The literature assessed the importance and influence of self-congruence, and particularly *self-object connection* and *self-other overlap*, on consumer outcomes (see 2.4.2. Self-concepts and self-congruence, p. 20). Moreover, perception of *trust* and *risk* are known to be key factors in decision making process, especially online (Comegys, Hannula, & Váisänen, 2009; D. J. Kim, Ferrin, & Rao, 2008). According to the social identification theory (Tajfel, 1982; Tajfel & Turner, 1979), the ethnicity of the host influences those four constructs (Murray & Schaller, 2016). Therefore, mediating effects are assumed, postulated in H5.

H5: The effect postulated in H1 will be mediated by a) self-object connection, b) self-other overlap, c) perceived trustworthiness and d) * perceived risk.

Based on the theory developed in 2.4.2. Self-concepts and self-congruence, the self-object connection, self-other overlap and perceived trustworthiness are expected to be lower for the outgroup host, strengthening the negative effect of the outgroup host on the consumer outcomes. The perceived risk is expected to have the opposite effect and be higher for the outgroup host, strengthening the negative effect of the outgroup host on the consumer outcomes.

3.1.2.4. *Moderated mediation*

As stated formerly in the moderation section, home exchange is an access-based type of service and hence, has several barriers to adoption (Hazée et al., 2017). They are even more challenging to overcome when they are related to outgroup (Murray & Schaller, 2016) (aslo see Social identity theory: Tajfel (1982); Tajfel and Turner (1979)). The level of intimacy implied by swapping houses might then also affect the proposed mediators. These arguments lead us to the following hypothesis, only tested in Study 1:

H6*: The indirect effects postulated in H5 are moderated by the service type.

The self-object connection, self-other overlap and perceived trustworthiness are expected to be lower for the outgroup host in the home swap scenario, strengthening the negative effects of the outgroup host on the consumer outcomes. The perceived risk is expected to be higher for the outgroup host in the home swap scenario, strengthening the negative effect of the outgroup host on the consumer outcomes.

The personal biases are also expected to have an impact on the self-object connection, self-other overlap, perceived trustworthiness, and perceived risk.

Extreme political orientation, as compared to moderate, lead to stronger principled-reasoning (Emler et al., 1983; Greenberg & Jonas, 2003), i.e. equalitarian for left-leaning individuals (Neumayer, 2004), conservative and avoiding uncertainty for right-leaning individuals (Jost, Glaser, Kruglanski, & Sulloway, 2003a; Jost et al., 2003b). Because the literature suggests that conservatives are more likely to engage into outgroup distancing and avoidance (Murray & Schaller, 2016), H7 is hypothesized as follows.

H7: The indirect effects postulated in H5 are moderated by the political orientation.

Self-object connection, self-other overlap, and perceived trustworthiness are expected be lower for the outgroup host for right-wing participants, strengthening the negative effect of the outgroup host on the consumer outcomes. Oppositely, perceived risk is likely to be increased for right-wing participants.

Through intergroup theories (Allport, 1954; Tajfel & Turner, 1979), *perceived outgroup threat* is assessed as impacting self-congruence, as well as perception of risk and trust. The outgroup member is likely to decrease potential for self-congruence and trust, while increasing perceived risk (Murray & Schaller, 2016). On that basis, H8 is postulated as:

H8: The indirect effects postulated in H5 are moderated by the perceived outgroup threat.

Particularly, the self-object connection, self-other overlap, and perceived trustworthiness are expected to be lower for the outgroup host for participants with a higher perceived outgroup threat, strengthening the negative effect of the outgroup host on the consumer outcomes. Conversely, the perceived risk is expected to be higher for the outgroup host.

3.2 Study 1

Preliminary remark: the data used for Study 1 were collected by the research team in charge of the broader project about Digital Discrimination at the Norwegian School of Economics. Access was given for the purpose of this thesis.

3.2.1 Methodology

An online survey was created to test the suggested model and hypotheses. Participants were subjected to a fictitious Airbnb announce with either an ingroup host (Norwegian), or an outgroup host (Norwegian-Somali) and were asked about their attitudes and behavioral intentions. This section will present the research design, manipulations, procedure and measurements used in the Study 1.

3.2.1.1. *Research design*

An *experimental research* was conducted in order to test causality (Churchill & Iacobucci, 2006). Furthermore, *between-subject design* was chosen. This method exposes participants to only one scenario, as opposed to a within-subject design where participants are presented several or all scenarios (Greenwald, 1976). In the study, participants were presented only one of the host. There are two main advantages with this approach. First, this avoid adjusted answers based on a reference or comparison point created when being exposed to the first scenario (Charness, Gneezy, & Kuhn, 2012). By avoiding multiple treatments interference, the external validity is strengthened (Campbell & Stanley, 2015). Second, this lowered the risk of hypothesis guessing regarding the purpose of the survey. Indeed, by being presented only one scenario, respondents could hardly guess that the host ethnicity was tested. Showing them several times similar scenarios with only the ethnicity differing would have increased the likeliness to find out the tested conditions, which would have hurt internal validity of the results (Christensen et al., 2011).

The attitudes towards the home swap were tested in a *within-subject design*. The main two strengths of this approach are statistical power, due to the increased number of observations gathered, and lower error variance arising from individual differences, as individual are the same in each treatment (Hall, 1998; D. M. Lane, n.d.). Moreover, the *carryover effects* (Hall, 1998) are expected as being insignificant. The addition of the home swap questions did not considerably extent the experiment duration (the survey took around 10 minutes to

complete). Hence, *fatigue* should not impact observations. In addition, the exposure to the normal rental Airbnb service preceding the hypothetical home swap service is not likely to have led to *practice* effect.

3.2.1.2. *Manipulations*

Two treatment conditions were developed to test the effect of host ethnicity on consumer outcomes. The first condition involved an ingroup host (Norwegian), and the second, an outgroup host (Norwegian-Somali). Both were presented in the context of the normal rental service Airbnb offers. The treatments used are available in appendix A.

Somalian ethnicity was chosen for the outgroup host as it was identified as one of the ethnicity the most likely to be subjected to discriminatory outcomes (see 3.1. Introduction, p. 28). The descriptions of the hosts were identical except for names, photo and ethnicity cues. They were expanded with details (i.e. hosts were said as being students, living in Copenhagen) in the interest of realism.

Names, even presented alone, are likely to cause discrimination and should hence be carefully chosen (e.g. Bertrand and Mullainathan (2004); Carpusor and Loges (2006)). For the Norwegian host, the most popular name among 25-years old Norwegians was chosen: Martin (Klemsdal & Sundt, 2017; SSB, 2016). In Norway, immigrants usually have names that refer to the tradition of country of origin (Reisæter, 2012). Therefore, the Norwegian-Somali host was named Abdi, as this is one of the most popular Somalian names (Roes, 2008; UiB, 2007).

Pictures were chosen on database website. The profile pictures come from PhotoStock for the Norwegian host, and from Creative Commons' Flickr for the Somali host.

3.2.1.3. *Procedure*

3.2.1.3.1. **Recruitment**

Participants were panels member recruited by Norstat, a data solution provider. The pre-recruited panel sample was chosen to reach a high number of respondents, which decrease the probability of sample errors and provide higher degree of accuracy in generalization than with other non-probability sample (Fricker, 2008).

3.2.1.3.2. Participants

587 answers were totalized as fully completed. Respondents who did not success the attention check, as well as those who went through the Airbnb announce in less than 7 second were removed. Three host conditions were presented, i.e. ingroup, outgroup with ingroup symbol, and outgroup hosts. Only the two conditions relevant for this thesis (ingroup and outgroup host) were considered. 388 observations were valid for our data analysis. This sample is made of 44.6% women (n=173) and 55.4% men (n= 215). 94.3% of the sample describes its ethnic origin as Norwegian, and the average age is 50 years old. Regarding their acquaintance to Airbnb, 23.2% of the respondents stated having already used the platform either as guest (20.4%), host (1.8%), or both (1%). 76.8% never used it.

3.2.1.3.3. Questionnaire

The survey was presented in Norwegian (appendix B). Participants were allocated randomly to one of the host condition. When showing the apartment description and the host profile, a timer of minimum ten second was set for insuring a reasonable attention-time. The survey took less than ten minutes to be completed. Yet, some respondent took a longer time making the average responding time 210 minutes. Data showed more time spent on the first pages (description and explanation) which might be due to breaks or waiting-time before taking the survey. Hence, response time is influenced but not the quality of answer. In addition, not many statistical differences were found between the long-response time observation (>30min) and the others (appendix D.1). Therefore, and to strengthen statistical power, no answer was removed due to excessive response-time.

At the end of the survey, respondents could leave comments before accessing a debrief stating the fictitiousness of the manipulations.

3.2.1.4. Measurements

In the online surveys, participants were asked about their attitudes and behavioral intentions towards the apartment and service (also referred to as *consumer outcomes*), but also about personal treats. Likert scales were chosen, widely used in marketing (Alexandrov, 2010). Likert scales have great validity for large samples (n>100) and allow meaningful comparison of sub-groups (Hartley, 2014). Results can be analyzed parametrically (Jamieson, 2004; Norman, 2010). 11-point Likert scales were chosen for their increased sensitivity compared to 4-, 5- and 6-point scales (Leung, 2011).

3.2.1.5. *Dependent variables*

3.2.1.5.1. **Attitude towards the apartment**

The *attitude toward the apartment* was measured with a combination of variables.

First, participant were asked about their *liking of the apartment*. Therefore, a single item, 11-point Likert scale was used (“did not like it at all” to “liked it very well”), adapted from Batra and Ahtola (1991).

Second, participants were also asked about the *attractiveness of the apartment*. A single item 11-point Likert scale from “very unattractive” to “very attractive” was used, based on the scale from “very unappealing” to “very appealing” developed by Spears and Singh (2004).

Third, *attributes of the apartment* were asked through a multi-item. For the following, 11 points scales were used to know how the respondent think previous guests would have rated the apartment in terms of: *standards* (“very low standards”/ “very high standards”), *cleanliness* (“very unclean”/ “very clean”), and *pleasantness* (“not nice at all”/ “very nice”). The measures were based on MacKenzie, Lutz, and Belch (1986). The indirect questioning, involving a tier person, was chosen to avoid self-enhancement bias reporting present better attitudes (Kramer, Newton, & Pommerenke, 1993) and social desirable responding (Fisher, 1993; Van de Mortel, 2008).

3.2.1.5.2. **Attitude towards the home swap service**

Concerning the *attitudes toward the home swap service*, respondents were asked about their willingness to exchange home through a single item, 11 points Likert scale (“very improbable”/ “very probable”). This question was raised in a within-subject design (see 3.2.1.1. Research design, p. 34), and was adapted from (MacKenzie et al., 1986).

3.2.1.5.3. **Behavioral intentions**

The *behavioral intentions* were measured through two items.

First, the *likelihood to choose this apartment* measured the interest in renting (or swapping in the home swap scenario on the Belgian experiment) the presented apartment. A single-item, 11-points Likert scale was used (“very unlikely”/ “very likely”) adapted from the 5-point scale in Smith, Coyle, Lightfoot, and Scott (2007).

Second, the *willingness to pay* was measured by asking participants to estimate the price they would be ready to pay for spending a night in the apartment. A price range reference

was set between 500 and 1500 NOK. An order of reference was set to reduce the likeliness that respondents “subjectively establish a range of extent and a point (a standard or norm) within that range which is peculiar to the individual” (Sherif, 1936, p. 96). This suggests a basis for analyzing respondent perception in adaptation-level frame (Helson, 1948).

3.2.1.5.4. Mediating variables

Following the framework of Price, Arnould, and Tierney (1995), Airbnb can be classified as an *extended*, *affectively charged*, and *intimate* service encounter. To deliver good consumer experience, those encounters need to establish *connection* and give “something more to the customer than expected within the norms of a commercial transaction” (Price et al., 1995, p. 94). Those two dimensions are reflected in our mediating variable.

On the one hand, *self-object connection* and *self-other overlap* evaluated the self-congruence perception (Aron et al., 1992) through single-item, 11-point Likert scales from “completely disagree” to “completely agree” adapted from Douglas (1990).

On the other hand, the *perceived trustworthiness* was measured using a two-item, 11-point Likert scale (“completely disagree”/ “completely agree”), asked based on McKnight, Choudhury, and Kacmar (2002). The two items were *general trust* and *benevolence-based trust*. Benevolence was measured in addition to general trust due to its specific relevance for service encounters like Airbnb (Price et al., 1995). Moreover, benevolence is also essential to measure because of the different service scenario: a high level of benevolence-based trust is required in home exchange (Andriotis & Agiomirgianakis, 2014), to overcome fears inherent to trade with strangers, such as being robbed or get the home damaged (Forno & Garibaldi, 2015).

3.2.1.5.5. Moderating variable

Participants were asked to indicate their *political orientation* by positioning themselves on a single-item, 11-points Likert scale from “left” to “right” which has been assessed as relevant way to measure political orientation (Inglehart & Klingemann, 1976).

The perceived *outgroup threat* was measured through 4 items. Based on Hackel, Looser, and Van Bavel (2014), respondents were asked about their perception of Muslim and Somalian (Norwegian study) or Moroccan (Belgian study) as posing a threat towards the Western culture and the Norwegian/Belgian culture. They were presented single-item, 11-point Likert scale from “not at all” to “to a large extent”.

3.2.1.5.6. Control variable

The “introduction of extraneous influences” (Carlson & Wu, 2012, p. 415) was prevented with experimental control for *age*, *gender*, *occupation*, as well as *ethnicity*.

In the Belgian study, the service type conditions were controlled, so that half of the sample could be exposed to the *home swap* scenario.

It was also asked about potential previous *Airbnb experience*. Participants were given the possibility to answer: “yes, both as a host and a guest”, “yes, as a host”, “yes, as a guest” and “no”.

3.2.1.5.7. Reliability check and factorial analysis

A factor analysis was conducted for three multi-items scales. The first is *attribute of the apartment*, the second *trustworthiness*, and the third *outgroup threat*. Attributes of the apartment were tested through three different items in the survey and were likely to be correlated, i.e. *standards*, *cleanliness* and *pleasantness* ($\alpha = .922$). Moreover, *benevolence-based trust* and *general trust* were also likely to be correlated ($\alpha = .887$). Finally, *outgroup threat* was tested with 4 approaches. As those taped in the same construct of outgroup threat, a correlation was expected ($\alpha = .971$). The factor analysis revealed strong loading, suggesting these items can be reduced to one dimension. Statistics are available in appendix D.2.

The factor analysis performed indicated the relevance to cluster the three aforementioned multi-items scales into *attribute of the apartment*, *perceived trustworthiness* and *outgroup threat*, which of the two first are similar to Klemsdal & Sundt (2017).

3.2.2 Data analysis and results

This part combines the data analysis and results of the Study 1. Analyses were performed with SPSS. Conditional effects, i.e. moderation, mediation, and moderated mediation, were analyzed with the PROCESS macro extension for SPSS developed by Hayes (2018). This allowed us to conduct ordinary least square (OLS) regression path analyses. The bootstrap

method was also used for inference (Hayes, 2013; Parker, Nouri, & Hayes, 2011; Preacher & Hayes, 2008; Preacher, Rucker, & Hayes, 2007).²

3.2.2.1. *Preliminary analysis*

A preliminary analysis was conducted prior to test the hypotheses. The assumptions of independence, normality, homoscedasticity, and uncorrelation of the control variable have been tested (Appendix D.4).

3.2.2.2. *Main effect*

The main effect was postulated in H1: *The out-group host will have a more negative effect than the in-group host on a) the attitude toward the apartment, b) the attitude toward the home swap service, and c) the behavioral intentions*. To test this hypothesis, an independent samples t-test was conducted for assessing the existence of significant differences between the two host conditions (Pallant, 2013).

The independent samples t-test showed statistically significant differences in all the consumers outcomes, except the willingness to pay, for the ingroup and outgroup hosts. Results showed that the attitudes towards the apartment, the attitude towards the home swap service, and the behavioral intentions were higher for the ingroup host than the outgroup host, supporting H1. The appendix D.5, table D.5.2, presents the results of the independent sample t-test conducted.

3.2.2.3. *Moderation effect*

The hypotheses 3 and 4 suggested moderation effects of, respectively, the *political orientation* and the *perceived outgroup threat* on the relation between *host ethnicity* and consumer outcomes. The moderation effects postulated in H3 and H4 were tested by conducting ordinary least square (OLS) regression path analyses with PROCESS model 1. Conceptual and statistical representations are available in appendix C.1.

First, the moderation of the effect of the *host ethnicity* on the consumer outcomes by the *political orientation* was tested. The moderation analysis revealed significant interaction effects of the *host ethnicity* and the *political orientation* for all the consumer outcomes, except the *liking* and *attractiveness* of the apartment (see appendix D.6, table D.6.1).

² The same method was applied to Study 2.

Spotlight analysis was conducted with the Johnson-Neyman approach because of the continuous characteristic of the moderator (Hayes, 2013; Krishna, 2016). The Johnson-Neyman technique revealed zone of significances at different level of political orientation for all the consumer outcomes. Overall, the effects of the *host ethnicity* on all the dependent variables were negatively increasing when going towards the higher end of the *political orientation* scale (11 = right-wing). Table D.6.2 gives precise values of the political orientation determining the significance region for each variable.

The data partially support H3; one item out of the three of the attitudes towards the apartment (attributes), the attitude towards the home swap service, and the behavioral intentions, were evaluated as significantly moderated by the political orientation in the moderation analysis conducted. The conditional effects confirmed the direction of the hypothesis; the negative effect of the outgroup host on the consumer outcomes is stronger for right-wing participants.

Second, the moderation of the effect of the *host ethnicity* on the consumer outcomes by the *perceived outgroup threat* was tested. The moderation analysis revealed no interaction effect between the *host ethnicity* and the *perceived outgroup threat* on any of the consumer outcomes. Yet, the Johnson-Neyman approach showed increasingly negative effects of the *host ethnicity* on each of the consumer outcomes when approaching the higher end of the *perceived outgroup threat* scale (11 = high level of perceived outgroup threat). The interaction effect between the host ethnicity and the perceived outgroup threat was almost significant on the willingness to swap. The Johnson-Neyman approach revealed zone of significance in the low end of the perceived outgroup threat scale (positive effect), as well as in the end (negative effect). Appendix D.6, table D.6.3, reports precise values of the perceived outgroup threat determining the significance region for each variable.

It cannot be concluded that the data support H4 because no statistical evidence of interaction between the *host ethnicity* and the *perceived outgroup threat* for any of the consumer outcomes was found. Yet, the conditional effects assessed by the Johnson-Neyman approach revealed a trend of a stronger negative effect of the outgroup host on the consumer outcomes for participants with higher degree of perceived outgroup threat.

3.2.2.4. *Mediation effect*

Hypothesis 5 postulated the mediation of the effects of *host ethnicity* on the consumer outcomes through *self-object connection*, *self-other overlap*, *perceived trustworthiness*, and *perceived risk*. To test the indirect effects, ordinary least squares (OLS) regression path analyses of PROCESS model 4 (Hayes, 2013) was used. The conceptual and statistical diagrams are available in appendix C.2.

The figures presented in appendix show a simple mediation. However, because of the several mediators, a parallel mediation analyses (MacKinnon, Fairchild, & Fritz, 2007) was conducted, as can be seen from the results reported in the statistical diagrams and tables, appendix D.7.

3.2.2.4.1. **Self-object connection**

A conditional path analysis (PROCESS Model 4) was conducted to assess indirect effect of the *self-object connection* on the relation between the *host ethnicity* and the consumer outcome. The mediation analysis showed significant indirect effects of the *self-object connection* on all the consumer outcomes. The results assessed lower *self-overlap connection* for the outgroup host scenario, leading to more negatives outcomes compared to the ingroup host. Detailed statistical diagrams are available in appendix D.7. Hence, the data support H5a.

3.2.2.4.2. **Self-other overlap**

The indirect effect of the *self-other overlap* on the relation between the *host ethnicity* and the consumer outcome was tested with the PROCESS model 4. The results showed no significant mediating effect of the *self-other overlap* for any of the consumer outcomes. The data do not support H5b.

3.2.2.4.3. **Perceived trustworthiness**

The mediation analysis revealed no indirect effect of *host ethnicity* on any on the consumer outcomes, through its effect on the *perceived trustworthiness*. The data do not support H5c.

3.2.2.5. *Moderated mediation effect*

The conditional path analysis of PROCESS model 7 assessing moderated mediation effects was used to test hypothesis 7 and 8. Conceptual and statistical diagrams of this model are available in appendix C.3 for a visual overview. In this model, the *host ethnicity* impacts the consumer outcomes indirectly through the mediators but also directly, with the extent of the

direct effect relative to the moderator (Hayes, 2013). The moderated mediation model is a conditional model which considers potential cross-relations as well as limits of an effect. It enabled us to surpass the oversimplification of the simple models and to understand the underlying mechanism of an effect (Hayes, 2013). In addition, PROCESS model 1 (Hayes, 2013) was used to explore further the relation between the host ethnicity and the mediators when moderated, as it includes the output of the Johnson-Neyman procedure. See appendix C.3, figure C.3.2 for visual representation.

Moderated mediation analyses were used to test the conditional effects of the moderators – i.e. *political orientation* and *perceived outgroup threat* – on the mediators – i.e. *self-object connection*, *self-other overlap*, and *perceived trustworthiness* – of the relationship between the *host ethnicity* and the consumer outcomes.

The conditional analyses showed evidence that the *host ethnicity* influenced the *liking*, *attractiveness*, as well as the *likelihood* to choose the apartment, independent of its effect on the moderated mediators (respectively; effect = $-.5854$, $p = .0025$; effect = $-.6007$, $p = .0009$; effect = $-.4501$, $p = .0242$). The *host ethnicity* did not directly, significantly, influenced the other consumer outcomes independent of the conditional effects. Interaction effects and conditional effects differed for conditional analyses involving *political orientation* or *perceived outgroup threat*. Results are reported below, and available in appendix D.8.

3.2.2.5.1. Moderated mediation effect of the political orientation

From the ordinary least square (OLS) regression path analyses conducted, there were significant interaction effects of the *political orientation* and the *host ethnicity* on the three mediators. The results showed that when moving up on the *political orientation* scale (11 = right-wing), individuals reported lower *self-object connection*, *self-other overlap*, and *perceived trustworthiness*. This effect is stronger for the outgroup host. Further moderation analyses on the relation between the host ethnicity and the mediators only revealed that when moving down on the *political orientation* scale (1 = left-wing), higher *self-other overlap* and *perceived trustworthiness* were reported. The same effect was found for the *self-object connection* but was not significant.

The conditional effect of the *political orientation* was significant on the mediating effects of the *self-object connection* and the *perceived trustworthiness*, regarding all consumer outcomes. The mediating effect of *self-other overlap* appeared to be significantly moderated

by the *political orientation* only regarding the *willingness to swap*. The bias-corrected bootstrap confidence intervals for the aforementioned indirect effects (based on 5000 bootstrap sample) were constantly under zero.

These results support H7a and H7c: the *self-object connection* and the *perceived trustworthiness* are lower for the outgroup host for right-wing participants, strengthening the negative effect of the outgroup host on the consumers outcomes. H7b is partly supported: the self-other overlap is lower for the outgroup host for right-wing participants, but only the willingness to swap is impacted.

3.2.2.5.2. Moderated mediation effect of the perceived outgroup threat

The moderated mediation analysis assessed interaction effect of the *perceived outgroup threat* and the *host ethnicity* on all the three mediators. Results showed that when moving up to the higher end of the outgroup threat perception scale (11), individuals perceived lower *self-object connection*, *self-other overlap*, and *perceived trustworthiness*. Further moderation analyses of the relation between the host ethnicity and the mediators only showed that when moving down to the lower end of the outgroup threat perception scale (1), individuals perceived higher *self-object connection* (not significantly), *self-other overlap*, and *perceived trustworthiness*. These effects were stronger for the outgroup host.

When moderated by the *perceived outgroup threat*, the results reported no significant mediating effect of the *self-object connection*, nor the *self-other overlap* (except regarding the willingness to swap). Yet, the *perceived trustworthiness* showed significant indirect effect on all consumer outcomes when moderated by the *perceived outgroup threat*. In this regard, the data support H8c.

3.2.3 Discussion and limitations

In the past few years, racial discrimination has been assessed in the sharing economy. In particular, Edelman et al. (2017) found evidence of racial discrimination in a field experiment on Airbnb. To reduce prejudice, it is crucial to understand the causal mechanisms and tackle the origin of the discrimination. Klemsdal and Sundt (2017) built up on these findings by investigating underlying mechanisms of racial discrimination with an online experiment. In this study on a larger Norwegian sample, discrimination in the sharing economy is further examined with the aim of validating and generalizing previous results

found in Klemsdal and Sundt (2017). Visual overviews of the findings are available in appendix D.9.

3.2.3.1. Main effects and moderation effects: Who discriminates?

Direct and indirect effects of the *host ethnicity* on the *attitudes and behavioral intentions* of the consumer were analyzed. Significant differences in consumer outcomes (except in the willingness to pay) were assessed favoring the ingroup over the outgroup host, as expected from the social identity theory (Tajfel, 1982; Tajfel & Turner, 1979). The political orientation moderated this effect: right-wing participants reported lower attitude towards the home swap service, and lower behavioral intentions for the outgroup host. Political orientation brought statistical explanation for the effect on the willingness to pay. In our sample, 47,1% of the respondent described themselves as politically right-oriented (> 5/11). Among right-wing Norwegian parties, the attitudes towards immigration are not clearly clustered, and it is hence hard to draw clear conclusions (see overview of the main Norwegian parties, appendix E).

The analyses did not show significant moderation effect of the perceived outgroup threat. Yet, the Johnson-Neyman approach revealed a trend for respondents with a high degree of perceived outgroup threat to report lower consumer outcomes for the outgroup host. For the willingness to swap, people with a low level of perceived outgroup threat reported significantly better consumer outcomes. This effect was stronger for the outgroup host, showing outgroup favoritism.

3.2.3.1.1. Outgroup favoritism

The literature explains outgroup favoritism with system justification theory, i.e. social-cognitive theory emphasizing the need of justification in intergroup relations (Jost, 2013), and “the mainstream culture’s imposition of high or low value on particular groups” (Dasgupta, 2004, p. 148). Outgroup favoritism occurs mostly among members of low-status groups (Sachdev & Bourhis, 1991), i.e. groups who are more prejudiced to discrimination, also known as disadvantaged group (Dasgupta, 2004). High- and equal-status groups are more likely to produce ingroup favoritism (Jost, 2013). As illustration, Yale undergraduate students (low-status) were found to indirectly favor older fellow students (high-status) compared to their direct mates (K. Lane, Mitchell, & Banaji, 2003). When comes to racial attitudes, researchers assessed outgroup favoritism for African Americans towards White (their outgroup) (Ashburn-Nardo, Knowles, & Monteith, 2003; Dasgupta, 2004; Livingston,

2002; Nosek, Banaji, & Greenwald, 2002; Spicer, 1999). Yet, in that perspective, no evidence of outgroup favoritism from White towards Black was found.

Outgroup favoritism can also be the result of a form of aversive racism. Aversive racists advocate equalitarian values towards all groups (Gaertner & Dovidio, 2005), and would hence report themselves as perceiving low outgroup threat. When exposed to situations involving racial cues and where the fair answer is clear, aversive racists do not discriminate (Dovidio et al., 2017). Favoring the outgroup is a way for aversive racists to “support their nonprejudiced self-image while simultaneously defending against their automatic, negative, race-based feelings” (Nail et al., 2008, p. 198). Favoritism towards the outgroup is also known as reverse discrimination (Nail et al., 2008).

Finally, another hypothetical explanation, could be the willingness to provide compensation and reparation to groups how have been prejudiced (Taylor, 1973). Studied in the legal field, this hypothesis does not seem to find support in the existing social and marketing literature.

3.2.3.2. *Mediation effects: Why does discrimination occur?*

Self-object connection appeared to be a significant mediator of the studied relation. Respondents perceived lower self-object connection for the outgroup host than the ingroup host, which led to lower consumer outcomes. Yet, no statistical evidence was found regarding mediation effect of self-other overlap and perceived trustworthiness. This suggests that the congruity between the self and the perception of the apartment – rather than the perception of the host himself– accounts racial biases triggered by the exposure to host ethnicity. Results confirm that, when looking for accommodations on Airbnb, people evaluate and make judgements about the apartment rather than the host (Jung et al., 2016).

3.2.3.3. *Moderated mediation effects: How personal traits impact the mechanisms behind discrimination?*

Further OLS regression path analyses revealed moderation of the mediators by the *political orientation* and the *perceived outgroup threat*. Right-wingers are conservative and embrace conformity of moral values (Emler et al., 1983; Murray & Schaller, 2016). Perceived outgroup threat differs for each individual, depending on personal factor such as background, education, living environment, etc. (Allport, 1954; Belk, 2009; Murray & Schaller, 2016). The self-object connection, self-other overlap and the perceived trustworthiness were lower for right-wing participants/high degree of perceived outgroup threat. Host ethnicity act as a

stimulus generating attitudes, which can be avoidance of contamination, as a response from the behavioral immune system (Murray & Schaller, 2016). The political orientation and perception of outgroup threat generate implicit attitude, which act as unintentional frame in consumer's mind to form evaluation and judgement (Oskamp & Schultz, 2005). When moderated by the political orientation, the self-object connection strengthened the negative effect of the outgroup host on all the dependent variables. Same effect was assessed for the perceived trustworthiness, when moderated by the political orientation and the perceived outgroup threat.

Further analyses revealed that left-wing participants reported higher self-other overlap, and higher perceived trust for the outgroup. The self-object connection was subjected to the same effect, but not significantly. Participants with low degree of perceived outgroup threat reported higher score on all mediators, showing a trend of outgroup favoritism (discussed in 3.2.3.1.1. Outgroup favoritism, p. 45).

3.2.3.4. *Home swap service attitude*

The home swap is a service including more intimacy than the normal rental (Bucher et al., 2017; Hazée et al., 2017), therefore all the proposed mediators were expected to act as barriers. Indeed, the willingness to swap was the only dependent variable influenced by the all mediators moderated by both political orientation and perceived outgroup threat. The self-other overlap had only significant conditional effects regarding the willingness to swap, strengthening the negative effect of the outgroup host for right-wing participants/high degree of perceived outgroup threat. This confirm the significant difference in intimacy for the normal rental and the home swap service. Self-other overlap is a concept originally including the self-association to close friends and family (Belk, 2014a), occurring mostly in physically accessible networks (Kreiczer-Levy, 2015). The results suggest that self-other overlap is extended in the sharing economy (Luca, 2017), but only to a certain extent, as reflected with the boundary effects of political orientation and perceived outgroup threat. This study did not include perceived risk. As risk is a barrier to swap, the addition of this variable might lead to more explanatory power.

This study assessed direct as well as indirect effects of the host ethnicity on the dependent variables. The main effects support previous results of Edelman et al. (2017) and Klemsdal and Sundt (2017). One major finding is the assessment of racial bias through the indirect effect of self-object connection. All other mediators had significant effects when moderated

by personal traits (political orientation and perceived outgroup threat). This means the racial bias impacting the dependent variables through the self-other overlap and the perceived trustworthiness are triggered by personal traits, which are difficult to act on externally. Yet, the self-object connection accounts effects even when not moderated, and hence constitutes a point to focus on for further studies and actions. For example, following these results, reducing cues about host ethnicity would reduce the likeliness of activating racial bias in the self-object connection (main indirect effect of the host ethnicity). This would in turn lower discriminatory consumer outcomes.

3.2.3.5. *Sample limitations*

The sample used in this research was in majority people unaccustomed to Airbnb. 76.8% reported having never used it, neither as a host nor as a guest. This might have impacted the attitudes and behavioral intentions studied. The results could be explained partly by the lack of experience with Airbnb, instead of the attitude towards the hosts.

Moreover, the majority of Airbnb users are aged 18 to 34 (Statista, 2017; Warwick, 2017) while the sample used was on average 50 years old. Observations are still relevant as individuals who are 60 were the fastest growing age group among Airbnb users in 2016 (Bloomberg, 2016; Garcia, 2016). However, it might limit the scope of generalization of the findings, and not be entirely valid for 18-34 years old. Generational differences have been assessed in work values (Twenge, 2010), personality traits (McCrae et al., 1999), concerns for others and civic orientation (Twenge, Campbell, & Freeman, 2012). Further study investigating online discrimination specifically among different age groups could detect underlying phenomenon.

3.2.3.6. *Perceived risk*

Perceived risk was not measured in this study, but is known to be an important barrier to overcome in relations with strangers (M.-J. Kim et al., 2011), especially in online market transaction (Mittendorf, 2016b). Therefore, some explanatory power of risk might have been captured in other variable such as trust. Trust and risk are known to be linked to each other (see 2.4.3. Trust and risk, p. 22). Therefore, effects of perceived risk will be investigated in the Study 2.

3.3 Study 2

3.3.1 Methodology

To test the hypothesis of our model, an online experiment was created, and displayed as a survey on Qualtrics. Participants were randomly presented one of the two services: either the regular Airbnb rental service (normal rental), either a speculative home exchange service (home swap). In addition to this, the host was presented as being either a Belgian student (ingroup host), either a Belgian-Moroccan student (outgroup host). This section will expose the research design, the manipulations and the data collection.

3.3.1.1. *Research design*

To test the research hypotheses, an *experimental research* was conducted in order to test causality (Churchill & Iacobucci, 2006). Furthermore, a *two between-subject factors* was chosen. With this method, each participant was exposed to only one of the four treatments created by the 2(host ethnicity)*2(service type) factorial design. This way avoids reference-based answer (Charness et al., 2012), practice effect (Hall, 1998), hypothesis guessing. Hence, internal and external validity are strengthened (Campbell & Stanley, 2015; Christensen et al., 2011).

3.3.1.2. *Manipulations*

As opposed to the first study where participants were shown two tasks (normal rental and then home swap service), each participant was shown only one set of question regarding either a *normal rental*, or a *home swap service*, combined with either a *ingroup* host, or an *outgroup* host.

3.3.1.2.1. **Types of service**

The normal rental of Airbnb is the same as presented in Study 1.

The hypothetical home swap service was presented as a new service Airbnb would offer. The concept is to exchange home with the host, instead of only renting the apartment presented. The hypothetical duration of the stay was set to one night.

3.3.1.2.2. **Hosts' ethnicity**

Moroccans have been assessed as likely to be subjected to negative attitudes in Belgium (see 3.1). Therefore, Moroccan was chosen for the ethnicity of the outgroup host. The hosts

presented were a Belgian student named Thomas (ingroup), and a Belgian-Moroccan student named Mohamed (outgroup) (see appendix F for the different conditions).

The names were chosen as follow. According to the first records of Statistics Belgium, the most common name given to boys in 1995 in Belgium was Thomas ("Prénoms filles et garçons," 2017). There exist no statistics based on ethnicity to find an equivalent for Belgian-Moroccan. However, given that the most given name in Morocco is Mohamed ("Most given Moroccan boy names," 2005), this one was used for the Belgian-Moroccan host.

In a previous similar experiment (Klemsdal & Sundt, 2017), profile pictures used were average faces developed in "World of facial averages" (The Postnational Monitor, 2011). Those are made of the combination of 100 faces and have the advantage of avoiding biases such facial expressions. Following the same methodology, the pictures chosen were the average Belgian male for the Belgian host, and the picture of an averaged Egyptian male for the outgroup host. As there was no picture of average face available for Morocco, the closest northern African country represented was chosen.

3.3.1.3. Procedure

3.3.1.3.1. Recruitment

A link assigning the participant randomly but evenly to the different treatment conditions was create. A convenience sample was used due to the associated advantages such as ease in accessibility, and the targeting of people willing to participate (Etikan, Musa, & Alkassim, 2016). Therefore, a link to the survey was shared on Facebook and among the Facebook course-groups of Université Catholique de Louvain (UCL). Students are situated in the most represented age-group among Airbnb users – 18-34 years old (Statista, 2017) –, and were hence relevant to target (Peterson & Merunka, 2014). Participants were not limited to students to get a more representative sample. Samples made only students are particularly different from the overall population when it comes to personal and attitudinal variables (Hanel & Vione, 2016). Nevertheless, convenience samples account uncertainty and this will be discussed in the limitations (see 3.3.3 Discussion and limitations, p. 60).

Participant were asked to answer individually and limit communication during the time of the survey. To control the sample, questions about current occupation were asked to distinguish students and other participants. As an incentive, respondents were given the

chance to win cinema ticket from a prize withdraw. The description specified cinema tickets were valid in Belgium, limiting the scope of potential non-Belgian respondents.

3.3.1.3.2. Participants

384 answers were totalized, of which 233 were fully completed. One unusable data was removed – the respondent chose “No, I don’t want to participate” – and considered 232 responses were valid for data analysis. Our sample is made of 60.8% women and 39.2% men. The majority (68.5%) are students, making the average age of the sample being 18-29 years old. 194 respondents describe their ethnicity as Belgian or partly-Belgian. Regarding their acquaintance to Airbnb, 68.8% of the respondents stated having already used the platform either as guest (64.2%), host (0.4%), or both (2.2%).

3.3.1.3.3. Questionnaire

two surveys available in English as well as in French³ (see appendix G) were built. Participants were allocated randomly to one of the two surveys by a “meta link” in Qualtrics: one questioning about the normal rental service and the other about the home swap service. Both were presented randomly with one of the two hosts. The surveys took less than ten minutes to be completed (mean = 10,1 minutes, median = 7 minutes). As previously done by Klemsdal and Sundt (2017), a timer of minimum ten second was set for insuring a reasonable attention-time when showing the apartment description and the host profile. At the end of the survey, respondents were given the possibility to give comments before getting access to a debrief stating the fictitiousness of the manipulations. Afterwards, they were redirected to another link where they could leave their contact information to take part in the prize draw.

3.3.1.4. Measurements

The measurement used in this study were similar to the one used in study I (see 3.2.1.4. Measurements, p. 36). Yet, some variables were adapted or modified, only those will be explained in this section.

3.3.1.4.1. Attitude towards the apartment

The same measurements as in Study 1 were used, i.e. *liking*, *attractiveness* and *attributes* of the apartment.

³ Surveys were translated with the help of Detry, Morgane & Warnier, Marie. Master students in Translation and Interpreting studies at Université Catholique de Louvain (UCL).

3.3.1.4.2. Attitude towards the home swap service

The *attitudes toward the home swap service* were asked differently in the two surveys. In the Norwegian study, respondents were asked about their willingness to exchange home in a within-subject design. In the Belgian study, only the participants exposed to the home swap service treatment were asked about their attitude towards this service. A single-item, 11-point Likert scale (“completely disagree”/ “completely agree”) was used to record the degree to which respondent agreed on the following statement: “I am positive towards this kind of service”. The wording was adapted from the level of agreement developed by Vagias (2006).

3.3.1.4.3. Behavioral intentions

The behavioral intentions were measured by two items. The *likelihood to choose this apartment* measured the interest in renting or swapping in the home swap scenario the presented apartment. A single-item, 11-points Likert scale was used (“very unlikely”/ “very likely”) as in study 1.

The *willingness to pay* was measured by asking participants to estimate the price they would pay for a one-night rent of the apartment. A price range reference was set between 50 and 150 euros per night, for the same reason as explained in Study 1. This question was only asked in the normal rental scenario.

3.3.1.4.4. Mediating variables

The first three mediating variables were the same as used in Study 1, i.e. *self-object connection*, *self-other overlap*, and *perceived trustworthiness*.

In addition, the *perceived risk* was added, which was measured with a single-item, 11-points Likert scale (“not risky at all”/ “very risky”). The question was based on Dowling and Staelin (1994). This construct was only asked in the Belgian experiment, as it is relevant regarding the type of service condition. Like the perceived trustworthiness, the fear of seller opportunism (Huurne et al., 2017; Jones & Leonard, 2014) influences consumer outcomes and is exacerbated for home exchange (Andriotis & Agiomirgianakis, 2014). However, perceived risk depends on the buyer's risk propensity (Huurne et al., 2017; Sutanonpaiboon & Abuhamdieh, 2008).

3.3.1.4.5. Moderating variable

The *service type* was a manipulation added as a moderating variable in the Belgian study, due to the different level of intimacy embedded in the normal rental and the home swap

service. Respondent were randomly presented to one of the two service types. In the normal scenario, respondents were presented a situation where they would consider renting the host's apartment for one weekend. In the home swap scenario, they were assumed to own a similar apartment as the one presented, and were told that the host would stay at their place in the meantime that they would lodge at the host's apartment.

The *political orientation* and *perceived outgroup threat* were asked as in Study 1.

3.3.1.4.6. Control variable

The control variables were the same as used in the Study 1. In addition, respondents were asked about their occupation (Fink, 2003).

3.3.1.4.7. Reliability check and factorial analysis

Similarly, to the first study, a factor analysis was conducted for three multi-items scales: *Attribute of the apartment* (3 items, $\alpha = .849$), *perceived trustworthiness* (2 items, $\alpha = .778$), and *perceived outgroup threat* (4 items, $\alpha = .961$). The factor analysis revealed strong loading, suggesting each multi-item construct can be reduced to one dimension. Statistics are available in appendix H.1.

3.3.2 Data Analysis and results

3.3.2.1. Preliminary analysis

Prior to test hypothesis of our model, the assumptions of independence, normality, homoscedasticity, and uncorrelation of the control variable have been tested (see appendix H.3).

3.3.2.2. Main effect

H1 postulated the main effect, to test if the *outgroup host* will have a more negative effect than the *ingroup host* on the dependent variables. Therefore, an independent sample t-test was conducted to assess the existence of significant differences between the two conditions (Pallant, 2013).

The independent-samples t-test revealed no significant difference in the scores regarding any of the dependent variables (see appendix H.4, table H.4.2.). These results suggest that the dependent variables are not significantly different for the *ingroup host* and the *outgroup host*. Hence, the data do not support H1.

3.3.2.3. *Moderation effect*

Moderation analyses were conducted to test hypotheses 2, 3 and 4. Those hypotheses proposed respectively the *service type*, the *political orientation* and the *perceived outgroup threat* as moderator of the relation between the *host ethnicity* and the attitudes and behavioral intentions. To test these, OLS regression (PROCESS Model 1 – moderation analysis) developed by Hayes (2013) was used, visually represented in appendix C.1.

First, a moderation analysis was conducted to test H2, and evaluate the moderation effect of the *service type* on the relation between *host ethnicity* and consumer outcomes. The analysis revealed no significant interaction effect of the *host ethnicity* and the *service type* on any of the dependent variable. Spotlight analysis was conducted at the two level of the *service type*, as the moderator was a dichotomous variable (Hayes, 2013). The conditional effects of the *host ethnicity* on the dependent variables at the different *service types* showed a trend of higher effect in the case of the normal rental scenario. Yet, these conditionals effect were not statistically significant (see appendix H.5.1). Hence, the results do not support H2.

Second, the moderation effect of the *political orientation* postulated in hypothesis H3 (see results in appendix H.5.2) was tested. The moderation analysis showed no significant interaction effect of the *host ethnicity* and the *political orientation* on any of the dependent variables. Spotlight analysis was performed at one standard deviation above and below the mean, as the Johnson-Newman approach did not produced results (Hayes, 2013; Krishna, 2016). The conditional effects of the *host ethnicity* on the dependent variables at different level of *political orientation* were not significant, and did not reveal any clear tendency. The data do not support H3.

Third, the moderation effect of the *perceived outgroup threat* postulated in H4 was tested through a moderation analysis (see results in appendix H.5.3). The results of the analysis revealed no significative interaction effect of the *host ethnicity* and the *perceived outgroup threat* on any of the dependent variables. Similarly to the test on political orientation, the spotlight analysis was performed at one standard deviation above and below the mean (Hayes, 2013; Krishna, 2016). Except for the *liking of the apartment* and the *attitude towards the home swap service*, the conditional effects of the *host ethnicity* on the dependent variables at different level of *perceived outgroup threat* suggested that consumer outcomes will be lower when respondents are exposed to the *outgroup host* and for high level of

perceived outgroup threat. However, these findings were not statistically significant. Overall, the results do not support H4.

3.3.2.4. Mediation effect

Mediation effects were assessed with ordinary least square (OLS) regression path analysis, through PROCESS Model 4 (Hayes, 2013), visually represented in appendix C.2. In addition, 5000 bootstrap sample were formed to produce bias-corrected confidence intervals for the indirect effect. The mediation analyses were all conducted similarly.

3.3.2.4.1. Self-object connection

A mediation analysis was conducted to assess indirect effect of the *host ethnicity* on the dependent variables, when mediated by the *self-object connection*. The mediation analysis showed overall positive mediating effects (positive index), but none was statistically significant.

However, it is still interesting to highlight that the mediation analysis reported significant effect of the *self-object connection* on each of the dependent variables (see b_1 path in Figures from appendix H.6.1). These results suggest that higher *self-object connection* lead to increasingly positive consumer outcomes. Yet, the *host ethnicity* does not influence the level of *self-object connection*.

All in all, the results do not support H5a.

3.3.2.4.2. Self-other overlap

The mediating effect of *self-other overlap* on the relation between the *host ethnicity* and the dependent variables was tested using the mediation analysis of PROCESS Model 4. Like the results for the *self-object connection*, the mediation analysis revealed positive indirect effects, but none of them was significant (see the figures in appendix H.6.1).

The results of the mediation analysis showed that *self-other overlap* had significant effects on the *liking* ($b_2 = .1296$) and the *attributes* ($b_2 = .1291$) of the apartment. These results suggested that the *self-other overlap* influence partly the attitude towards the apartment (2 items out of the 3). However, the data do not support the mediating effects postulated in H5b.

3.3.2.4.3. Perceived trustworthiness

Perceived trustworthiness was examined as a mediator of the relation between the *host ethnicity* and the dependent variables in a mediation analysis. The results showed the *host ethnicity* indirectly influenced the *attractiveness* and *attributes of the apartment* through its effect on the *perceived trustworthiness*.

As can be seen from Figures in appendix H.6.1 (statistical diagram), the respondents exposed to the *outgroup host* perceived a higher *trustworthiness* than those who were shown the *ingroup host* ($a_3 = .4953$).

Moreover, respondents who perceived a higher *trustworthiness* reported a higher *attractiveness* of the apartment ($b_3 = .1661$). A bias-corrected bootstrap confidence interval for the indirect effect ($a_3 * b_3 = .0823$) based on 5000 bootstrap sample was entirely above zero (.0112 to .2370). There was evidence that the *host ethnicity* influenced the *attractiveness* independent of its effect on *perceived trustworthiness* and the other mediators considered in the multiple-mediation analysis ($c' = -.3758$, $p = .0426$) (see appendix 8.6, figure H.6.2).

The mediation analysis also reported that the respondents who perceived a higher *trustworthiness* reported a better rating of the *attributes* of the apartment ($b_3 = .1803$). Based on 5000 bootstrap samples, a bias-corrected bootstrap confidence interval for the indirect effect ($a_3 * b_3 = .0893$) was entirely above zero (.0168 to .2265). There was no evidence that the *host ethnicity* influenced the *attributes* independent of its effect on *perceived trustworthiness* and the other mediators considered in the multiple-mediation analysis ($c' = -.0680$, $p = .5874$) (see appendix H.6, figure H.6.3).

Overall, the data do not support H5c. There was significant mediation effect only regarding two of the dependent variables: the *attractiveness* and the *attributes* of the apartment. Plus, findings are contradictory to what was postulated: higher trust is perceived for the outgroup host.

3.3.2.4.4. Perceived risk

The multiple-mediation analysis revealed *host ethnicity* indirectly influence the *attitude* towards the home swap service, and the *likelihood* to choose the apartment, through its effect on the *perceived risk*.

Surprisingly, when exposed to the home swap scenario, respondents exposed to the *outgroup host* perceived a lower *risk* than those who were shown the *ingroup host* ($a_4 = -.7347$, $p = .0678$). Moreover, respondents with higher level of *perceived risk* reported lower *attitude* towards the home swap service ($b_4 = -.5245$). A bias-corrected bootstrap confidence interval for the indirect effect ($a_4*b_4 = .3854$) based on 5000 bootstrap sample was entirely above zero (.0021 to .9634). There was no evidence that the *host ethnicity* influenced the *attitude* towards the apartment independent of its effect on *perceived risk* and the other mediators considered in this analysis ($c' = -.3177$, $p = .3853$) (see appendix H.6, figure H.6.4).

In addition, the mediation analysis assessed indirect effect of the *host ethnicity* on the *likelihood* to choose the apartment through its effect on the *perceived risk*. Surprisingly, results showed that respondents exposed to the *outgroup host* perceived a lower *risk* than those who were shown the *ingroup host* ($a_4 = -.9913$). Respondents who perceived a higher *risk* reported a lower *likelihood* to choose the apartment ($b_4 = -.4149$). A bias-corrected bootstrap confidence interval for the indirect effect ($a_4*b_4 = .4113$) based on 5000 bootstrap sample was entirely above zero (.1654 to .7649). There was evidence that the *host ethnicity* influenced the *likelihood* to choose the apartment independent of its effect on *perceived trustworthiness* and the other mediators considered in the multiple-mediation analysis ($c' = -.5445$, $p = .0365$) (see appendix H.6, figure H.6.6).

Overall, the data do not support H5d, and even tend to go against the prospect of higher perceived risk associated with outgroup member.

3.3.2.5. Moderated mediation effect

To test hypotheses 6, 7 and 8, the conditional path analysis of PROCESS model 7 was used, which assess moderated mediation effects. Appendix C.3 provides conceptual and statistical diagram of this model.

With the moderated mediation analyses, the conditional effects of the moderators were tested – i.e. *service type*, *political orientation* and *perceived outgroup threat* – on the mediators – i.e. *self-object connection*, *self-other overlap*, *perceived trustworthiness*, and *perceived risk* – of the relationship between the *host ethnicity* and the dependent variables.

The conditional analyses showed evidence that the *host ethnicity* influenced the *attractiveness*, as well as the *likelihood* to choose the apartment, independent of its effect on the moderated mediators (respectively; effect = $-.3758$, $p = .0426$; effect = $-.5445$, $p =$

.0365). However, the other dependent variables were not influenced significantly by the *host ethnicity* independent of the conditional effects. Interaction effects and conditional effects differed for each conditional analysis, involving either *service type*, *political orientation* or *perceived outgroup threat*. Results are reported separately in the following sections.

3.3.2.5.1. Moderated mediation effect of the Service type

First, a conditional analysis was conducted to assess conditional effect of the mediators moderated by the *service type*, on the relation between the *host ethnicity* and the dependent variables (see results in appendix H.7.1).

The output showed no significant interaction effect of the *host ethnicity* and the *service type* on any of the mediator. Moreover, there was no conditional effects on the relation between the *host ethnicity* and any of the dependent variables. The bias-corrected bootstrap confidence intervals for the indirect effects based on 5000 bootstrap sample were constantly comprising zero.

These results suggest that there are no significant conditional effects of the *service type* on the mediators of the relation between the *host ethnicity* and the dependent variables. The data do not support H6.

3.3.2.5.2. Moderated mediation effect of the Political orientation

Second, a conditional analysis was conducted to assess conditional effect of the mediators moderated by the *political orientation*, on the relation between the *host ethnicity* and the dependent variables (see results in appendix H.7.2).

The output showed no significant interaction effect between the *host ethnicity* and the *political orientation* on any of the mediators, but marginally (at $p < 0.1$) on perceived trustworthiness (effect = $-.1878$, $p = .0680$). Further moderation analysis focusing on the relation between the *host ethnicity* and the *perceived trustworthiness* produced a Johnson-Neyman output indicating positive zone of significance for centrist to right political orientation (6.4260 to 8,5), and negative zone of significance for extreme right (9, 11).

Political orientation moderated the mediation effects of the *perceived trustworthiness* on the relation between the *host ethnicity* and the *attractiveness* (effect = $-.0312$, BootCI [$-.0892$, $-.0007$]), as well as the *attributes* (effect = $-.0339$, BootCI [$-.0948$, $-.0032$]) of the apartment.

The bias-corrected bootstrap confidence intervals for the indirect effects based on 5000 bootstrap sample were constantly under zero.

The moderated mediation analysis confirmed the results found under the mediation analysis. However, there was no significant indirect effect of the political orientation. These results suggest that there are no conditional effects of the *political orientation* on the mediators of the relation between the *host ethnicity* and the dependent variables. Hence, the data do not support H7.

3.3.2.5.3. Moderated mediation effect of the Perceived outgroup threat

A conditional analysis was conducted to assess conditional effect of the mediators on the relation between the *host ethnicity* and the dependent variables when moderated by the *perceived outgroup threat* (see results in appendix H.7.3).

The analysis showed significant interaction effect of the *host ethnicity* and the *perceived outgroup threat* on the *self-other overlap* (effect = $-.2186$, $p = .0416$), the *perceived trustworthiness* (effect = $-.2882$, $p = .0012$), and almost on the *perceived risk* (effect = $.2284$, $p = .0583$). The Jonhson-Neyman output produced with further analyses using PROCESS model 1 revealed zones of significances. Higher self-other overlap was reported when moving down on the outgroup threat perception scale (1 to 2.2). The perceived trustworthiness was higher when moving down on the outgroup threat perception scale (1 to 3.9), and lower when moving up to the higher end (8.7 to 11). The risk was perceived as lower when moving down the lower end of the outgroup threat perception (1 to 5.1). Those effects are stronger for the outgroup host.

The moderated mediation analysis revealed some conditional effects: first, *self-other overlap* on *attributes*; second, *perceived trustworthiness* on *attractiveness* and *attributes* of the apartment; and third, *perceived risk* on the *likelihood* to choose the apartment. All these indirect effects were negative, with bias-corrected bootstrap confidence intervals based on 5000 bootstrap sample constantly under zero.

The significance of the interaction effects of the *host ethnicity* and the *perceived outgroup threat* on two of the mediators (*self-other overlap* and *perceived trustworthiness*) partially support H8.

3.3.3 Discussion and limitations

Subsequent on the previous study, this research on a Belgian sample adds up to previous investigations considering discrimination in the sharing economy. This study examined the relationship between *host ethnicity* and *attitudes and behavioral intentions*, with the addition of different intimacy level through a *home swap* service. The aim was to generalize the finding cross-culturally and to evaluate the effect of different service intimacy. Visual overview of the results is available in appendix H.8.

3.3.3.1. *Main effects and moderation effects: Who discriminates?*

The study did not entirely validate the previous results obtained in study I. The results suggest that the host ethnicity does not generate differences in the dependent variables through direct effect. The same conclusion is deduced when considering moderation effects of the political orientation and perceived outgroup threat of respondent. In Study 2, some respondents expressed they wanted more information about the apartment to answer the questions, meaning they focused more on the apartment than the host. This could explain the absence of significative difference between the conditions.

3.3.3.2. *Mediation effects: Why does discrimination occur?*

Yet, the results assessed indirect effects of the host ethnicity on 1) the attractiveness and the attributes of the apartment, through its effect on the perceived trustworthiness, and 2) on the attitude towards the home swap service and the likelihood to choose the apartment, through its effect on the perceived risk. These results are unexpected. Higher trustworthiness was perceived for the outgroup host than for the ingroup one, whereas from the literature, the distance created by the outgroup made less trust likely (Luhmann, 2017). Similarly, lower risk was perceived when exposed to the outgroup host than the ingroup host, while the literature argued in the sense of higher risk towards the outgroup (Quillian & Pager, 2010; Tajfel, 1982; Terry et al., 1999). Klemsdal and Sundt (2017) also found evidence of favoritism towards an outgroup host for left-wings and respondents perceiving low outgroup threat. Even though the same conclusion cannot be drawn here regarding the conditional effects, the directions of the findings are aligned. Outgroup favoritism can result from the *reverse discrimination effect* (Nail et al., 2008). Aversive racists consciously “endorse fair and just treatment of all groups” (Gaertner & Dovidio, 2005, p. 619) but unconsciously have negative beliefs and feeling towards outgroups. They feel discomfort in presence of the outgroup by trying to avoid wrongdoing and compensate by expressing over positive

attitudes or behavior (Gaertner & Dovidio, 2005). This study showed clue of such behavior in the Belgian sample.

3.3.3.3. *Moderated mediation effects: How personal traits impact the mechanisms behind discrimination?*

3.3.3.3.1. **Political orientation**

The perceived trustworthiness was almost significantly mediated by the political orientation ($p = .0680$). The trustworthiness perceived for the outgroup host was higher for left-wing (not significantly), centrists and right-wing participants, than for the ingroup host. Extreme right respondents perceived significantly lower trustworthiness for the outgroup than the ingroup host. In the hypothesis section (p. 30), the political right was described as conservative and promoting conformity (Jost et al., 2003a, 2003b; Murray & Schaller, 2016), whereas the left was more equalitarian (Neumayer, 2004). This simplification does not reflect Belgian parties' system, due to its complexity. Overall, right parties protect liberty and economic liberty of markets by endorsing norms, while left promotes equalitarianism (Cultures&Santé, 2013b). In term of immigration, parties from the left to the center right are more or less open to immigration, only the extreme right parties are in favor of border shutdown (see visual overview in appendix I, adapted from Cultures&Santé (2013a)). Voting right can reflect a willingness to limit immigration (immigration policy or a preference to reduce fiscal pressure (economic policy)). The Belgian parties' system complexify the deduction of particular attitudes from political orientation. To avoid this effect, further research may ask respondents about their openness to immigration through multi-item scale, as well as their opinion on social matters (i.a. gay marriage, abortion) to determine the nature of their mindset: conservative or progressive.

3.3.3.3.2. **Outgroup threat perceived as low**

The results confirmed conditional effects of the perceived outgroup threat on some mediators. The sample perceived on average low outgroup threat (Mean = 3.52). Respondents perceiving low outgroup threat reported significantly higher self-other overlap and perceived trustworthiness, as well as lower perceived risk as expected. Yet, this effect was stronger for the outgroup host, showing outgroup favoritism. This could be due to reverse discrimination effect (Nail et al., 2008), compensatory effects (Taylor, 1973) (see 3.2.3.1.1. Outgroup favoritism, p. 45). Another explanation could be that respondents with low outgroup threat had high degree of social desirability (Grimm, 2010), which would lead in over-estimation in the reported measures (Fisher, 1993). Direct questioning was used

when measuring self-object connection, self-other overlap, perceived trustworthiness and risk, leading answers to may be subjected to social desirability biases (Fisher, 1993). Yet, these discussions are only speculation.

3.3.3.3. Outgroup threat perceived as high

Respondents perceiving high outgroup threat reported significantly lower level of perceived trustworthiness. They also reported lower self-other overlap and higher perceived risk, even though these two-last trends were not significantly statistically supported. These effects increasingly negative for the outgroup host. Self-other overlap finds its origin in perceived closeness and similarities (Aron et al., 1992). Even if challenged by the sharing economy, the bases of trust also require familiarity (Luhmann, 2017). Due to implicit attitudes, e.g. perceived outgroup threat, the outgroup host was expected to rather generate distancing (Murray & Schaller, 2016). Moreover, self-distance increases perceived risk (Quillian & Pager, 2010; Tajfel, 1982; Terry et al., 1999), which was likely to occur in a greater extent towards the outgroup. This study confirmed the theoretical premises. Yet, the extent to which people see the outgroup as a threat did not impact their self-connection with the apartment. This supports the perspective of the home being a functional place (Austin, 2010), rather than a self-defining frame (Kreiczer-Levy, 2015; Radin, 1982).

As assessed by (Dovidio & Gaertner, 2000), the results suggest the persistence of old fashion racism and the existence of aversive-racism in reported attitudes and behavioral intentions towards the apartment.

3.3.3.4. Home swap service condition

Overall, this study showed no impact of the different service types on the relation between the host ethnicity and the dependent variables, in any way. This aligns with the findings of Edelman et al. (2017) regarding the different type of accommodation (shared vs. entire apartment). The home swap service, which involves a different level of intimacy than the normal rental service, was expected to impact the relation between the host ethnicity and the dependent variables (H2), and indirectly through its effect on the proposed mediators (H6). The home swap service was identified as carrying more barriers to adoption than the normal rental (Kreiczer-Levy, 2015), i.e. complexity, reliability, contamination, and responsibility (Hazée et al., 2017). In addition, those barriers are more complex to overcome when associated to an outgroup host. In the normal rental, respondents were prospecting to rent the host's apartment for one weekend, whereas, in the home swap service, they prospected that

the host would stay at their place in the meantime. The home swap scenario did not refer to the respondent actual home, but to a hypothetical apartment they would own, which would be similar to the one presented along with the ingroup and outgroup host. Therefore, the self-concepts related to their actual homes, and the barriers resulting were suspected to not have been transferred to the hypothetical apartment in question. This would explain the results regarding analyses involving the service type. However, this measurement error (Fricker, 2008) is just speculation.

To correct this effect, further studies could give the respondent the possibility to choose a housing similar to their home, and then ask them about a home swap with their own home. This would also lower the risk of answer biased by the context effect. For example, a woman always travelling with her husband and kids would hardly picture the 1-person apartment as a possible holiday housing. Even though the survey does not imply real consequences (effective rental or home swap), this might have influenced the woman's answers downwards.

Even though home swap service did not produce significant results in this study, further research is needed to explore the implication of this concept and its mechanisms on discrimination.

3.3.3.5. *Sample limitations*

A convenience sample was used in this study (see 3.2.1.3.1. Recruitment, p. 35). Even though often used in consumer behavior research (Peterson & Merunka, 2014), this technique accounts uncertainty. Small convenience samples ($n \leq 50$) that are qualitatively and quantitatively similar can lead to very different outcomes (Peterson & Merunka, 2014). The sample used in Study 2 was made of 232 valid observations, decreasing this risk. Replicability of the findings is crucial to overcome uncertainty (Epstein, 1980), especially in consumer behavior (Peterson & Merunka, 2014). Some of the findings were similar to Study 1, and previous results of (Klemsdal & Sundt, 2017).

3.4 Comparison and conclusion

Following up on previous research assessing racial discrimination in online market places, Study 1 and Study 2 investigated the impact of host ethnicity on consumer outcomes through direct and multiples indirect mechanisms. This chapter presents a brief comparison of the results obtained in the two studies presented. The purpose is to put the results in a cross-cultural perspective, and broaden the understanding of underlying trends.

3.4.1 Samples comparison

Study 1 was conducted on a large sample of 388 respondents, aged on average of 50 years old. Study 2 accounted 232 observations, and the most represented age group was 18-29. This first information highlights the cautiousness required in interpreting data comparison as the sample differ. Study 1 was conducted in the aim to validate results in Norway, hence, results can be interpreted as representative of the relevant population. Yet, as study 2 was conducted on a smaller sample and is limited in representativeness, the comparison must be carefully handled.

3.4.1.1. *Mean score comparison*

Appendix J.1, table J.1.1 presents the mean score for all variable in each study. Overall, Belgians reported higher consumer outcomes than Norwegians. When differentiating ingroup and outgroup host, Norwegians rate consumer outcomes lower than Belgians for the ingroup host, and even lower for the outgroup host. In the Belgian experiment, the scenario with the outgroup host produced higher outcomes than the ingroup host scenario. Both experiments reported on average central political orientation (Mean Study 1 = 5.96, Mean Study 2 = 6.07). Perceived outgroup threat was lower when exposed to the outgroup host in both studies. Norwegian perceived higher outgroup threat than Belgians (Mean Study 1 = 5.36, Mean Study 2 = 3.52).

The Norwegian society is historically homogeneous and small – 5 295 619 inhabitants on January 1st, 2018 (SSB, 2018) – which has led to the image of the nation as a family (Eriksen, 2013). Subsequent Swedish and German occupations made Norwegian nation identity perceived as vulnerable, and might now trigger averseness to strangers (Eriksen, 2013).

Belgium, on its side, is one of the least nationalistic country in the world (Mnookin & Verbeke, 2009). In this multinational state, inhabitants can identify with the Belgian nationality or sub-nationalities in Flanders (Dutch-speaking part) and Wallonia (French-speaking part) (Maddens, Billiet, & Beerten, 2000). Maddens et al. (2000) found that attitudes towards foreigners are not unified across the sub-nationalities and depend on which identity people relate the most to. In particular:

In Flanders, citizens with a strong Flemish identification tend to have a negative attitude towards foreigners, while those with a strong Belgian identification are more positive. In Wallonia, the stronger the Walloon identity, the more positive the attitude towards foreigners; the stronger the Belgian identity, the more negative the attitude towards foreigners. (Maddens et al., 2000, p. 45)

Maddens et al. (2000) found that Walloon feeling more Walloon than Belgian were more positive towards foreigners than those feeling more Belgian than Walloon. In Study 1, the region of the respondent was not controlled. Yet, participants are suspected to be Walloon rather than Flemish, because of the convenience sampling method used. 90.5% of the respondents took the survey in French; hence, the sample is assumed being Walloon. The reported perceived outgroup threat indicates that respondents have positives attitudes toward foreigners. From the findings of Maddens et al. (2000), this imply they rather identify with the Walloon sub-nationality than the Belgian nationality. This suggest that having presented a ingroup host as “Belgian” might not have had the expected effects on respondents. The Belgian host might have been perceived as an outgroup member: Belgian-Flemish rather than Walloon. Due to the persistent latent conflict between the two communities (Mnookin & Verbeke, 2009), Flemish’s can be considered as an outgroup for Walloons.

Another explanation lies in the reaction to recent event in Belgium. After March 22nd, 2016, a rise of Islamophobia touched Belgian population (RTBF, 2017). Quickly, strong reactions against amalgams came up on social networks and the media to emphasized the importance of keeping a clear distinction between Muslims, Moroccans and terrorists (Leroy & Hiltermann, 2016; Marchand, 2017). This attention to avoid amalgam is a reason that could either explain sincere better attitudes towards outgroup in Belgium than in Norway. However, it could also provide a ground for increased adverse racism (see e.g. Dovidio and Gaertner (2000); Gaertner and Dovidio (2005)) in Belgium. In all cases, results are better consumer outcomes for the outgroup host than the ingroup host. Adequate data are lacking to

assess which of the two potential reasons – increased attention, or adverse racism – accounts more explanatory power.

In conclusion, the identity matter and the recent care for inclusion and non-categorization in Belgium might explain the overall higher consumer outcomes (see Table 10.2.1. Descriptive statistics sorted by treatments).

3.4.2 Comparison of effects

The two studies analysed the relation between the hosts' ethnicity and different consumer outcome, with the aim to deepen the understanding of discrimination in online market places. The studies did not found evidence leading to the same conclusions. Direct effects of the host ethnicity on the dependent variables were found only in Study 1, confirming discriminating effect for the outgroup hosts. Uneven effects were found regarding *who* discriminates, *why* it occurs, and what role does the *type of service* play in the relation studied.

3.4.2.1. *Moderation effect : who discriminates?*

From study 1, right-wing participants reported lower outcomes for the outgroup host (except liking and attractiveness). Study 2 reported no effect of the political orientation.

Respondents with high degree of perceived outgroup threat reported lower consumer outcomes for the outgroup host in both studies (except on liking and attractiveness in study 2). For both study, this was only a trend identified with spotlight analyses, but not a significant effect.

3.4.2.2. *Mediation effect: why does discrimination occur?*

From Study 1, the self-object connection influences the consumer outcomes, strengthening the negative effects of the outgroup host. From Study 2, trust appeared to mediate the effect of the host ethnicity on the attractiveness and attribute of the apartment. Higher trust was perceived for the outgroup host, leading to increased attractiveness and attributes of the apartment. Risk also mediated the studied relation. Lower risk was perceived for the outgroup, leading to higher attitude towards the home swap and likelihood to choose the apartment. The reason of this increased trust and reduces risk perception for the outgroup host remains unclear.

3.4.2.3. *Moderation mediation effect: the influence of personal traits on the mechanisms behind discrimination*

In study 1, left wing participant reported overall better scores on all mediators, in favour of the outgroup host. Right-wing participants reported lower self-object connection and lower perceived trustworthiness for all the consumer outcomes. Right-wingers reported lower willingness to swap through the lowered self-other overlap. The effects were stronger for the outgroup host. Study 2 showed the same trend in the perceived trustworthiness for left wing participant.

Results regarding the influence of perceived outgroup threat are mitigated. From Study1, high degree of perceived outgroup threat influenced the self-object connection, the self-other overlap, and the perceived trustworthiness. But only the perceived trustworthiness impacted the outcomes. In Study 2, perceived outgroup threat impacted attitude towards the home swap through the self-other overlap, attractiveness and attributes through the perceived trustworthiness, and almost the likelihood to choose the apartment through the perceived risk.

The directions of the results were similar: when the outgroup threat is perceived as low, self-object connection, self-other overlap, perceived trustworthiness and perceived risk* are better rated regarding the outgroup host. Whereas, when the outgroup threat is perceived as high, scores reported are increasingly worse for the outgroup.

3.4.2.4. *What role does the service type play ?*

Study 1: The willingness to swap was subjected to direct effect of the host ethnicity, as well as when indirectly moderated by the political orientation. The outgroup host had a negative direct effect on the willingness to swap. This effect was stronger for right-wing participants. The relation between host ethnicity and willingness to swap was mediated by the self-object connection, as were all the consumer outcomes. Yet, the willingness to swap appeared as the only consumer outcome influenced by the self-other overlap when considering the political orientation and the perceived outgroup threat. Right-wingers and respondents with high level of perceived outgroup threat reported lower level of self-other overlap for the outgroup host, strengthening its negative effect on the willingness to swap.

Study 2 assessed no moderation effect of the service type on the relation between the host ethnicity and the dependent variables, nor on the proposed mediators. In addition, the attitude towards the home swap was not directly influenced by the host ethnicity. Yet when the relation was mediated by the perceived risk; it appeared that lower risk was perceived for the outgroup host, leading to more positive attitude towards the home swap service than for the ingroup host. This trend has been assessed as outgroup favouritism (p. 45).

3.4.3 Conclusion and limitations

Different results were obtained with the two experiments. Yet, similar trends have been identified and confirmed the existence of cross cultural tendencies.

The results obtained with the experiments are based on data collected with online surveys. Airbnb's policies make it hard to conduct field experiments, as Ben Edelman (Harvard professor and researcher) experienced. For his research on racial discrimination, Edelman created fictitious accounts on Airbnb and got banned from the platform (Levin, 2016). The issue of online survey is that the data might suffer from experimental conditions. Answers given by the respondents were not tying them to real outcomes, i.e. effective rental or home swap. Hence, it might not have reflected the choices they would have made in real situations.

Preferences and actions are subjected to psychological distance (Trope & Liberman, 2010). Hence, the perception of *whether* the outcome will occur influence the responses (Trope & Liberman, 2003). In addition, the construal-level theory (CLT) assesses differences in responses depending on the construal-level of events. The Airbnb rental and home exchange scenarios presented are likely to have been interpreted as high-level construals, i.e. abstract mental representation demanding low elaboration. Whereas, in reality, it might be more of a low-level construal. According to the CLT, "it would be more reasonable to make the decision about renting an apartment from closer temporal, geographical, and social perspectives" (Liberman, Trope, & Wakslak, 2007, p. 115).

Finally, it should be noted that the two studies were realized in countries with Western-culture. Prior experiments assessed difference in intergroup relations and trust base between Western and Eastern cultures (Yuki et al., 2005). Therefore, generalization of the conclusions reported should be limited and carefully extended.

4 Nudges to fight discrimination

Following the Nudging Development Process used by Weinmann, Schneider, and vom Brocke (2016) and Mirsch, Lehrer, and Jung (2017), this part first exposes the context and goals of the nudging strategy. Then, the origin of the problem and related psychological mechanisms are identified. Nudges are developed consequently and their evaluation is discussed.

4.1 Introduction

Fighting discrimination is a well-documented topic among the literature. Studies highlighted the essential role of the implicit attitude in evaluating discrimination. Implicit attitude is defined as “an attitude that can be activated without conscious awareness and, when so triggered, influences judgments and actions” (Quillian, 2006, p. 314), with emphasize put on the *unconscious* activation (Devine, 1989). However, traditionally, prejudice-reduction techniques focused on changing the conscious (explicit) attitudes and apparent bias-expressions (Dovidio et al., 2017), mostly with educational programs (Stephan & Stephan, 2001). Yet, these techniques did not prove efficient in reaching their goal (Dovidio et al., 2017; Ölander & Thøgersen, 2014; Paluck & Green, 2009).

Similarly, Airbnb set up initiatives aiming at inhibiting discrimination (Murphy, 2016), such as their policy emphasizing inclusion and respect (Airbnb, 2016), the promotion of super-hosts status (Airbnb, 2018f), and the toolkits raising (self-) awareness on bias (Airbnb, 2018a, 2018h; Cleave, n.d.; News Deeply, n.d.) (also see 2.3. The case of Airbnb, , p. 13). These techniques can be referred to as “boosts” (Hertwig & Grüne-Yanoff, 2017), aiming at “building new decision competences or fostering existing ones” (Reijula, Kuorikoski, Ehrig, Katsikopoulos, & Sunder, 2018, p. 99). Boosts impact behavior by enhancing the competences of individuals (Grüne-Yanoff & Hertwig, 2016). Yet, they do not act on implicit biases that may come into play (Hertwig & Grüne-Yanoff, 2017). The Instant Book feature (see 2.3.3.2 Instant book, p. 16) aimed at reducing implicit bias (Murphy, 2016), but accounts missteps and fails at fully reaching its goal.

All in all, Airbnb’s current actions are mainly tackling explicit (vs. implicit) attitudes, which does not seem to be enough to fight effectively discrimination. A proposed solution was to

create and enforce laws directly against individual users discriminating (Cheng & Foley, 2018). Even though this would reduce discriminatory outcomes, this solution does not address implicit biases. There is a need for a deeper understanding of the source of discrimination. This is the focus of the following section.

4.2 Identifying the source of the problem: Information

Part of the literature – mostly economics – agrees on two major mechanisms behind discrimination (Bertrand, Chugh, & Mullainathan, 2005; Cui et al., 2017; Guryan & Charles, 2013; Quillian, 2006): *statistical discrimination* (Arrow, 1973; Phelps, 1972), and *taste-based discrimination* (Becker, 2010). Statistical discrimination is when “individuals use the average characteristics of social categories to help make judgments” (Quillian, 2006, p. 321). Taste-base discrimination occurs when “people act as if there is a non-pecuniary dis-utility of associating with a particular ethnic group” (Cui et al., 2017, p. 2). The former occurs particularly in imperfect information settings (Aigner & Cain, 1977; Quillian, 2006), while the latter arises even with perfect information (Cui et al., 2017). Both are likely to happen in online market places (Cui et al., 2017). Based on those theories, discrimination appears to be a function of the amount of information.

Information is a decisive matter in consumer decision making (Malhotra, 1984). The literature accounts for numerous decision strategies, most of which are described in Payne, Bettman, and Johnson (1993). The Elaboration Likelihood Model (Petty & Cacioppo, 1986) identifies two paths of information processing: one involving low cognitive effort, and the other, high-effort. In the tourism industry and with the increased amount of information available on internet, cognitive effort is needed to book accommodations, despite facilitating agencies (Häubl & Dellaert, 2004). In that setting, information overload is likely but should ideally be avoided. Indeed, “if consumers are provided with "too much" information at a given time, such that it exceeds their processing limits, overload occurs leading to poorer decision making and dysfunctional performance” (Malhotra, 1982, p. 419). When there is a large amount of information to process, people may consciously choose to ignore some elements to make their decision (Payne et al., 1993). Moreover, people tend to apply simpler rule to make decision when there are more than five alternatives (Lussier & Olshavsky, 1979; Ross, 1979).

In that regards, the literature suggests several changes to decrease online discrimination on Airbnb. Two contradictory tendencies are distinguished. The first one argues for revealing more information, while the second defend an opposite approach and appeal for less disclosure.

4.2.1 Increasing the amount of information

Building trust in an online environment is a challenge for Airbnb (see 2.4.3. Trust and risk, p. 22). To tackle this issue, the company chose to make the use of profile picture mandatory which would “help build relationships and allow host and guests to get to know one another before a booking begins” (Murphy, 2016, p. 17). Previous studies showed that pictures and user verifications are important trust-building mechanisms besides rating systems (Teubner, 2014).

When the home is shared between the host and the guest, building trust is even more important (Kreiczler-Levy, 2015). In those cases, people are more likely to experience relationships and interactions, and this is where the sharing of personal information is needed (Jung et al., 2016).

Moreover, Airbnb encourages its users to use mutual reviews (Airbnb, 2018c), as reciprocal reviewing increase trust (Luca, 2017). Reviews act as a quality signaling tool, which is a pertinent solution to imperfect information situations (Cheung, Xiao, & Liu, 2014). Prior studies showed than even only one positive review led to more positive outcomes, regardless of ethnicity (Cui et al., 2017; Edelman, 2016; Edelman & Luca, 2014). Negative reviews have been shown as decreasing the difference in outcomes between ingroup and outgroup hosts (Cui et al., 2017). However, the results of a study conducted by Cansoy and Schor (2016) revealed that people generally give lower reviews for outgroup hosts, hence, the reputation mechanism is also subjected to discriminatory outcomes.

4.2.2 Decreasing the amount of information

According to Edelman (2016), a solution to eliminate discrimination is to reduce the disclosure of unnecessary information. Cues about a user, and hence race, can be inferred from names, pictures, but also other personal information such as background and interest (Todisco, 2014). Airbnb claims that mandatory pictures and names are important to build trust among the online community (Murphy, 2016). However, Edelman (2016) and Todisco

(2014) argue those information are not indispensable for people to operate transactions, especially when other cues are available (Ert et al., 2016), such as reviews (Todisco, 2014). According to Murphy (2016): “photos capture only one dimension of a person’s identity” (p. 17), and should be less prominent. Airbnb already reduces the prominence of the pictures of the hosts by delaying their display further in the search process (Mohammed, 2017) (also see 2.3 The case of Airbnb, p. 13).

The issue is that racial cues can lead people to make discriminatory decision (Edelman, 2016), even unconsciously (Devine, 1989). Several studies showed that when characteristics displayed are equal, equivocal or diverse, people judge them unevenly based on their implicit biases (Dovidio & Gaertner, 2000; Dovidio et al., 2017). In addition, studies demonstrated that peripheral cues influence the decision process (Luck & Thomas, 1999). In Airbnb’s context, host ethnicity can be seen as a peripheral cue in comparison to price, location and cleanliness, which are the most important drivers for choice (Martin-Fuentes, Fernandez, Mateu, & Marine-Roig, 2018). On Airbnb, the house, rather than the host, is the main focus for guests (Jung et al., 2016). In situation where people have low levels of knowledge, they are likely to use *social heuristic* and act as their group of reference would (Gigerenzer & Gaissmaier, 2011). This imply that when people are unsure about what to look for, they might rely on cues such as the host profile. In that perspective, the higher the congruity with the host, the more likely the guest will choose the apartment. The higher the self-distance with the host, the less likely the apartment will be chosen (also see 2.4.2 Self-concepts and self-congruence, p. 20).

All in all, due to implicit biases, displaying information identifying the host as an outgroup member can lead him to be subjected to discriminatory outcomes. Therefore, limiting such information, particularly pictures (Ert et al., 2016), might help solving the issue (Edelman, 2016; Todisco, 2014).

4.3 Proposed nudges

In the sense of Sunstein (2014), nudges are “liberty-preserving approaches that steer people in particular directions, but that also allow them to go their own way” (p. 583). Nudging interventions aim at helping people make responsible decisions (Marchiori, Adriaanse, & De Ridder, 2017; Thaler & Sunstein, 2008), by suggesting behavioral changes through unconscious processes, rather than forcing the adherence to some rules (Marchiori et al.,

2017). This implies that nudges impact implicit attitudes while preserving freedom of choice. So far, techniques implemented by Airbnb tapped mainly into explicit attitudes (see 4.1 Introduction, p. 69). Yet, to tackle discrimination effectively, there is a need to address implicit biases. Freedom of choice is an important characteristic for a solution against discrimination on Airbnb. Digital discrimination is triggered by subjectivity (Cheng & Foley, 2018), and the responsibility is in the hands of the consumers, moving away from classical CSR settings.

Nevertheless, Airbnb has responsibilities and influences its users. Investigations focusing on digital nudges are emerging (see Weinmann et al. (2016); Mirsch et al. (2017)) and underline the importance of the choice environment design. Edelman and Luca (2014) even describe discrimination as a *market design* issue in the case of Airbnb. The choices users make on the platform are (unconsciously) influenced by the way information is presented (Thaler & Sunstein, 2008; Weinmann et al., 2016). In fact, “choice architecture alters people’s behavior in a predictable way” (Thaler and Sunstein 2008, p. 6). Hence, the corporate responsibility lies mostly in the choice architecture.

From the highlighted literature, partisans of the display of more information argue for trust-building, while less-information opinions focus on implicit bias inhibition and emphasize the home as the focal object in the transaction. The two directions agree on the benefits of the reputation system, which is at the same time providing more information and driving people away from racial cues. On that basis, three different nudges are proposed. They can be considered one at the time or all together as part of a nudge strategy.

4.3.1 Mutual Reviews

A first insight is to increase emphasis on reputation, and continue encouraging people to post mutual reviews (Cui et al., 2017). Ratings on Airbnb are considerably high (Zervas et al., 2015), which could be due to the reciprocity of the evaluation, incentivizing people to give out nice grades. Yet, the motives are not questioned by users, and the effects of reviews are positive both for guests and hosts (Cui et al., 2017). Reviews drive bookings (Dickinger & Mazanec, 2008), and have an important impact on trust (Chien, Chen, & Wu, 2013; Ert et al., 2016; Huurne et al., 2017). They have been proven to decrease significantly discrimination (Cui et al., 2017). Unlike the stars in the hotel industry assessing objective quality (Martin-Fuentes et al., 2018), Airbnb ratings aim to build trust and share users’

experiences to the community. There are other programs (see 2.3.3.1 “Super” status and programs, p. 15) in which Airbnb evaluates quality as a third party in the guest-host relation (Cheng & Foley, 2018; Martin-Fuentes et al., 2018). These programs are closer to hotels’ ratings classification systems, mitigating asymmetry of information (Martin-Fuentes et al., 2018; Núñez-Serrano, Turrión, & Velázquez, 2014).

4.3.2 Home’s pictures reviews

A third insight is about the emphasize put on the homes rather than on the hosts. Unlike CouchSurfing where people look for social interactions, homes are the main focus when booking an accommodation on Airbnb (Jung et al., 2016). This focal point was also highlighted by some respondents in Study 2 who commented they would have liked more pictures and information about the apartment. Currently, the reviews left after a stay can describe the place, the neighborhood, but also the hosts’ welcome and the activities guests did. In other words, there is few guidelines on what should reviews include. Yet, reviews are drivers for choice in bookings (Dickinger & Mazanec, 2008). To put emphasize on the housing, after their stay, guests could rate the accuracy of the pictures depicting the home. That way, the functional aspect of housing could be highlighted, and trust related to the home could be enhanced. Having validated scores on pictures might steer people away from their attitudes towards the hosts ethnicity (stereotypes) and host trustworthiness (reliability) could be increased (Chien et al., 2013).

4.3.3 Host’s presentation

A second insight refers to implicit biases. Hiding information from users might inhibit racial biases to come into play, but is not likely to reduce them effectively (Li, Zhang, & Cui, 2017). Moreover, concealing identifiable information is more likely to deteriorate online trust (Mesch, 2012). To tackle discrimination on Airbnb and more generally in the sharing economy, the proposed nudge should focus on the origin of the problems rather than on the symptoms. Hence, displaying more information can challenge the unconscious bias by dismantling stereotypes. Stereotypes have been identified as heuristics influencing attitude and behavior (Chen, Duckworth, & Chaiken, 1999). As an illustration, when stereotypes link Blacks with danger (as in Kahn and Davies (2011)), the association might get transferred to the renting of the house through contamination effect (Murray & Schaller, 2016). Making this link less salient in the minds of users by priming (in the sense of Mirsch et al. (2017))

other associations reducing intergroup differences would avoid this contamination effect, and would also create new associations. Over time, the repetition of these new associations can challenge the existing stereotypes and help overcome racial (implicit) biases, in the manner of the mere exposure effect and implicit learning (Gordon & Holyoak, 1983).

A campaign to fight racism already used this approach. In 2011, the United Nations (UN) launched their campaign *Let's Fight Racism!* (UNRIC, 2011). As part of it, a visual collection of postcards called *More than meets the eye* was spread on the social media. The postcards, available in appendix K, present pictures of people from different background and with different ethnicity. A slogan asks the viewer what he sees and gives three possible answers. The three options are qualifying attributes challenging stereotypes. They push people to reflect on their first impressions and thoughts. By using the same mechanism, Airbnb could present some user's attributes – non-related to stereotypes – along with user's pictures. This could help overcoming the impact of racial biases.

4.4 Conclusion

Based on the arguments of the literature, three independent nudges to decrease discrimination were suggested. The first one encourages the continuation of mutual reviews. The second builds up on the reputation mechanism by suggesting ratings of the pictures of the homes. The third nudge advises to present more information about the hosts to challenge stereotypes. Overall, all the three nudges argue for the display of more information in a perspective of trust building.

4.4.1 Limitations

Increasing the amount of information has advantages but also triggers drawbacks (Martin-Fuentes et al., 2018; O'Connor, 2010). A disadvantage is the information overload that can result from more content generated by users (in their description and reviews). This would result in increased complexity of the decision-making process (Fang, Ye, Kucukusta, & Law, 2016). Therefore, *simplified, uniform and comparable* indicators should be used (Martin-Fuentes et al., 2018, p. 77). Common examples are stars- or 5-points scale-rating systems.

Reviews might involve implicit biases (Cansoy & Schor, 2016). Therefore, the reviews-matter should be further considered with the findings of Ye, Alahmad, Pierce, and Robert

(2017). If their research assesses the negative effect of the host's ethnicity on the reviews, mechanisms correcting the racial biases involved should be developed prior to, or along with emphasizing the reputation system. This should be further elaborated when their findings will be available.

4.4.2 Suggested directions for further research

Further research is needed to evaluate the trade-off between *less* information – leading to less trust – and *more* information – with the potential problem of overload. The perspective adopted for the proposed nudges aimed at tackling implicit biases. Yet, it might be more effective in terms of consumer outcomes to inhibit racial biases, rather than trying to reduce or eliminate them. Therefore, there are three directions that need further investigation.

The first direction regards trust. As trust building is a crucial challenge in online environment, the mechanism building trust should be further explored. One main question regards hosts; as Airbnb bookings are made based on the housing offered, the two parties could only be revealed to each other when the transaction is accepted (Edelman, 2016; Todisco, 2014). The question is: would people still use Airbnb? If personal information is concealed, what would compensate for trust? In that perspective, the trust-building power of the two first proposed nudges (mutual reviews and home's pictures reviews) or similar actions could be tested without giving any information about the host.

The second direction refers to the extent to which implicit biases can be modified by the third nudge proposed (display attributes of the hosts) or similar actions. The power of adding information to fight stereotypes (implicit learning) should be tested. The perception and attitudes towards the host could be measured when the picture is displayed alone, and with some personal attribute (example in appendix L).

Lastly, the third direction considers the risk of information overload. Further research could examine levels of information and determine what threshold leads to optimal outcomes. It could be that the nudges proposed increase the amount of information to an extent that complexify the decision process and degrades the decisions quality. Whereas, the goal was to offer simpler decision heuristics.

5 Conclusion and limitations

The persistence of discrimination in the sharing economy and particularly on Airbnb has been assessed by the literature and supported throughout this thesis. Investigation of the actions and initiatives taken by Airbnb to fight discrimination showed that the problem is complex and little is done to effectively address it. The nature of the service provided on Airbnb is driving user responsibility, which not legally regulated and leaves the door open to discriminatory outcomes. Yet, awareness around the subject is growing. Edelman and Luca (2014), Edelman et al. (2017), Todisco (2014), Kakar, Franco, Voelz, and Wu (2016), Cui et al. (2017) are only few examples of recent research assessing racial discrimination in the sharing economy. However, much remains unclear regarding *who* discriminates, *why* do people discriminate and in *which service*-context discrimination is more likely to occurs. Moreover, how racial discrimination can be fought remains a crucial question.

This context triggered six research questions that this thesis aimed to address. The results of the two experiments reported and an extensive literature review provided valuable insights to answer those questions. Here are the main conclusions.

RQ1: Do people discriminate hosts based on race in the services offered on Airbnb?

Previous research assessed the existence of racial discrimination on Airbnb (e.g. Edelman et al. (2017)), and racial discrimination against hosts (Klemsdal & Sundt, 2017). The Study 1 confirmed this tendency. However, Study 2 did not show statistically significant discrimination towards the outgroup host. The answer is hence mitigated: racial discrimination against hosts exists in the sharing economy but does not seem to be equivalent across cultures.

RQ2: Do individuals' political orientation and outgroup threat perceptions moderate racial discrimination?

From Study 1, right-wingers are more likely to discriminate. Both studies assessed reverse discrimination effect for left-wing participants, not directly on the consumer outcome but through the self-perceptions, trust and risk*. Similarly, individuals with high level of perceived outgroup threat tend to discriminate against the outgroup host. On the contrary, individuals with low level of perceived outgroup threat discriminate in favor of the outgroup host.

Overall, right-wingers and individuals with high level of perceived outgroup threat discriminate against the outgroup host. On the opposite, left-wingers and individuals with low level of perceived outgroup threat discriminate in favor of the outgroup host, showing evidence of reverse discrimination. This effect is not extensively studied yet, and should draw more attention. Further research is needed to evaluate the reason behind positive discrimination against outgroup.

RQ3: Why do people discriminate based on host ethnicity?

From Study 1, racial discrimination is partly explained by a lower self-object connection associated with the outgroup host, compared to ingroup host. This emphasizes the importance of the apartment as a focal point in the renting, compared to e.g. the trust in the host. From Study 2 however, the effect of the perceived trustworthiness and risk lead to positive discrimination towards the outgroup. This means that respondents were positively discriminating in favor of the outgroup host based on host's perceived characteristics (higher trustworthiness and lower associated risk) rather than self-connection with apartment as in Study 1.

Overall, racial discrimination against the outgroup host seems to be caused by projective mechanism on the apartment – lower self-object connection could be due to contamination (see 2.4.4 Intimacy and contamination, p. 24). Whereas, discrimination in favor of the outgroup host is triggered by subjective perception of the host, which might be overestimated (see 3.2.3.1.1. Outgroup favoritism, p. 45).

RQ4: How does the type of service influence the manifestation of racial discrimination?

Study 1 showed discrimination in the home swap service context. Yet, in addition to the self-object connection, the self-other overlap came into play. The extent to which people think they have similar values with the host impact their willingness to swap homes. This indicates that the type of service influences the decision process; with the home swap service people take into consideration more personal characteristic (self-other overlap) than only self-connection with the apartment.

Study 2 showed no effect of the type of service as a moderator. However, attitude toward the home swap service was subjected to positive discrimination through the effect of perceived risk. Risk was perceived as being lower for the outgroup host, which led to a better attitude

towards the home swap service. This confirms the trend and logic behind positive discrimination identified in RQ3.

RQ5: What findings on racial discrimination can be cross-culturally generalized?

The comparison of the two studies showed differences across the samples. Even though both Norway and Belgium are from the Eastern culture and are close in that regard (Yuki et al., 2005), differences subsist. This highlights the fact that populations are not similar across countries, and that inhabitants' culture play a great role in shaping individuals. Therefore, results must be interpreted within their cultural context and general conclusions should not be drawn hastily. Overall, the two studies assessed the significant role of the personal traits in discrimination against the outgroup host and positive discrimination toward the outgroup host.

RQ6: How could racial discrimination against host in the services offered on Airbnb be tackled?

Three nudges were suggested. The first one encourages mutual reviews. The second suggests guests to rate the accuracy of the picture of the home after the stay. The third nudge recommends presenting more information about the hosts to challenge stereotypes. All three nudges aim to tackle racial discrimination by reducing the implicit biases embedded in the decision-making process.

Throughout this thesis, the analysis had a limited focus regarding three elements; actors considered, the company, and the kind of discrimination. These limitations are discussed in the following paragraphs.

Three actors were considered: hosts, guests and Airbnb. Yet, in reality, various other stakeholders and co-stakeholders – e.g. entrepreneurs, similar Airbnb platforms, laws and regulations – may play a role in dismantling discrimination (Cheng & Foley, 2018). The requirements are different for the stakeholders involved, and this impacts how trust should be built online (Shankar, Urban, & Sultan, 2002). Further research might integrate the stakeholder theory (Donaldson & Preston, 1995) to work with a more comprehensive frame.

Airbnb was the focus of this thesis. The company has a strong brand image and is already well known (SOCl, 2017). This implies that the platform induces several associations in the mind of consumers. In the experiments conducted, using the context of Airbnb facilitated the

explanation of the presented situations. However, the brand equity might have affected results (Belén del Río, Vazquez, & Iglesias, 2001), and further studies might prefer using no explicit company name to generalize the findings to the sharing economy.

The present thesis focused on racial discrimination. Yet, other types of discrimination are present on Airbnb, e.g. based on sexual orientation (e.g. Ahuja and Lyons (2017); Cheng and Foley (2018)), gender (e.g. Gallagher (2017)), disabilities (e.g. Boxall et al. (2018)), and those should also be considered. Even though potential for a more inclusive world is present in the sharing economy and the digital era, the reality is not meeting these optimistic expectations. More research in understanding discrimination and testing solutions is needed. Hopefully, the subject attracts more and more attention, increasing the likelihood of discovering promising findings in a near future.

6 References

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Appendix A Manipulations – Study 1



[Oversikt](#) [Anmeldelser](#) [Verten](#) [Beliggenhet](#)



Nice Apartment in the Centre of Copenhagen
København, Danmark

 Helt hjem/leilighet
  1 Gjest
  1 Soverom
  1 seng

Om dette utleiestedet

The apartment is situated in the central area Indre By in Copenhagen, close to Tivoli and everything the city has to offer. 10 minute walk to the train station.

The apartment is fully equipped, with a kitchen, living room and one bedroom.

Figure C.1.1. Description of the apartment for the ingroup host scenario



Martin

Hi. My name is Martin, I am a 25-year-old Norwegian student living in Copenhagen.

I am renting out my apartment as I frequently travel to Norway to see my friends and family.

Figure C.1.2. Description of the host for the ingroup host scenario



[Oversikt](#) [Anmeldelser](#) [Verten](#) [Beliggenhet](#)



Nice Apartment in the Centre of Copenhagen
København, Danmark

 Helt hjem/leilighet
  1 Gjest
  1 Soverom
  1 seng

Om dette utleiestedet

The apartment is situated in the central area Indre By in Copenhagen, close to Tivoli and everything the city has to offer. 10 minute walk to the train station.

The apartment is fully equipped, with a kitchen, living room and one bedroom.

Figure C.1.3. Description of the apartment for the outgroup host scenario



Abdi

Hi. My name is Abdi, I am a 25-year-old Norwegian-Somali student living in Copenhagen.

I am renting out my apartment as I frequently travel to Norway to see my friends and family.

Figure C.1.4. Description of the host for the outgroup host scenario

Appendix B Survey – Study 1

Starting page

Denne undersøkelsen dreier seg om Airbnb, en online markeds plass hvor brukere kan bestille overnattingssteder over hele verden. I undersøkelsen ønsker vi å spørre deg om din holdning til ulike Airbnb-annonser.

Undersøkelsen vil ta maksimalt 10 minutter.

Undersøkelsen gjennomføres som en del av et forskningsprosjekt ved Norges Handelshøyskole.

Dersom du har spørsmål til studien, ta kontakt med stipendiat Katrine Nødtvedt, e-post: katrine.nodtvedt@nhh.no.

All informasjon behandles konfidensielt. Den tekniske gjennomføringen av spørreskjemaundersøkelsen foretas av Norstat. Forskere ved NHH vil få utlevert data fra Norstat uten tilknytning til e-post, IP-adresse eller annen personidentifiserende informasjon. Opplysningene fra dette spørreskjemaet slettes fra Norstat sine servere når prosjektet er ferdigstilt, seinest 1. mars 2018. Opplysningene vil da kun være tilgjengelig i fullstendig anonymisert form på Norges Handelshøyskoles server, der kun forskerne tilknyttet dette prosjektet vil ha tilgang.

I eventuelle publikasjoner basert på denne undersøkelsen vil det ikke være mulig å gjenkjenne enkeltpersoner.

Det er frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn.

Studien er meldt til Personvernombudet for forskning, NSD - Norsk senter for forskningsdata AS. Dersom du bekrefter at du har lest informasjonen over, og gir samtykke til å frivillig delta i undersøkelsen, klikk «Ja»

- Ja, jeg ønsker å delta
- Nei, jeg ønsker ikke å delta → **SCREEN OUT**

End

New page

To steg før du begynner:

1. Trykk på F11-knappen på tastaturet ditt for visning i «full screen». (Dersom dette ikke fungerer på din enhet er det OK. I så fall ber vi deg om å lukke alle andre faner i nettleseren, slik at du ikke distraheres underveis i undersøkelsen.)

2. Besvar alle spørsmål individuelt: Ikke kommuniser med andre underveis, hverken ansikt-til-ansikt eller via internett.

End

New page

Instruksjoner: Les nøye

Det er svært viktig at du leser nøye gjennom all informasjon du blir presentert i denne undersøkelsen og svarer oppriktig på alle spørsmål. For å vise at du har lest denne ber vi deg om å svare «Tennis» på spørsmålet under for å fortsette til selve undersøkelsen.

Hvilke av følgende idretter er du mest interessert i?

Fotball	Ski	Snowboard	Friidrett
Svømming	Tennis	Basketball	Håndball

➔ SCREEN OUT if not «Tennis»

End

New page

Airbnb er en online markeds plass hvor brukere kan bestille overnattingssteder over hele verden. I motsetning til tradisjonell overnatting (hotell), så er dette et forum hvor privatpersoner kan leie ut boligen sin til andre privatpersoner gjennom en sikker betalingsplattform.

End

New page

Før du fortsetter: Se for deg at du skal reise til København for en helg og er interessert i å leie en Airbnb-leilighet i prisklassen 500-1500 NOK per natt. På neste side vil du bli presentert for en leilighet sentralt i København innenfor denne prisklassen. Vi ber deg om å lese informasjonen i annonsen, og klikke videre for å få informasjon om verten (utleier). Du kan ikke klikke deg videre fra annonsen eller informasjon om verten før det har gått minst 10 sekunder. Deretter vil du bli bedt om å svare på noen spørsmål om denne annonsen.

End

New page Randomization to one of the three scenarios

(Next pages are 3 different scenarios (betingelser), that should be randomized. All respondents should get 1 scenario each. Quota per scenario)

SCENARIO 1. (10-second timer set before going to the next page).

Denne skal vises i 10 sekunder før det skal være mulig å klikke seg videre.

[Figure C.1.1. Description of the apartment for the ingroup host scenario, p.3]

Denne skal vises i 10 sekunder før det skal være mulig å klikke seg videre.

[Figure C.1.2. Description of the host for the ingroup host scenario, p.3]

SCENARIO 2. (10-second timer set before going to the next page).

Denne skal vises i 10 sekunder før det skal være mulig å klikke seg videre.

[Figure C.1.3. Description of the apartment for the outgroup host scenario, p.4]

Denne skal vises i 10 sekunder før det skal være mulig å klikke seg videre.

[Figure C.1.4. Description of the host for the outgroup host scenario, p.4]

End

New page: Start task 1

Generelt sett, hvor godt likte du denne leiligheten?

	Likte ikke i det hele tatt 0	1	2	3	4	5	6	7	8	9	Likte svært godt 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Dersom du skulle tatt en beslutning her og nå, hvor sannsynlig er det at du ville valgt akkurat denne leiligheten?

	Helt usannsynlig 0	1	2	3	4	5	6	7	8	9	Svært sannsynlig 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Leiligheten du så ligger i prissjiktet 500-1500 NOK pr natt. Hvor mye ville du vært villig til å betale for denne leiligheten per natt? (Oppgi beløp i norske kroner).

Page Break

Hvor attraktiv tror du akkurat denne leiligheten ville vært for en gjennomsnittlig norsk forbruker?

	Svært lite attraktiv 0	1	2	3	4	5	6	7	8	9	Svært attraktiv 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Vanligvis blir Airbnb-leiligheter klargjort av verten selv. Hvor interessert hadde du vært i at denne leiligheten ble rengjort av et profesjonelt rengjøringsfirma før ditt opphold?

	Svært lite interessert 0	1	2	3	4	5	6	7	8	9	Svært interessert 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Basert på ditt generelle inntrykk, hvordan tror du denne leiligheten har blitt vurdert av tidligere gjester?

	Svært dårlig standard 0	1	2	3	4	5	6	7	8	9	Svært god standard 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

	Svært urenslig 0	1	2	3	4	5	6	7	8	9	Svært renslig 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

	Svært lite trivelig 0	1	2	3	4	5	6	7	8	9	Svært trivelig 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Jeg følte med en gang at denne leiligheten er "typisk meg".

	Helt uenig 0	1	2	3	4	5	6	7	8	9	Helt enig 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

(Insert name according to scenario/betingelse)

	Helt uenig										Helt enig
(1)	0	1	2	3	4	5	6	7	8	9	10
(2)	0	1	2	3	4	5	6	7	8	9	10
(3)	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

(1)Jeg tror (DP: Insert name according to scenario/Betingelse NAVN VERT: betingelse 1 = Martin, betingelse 2 = Abdi) er en vert som først og fremst ønsker det beste for sine gjester.

(2)Jeg tror (DP: Insert name according to scenario/Betingelse NAVN VERT: betingelse 1 = Martin, betingelse 2 = Abdi) er til å stole på.

(3)(NAVN VERT: betingelse 1 = Martin, betingelse 2 = Abdi) og jeg har antageligvis lignende verdier og prinsipper på.

End Task 1

New page: Start task 2

Airbnb vurderer å tilby en tjeneste som skal tilrettelegge for gjensidig bytte av leiligheter. Som et eksempel, la oss si at du skal til København samme helg som (DP: Insert name according to scenario/Betingelse NAVN VERT: betingelse 1 = Martin, betingelse 2 = Abdi) skal til din hjemby. Da vil dere kunne finne hverandre gjennom Airbnb sin bytteordning, slik at begge sparer penger på å dele hverandres leilighet samtidig.

Vi vil gjerne at du svarer på noen få spørsmål om denne typen tjeneste.

New page

La oss si at du eier en 2-roms leilighet tilsvarende den (DP: Insert name according to scenario/Betingelse NAVN VERT: betingelse 1 = Martin, betingelse 2 = Abdi) leier ut i København. Hvor aktuelt hadde det vært for deg å foreta et gjensidig boligbytte med (DP: Insert

name according to scenario/Betingelse NAVN VERT: betingelse 1 = Martin, betingelse 2 = Abdi) for en helg?

	Svært lite aktuelt 0	1	2	3	4	5	6	7	8	9	Svært aktuelt 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Når du selv reiser på ferie, hvor aktuelt er det for deg å bruke Airbnb for å finne overnatting?

	Helt uaktuelt 0	1	2	3	4	5	6	7	8	9	Svært aktuelt 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

End Task 2

New page

Har du erfaring med Airbnb fra tidligere?

1. Ja, som vert
2. Ja, som gjest
3. Ja, som både vert og gjest
4. Nei

Page Break

Til slutt vil vi gjerne stille deg noen spørsmål om deg og dine meninger om ulike tema.

Vennligst oppgi i hvilken grad følgende utsagn beskriver deg som person

	Helt uenig											Helt enig
(1)	0	1	2	3	4	5	6	7	8	9	10	
(2)	0	1	2	3	4	5	6	7	8	9	10	
Recorded scores	1	2	3	4	5	6	7	8	9	10	11	

- (1) Jeg har en tendens til å stole på andre mennesker, selv om jeg vet lite om dem på forhånd
 (2) Å stole på andre mennesker er ikke vanskelig

Page Break

Hvordan vil du beskrive din etniske bakgrunn?

1. Norsk

2. Annet: [Tekstboks]

Page Break

I politikken snakker man ofte om "venstresiden" og "høyresiden". Nedenfor er en skala der 0 representerer de som står helt til venstre politisk, og 10 representerer de som står helt til høyre politisk. Hvordan vil du plassere deg selv på en slik skala?

	Venstre											Høyre
	0	1	2	3	4	5	6	7	8	9	10	
Recorded scores	1	2	3	4	5	6	7	8	9	10	11	

Page Break

I hvilken grad tror du muslimer utgjør en trussel mot vestlig kultur?

	Ikke i det hele tatt 0	1	2	3	4	5	6	7	8	9	I svært stor grad 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

I hvilken grad tror du muslimer utgjør en trussel mot norske verdier?

	Ikke i det hele tatt 0	1	2	3	4	5	6	7	8	9	I svært stor grad 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

I hvilken grad tror du somaliere utgjør en trussel mot vestlig kultur?

	Ikke i det hele tatt 0	1	2	3	4	5	6	7	8	9	I svært stor grad 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

I hvilken grad tror du somaliere utgjør en trussel mot norske verdier?

	Ikke i det hele tatt 0	1	2	3	4	5	6	7	8	9	I svært stor grad 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Her er noen påstander om personlige holdninger og trekk. Les hver påstand og angi om den er SANN eller USANN for deg personlig.

(1-10)	Sann	Usann
Recorded scores	1	2

- (1) Jeg har aldri mislikt noen intenst.
- (2) Jeg føler meg noen ganger bitter når jeg ikke får det som jeg vil.
- (3) Uansett hvem jeg snakker med så er jeg alltid en god lytter.
- (4) Det har hendt at jeg har utnyttet en annen person.
- (5) Jeg er alltid villig til å innrømme det når jeg gjør en feil.
- (6) Jeg prøver noen ganger å ta igjen, i stedet for å tilgi og glemme.
- (7) Det har vært anledninger da jeg har følt for å knuse ting.
- (8) Det har skjedd at jeg har vært ganske sjalu på andres lykke.
- (9) Jeg har aldri følt at jeg ble straffet uten grunn.
- (10) Jeg har aldri med vilje sagt noe som såret en annens følelser.

Page Break

Har du noen kommentarer om undersøkelsen ? Open end, non-compulsory.

Page Break

Takk for at du deltok i denne undersøkelsen. Vi vil informere om at undersøkelsen **ikke** er gjennomført i samarbeid med Airbnb, og at alle annonsene presentert i denne undersøkelsen er fiktive, laget for å undersøke hvordan forbrukere responderer på ulike typer annonser. Boligbyttetjenesten du ble spurt om i del 2 av undersøkelsen er **ikke** en ekte tjeneste, og at vi ikke har informasjon om hvorvidt Airbnb faktisk vurderer å starte med en slik tjeneste. Hensikten med dette spørsmålet var å kartlegge holdninger til en slik tjeneste, i tilfelle den vil bli lansert på et senere tidspunkt.

Dersom du har spørsmål om undersøkelsen, ta kontakt med stipendiat Katrine Nødtvedt på e-post katrine.nodtvedt@nhh.no.

End

Appendix C Data Analysis

C.1 Moderation analyses PROCESS Model 1

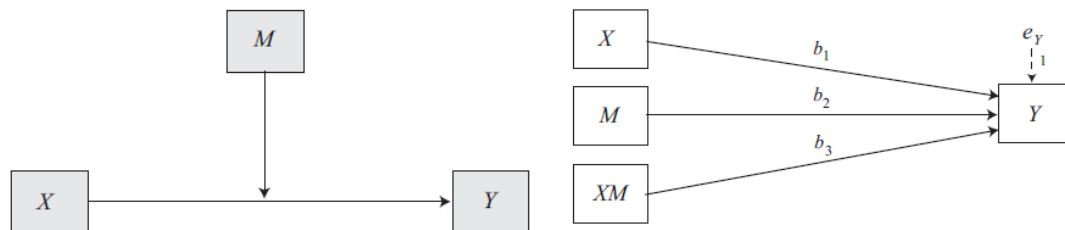


Figure C.1.1. Conceptual and statistical diagrams of moderation effect

C.2 Mediation analysis PROCESS Model 2

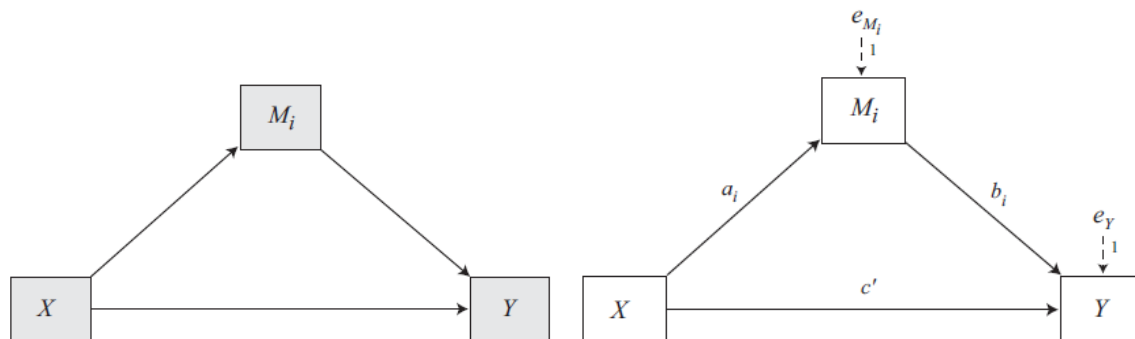


Figure C.2.1. Conceptual and statistical diagram of mediation effect
(Model 4, Hayes, 2013)

C.3 Moderated mediation analysis PROCESS model 7

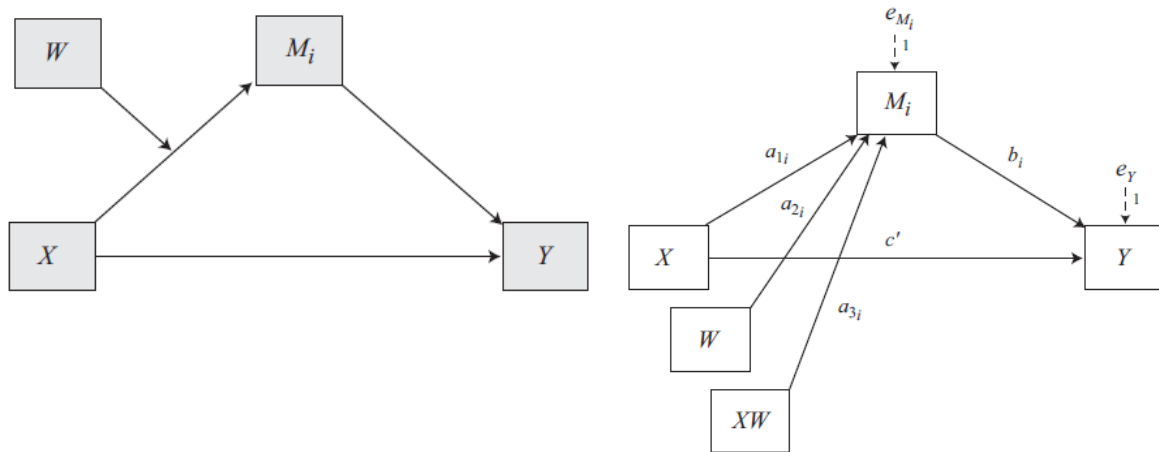


Figure C.3.1. Conceptual and statistical diagrams of moderated mediation effect (Model 7, Hayes, 2013)

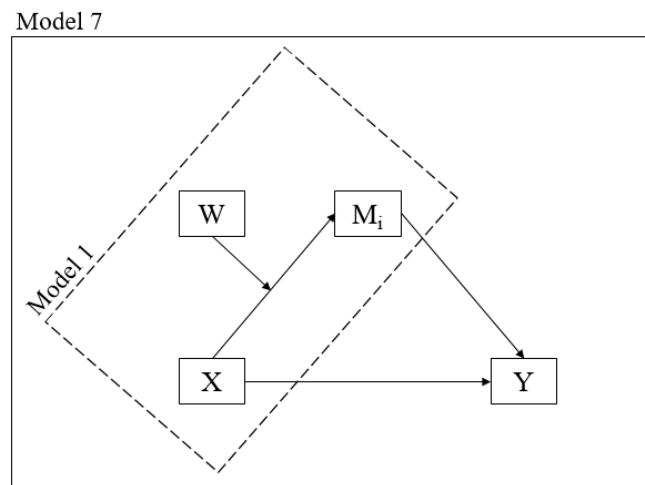


Figure C.3.2. Visual representation of the analyses used in assessing moderated mediation effect

Appendix D Results – Study 1

D.1 Testing long response time observation

Table D.1.1. Descriptive Statistics

	« Normal » response time (<30min)			Long response time (>30 min)		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Liking	178	6.44	2.139	55	5.62	2.190
Attractiveness	178	6.33	2.259	55	5.85	2.215
Attributes	178	6.80	1.844	55	6.20	1.887
Willingness to swap	178	4.86	3.337	55	4.85	3.118
Likelihood	178	5.08	2.793	55	4.95	2.297
Willingness to pay	178	600.61	284.220	55	583.64	269.954

Note: bold characters indicate statistically significant differences (t-test).

Table D.1.2. Independent-samples test

Source	t	df	p
Liking	2.488	231	.014
Attractiveness	1.375	231	.171
Attributes	2.109	231	.036
Willingness to swap	.010	231	.992
Likelihood	.322	231	.748
Willingness to pay	.392	231	.696

Note: bold characters indicate statistically significant differences at $p < 0.05$.

D.2 Reliability check and factor analysis

Table D.2.1. Factor analysis and Cronbach's Alpha for the Attributes of the apartment

Items	Factor loadings
Standards	.918
Cleanliness	.931
Pleasant	.942
Eigenvalue	2.597
Cronbach's alpha	.922

Table D.2.2. Factor analysis and Cronbach's Alpha for the Trustworthiness

Items	Factor loadings
Benevolence	.948
Trust	.948
Eigenvalue	1.797
Cronbach's alpha	.887

Table D.2.3. Factor analysis and Cronbach's Alpha for the Outgroup Threat

Items	Factor loadings
Muslims and Western culture	.944
Muslims and Norwegian culture	.960
Somali and Western culture	.968
Somali and Norwegian culture	.966
Eigenvalue	3.684
Cronbach's alpha	.971

D.3 Descriptive statistics

Table D.3.1. Descriptive statistics

Source		N	Min	Max	Mean	SD	Skewness		Kurtosis	
							Statistic	SE	Statistic	SE
Dependent variable	Liking	388	1	11	6.39	2.138	-.233	.124	.215	.247
	Attractiveness	388	1	11	6.38	2.236	-.174	.124	-.135	.247
	Attributes	388	1	11	6.87	1.784	-.372	.124	.685	.247
	Willingness to swap	388	1	11	5.12	3.318	.165	.124	-1.293	.247
	Likelihood	388	1	11	5.22	2.733	-.024	.124	-.955	.247
	Willingness to pay	388	0	1500	612.59	232.496	.115	.124	1.187	.247
Mediators	Self-object connection	388	1	11	4.39	2.415	.095	.124	-.878	.247
	Self-otheroverlap	388	1	11	5.70	2.298	.047	.124	-.203	.247
	Trustworthiness	388	1	11	6.91	2.077	-.271	.124	.448	.247
Moderators	Political orientation	388	1	11	5.96	2.454	.107	.124	-.603	.247
	Outgroup threat	388	1	11	5.36	3.066	.233	.124	-1.053	.247

Note: bold characters indicate violation of normality at ± 1 .

D.4 Preliminary analysis

Prior to test hypothesis of the model, the following assumptions have been tested.

D.4.1 Independence of the observations

The survey was distributed through a link, and was asked to be answered individually. Therefore, we presume independence of the observations.

D.4.2 Normal distribution of the observations

Violation of the normality is not problematic with large samples (Pallant, 2013). Some even argue the distribution of the data can be disregarded for sample larger than hundred responses (Altman & Bland, 1995; Ghasemi & Zahediasl, 2012).

In assessing normality, the rule of thumb is ± 1 when looking at skewness and kurtosis. However, some literature argues the acceptable limit is ± 2 (Gravetter & Wallnau, 2016; Trochim & Donnelly, 2006). For large sample ($n \geq 200$), the limit can be extended to ± 2.58 (Ghasemi & Zahediasl, 2012).

When looking at the descriptive statistics (Table D.3.1. Descriptive statistics, p.19), the normality of the willingness to swap, the willingness to pay and the outgroup threat are questioned. However, due to the subjective character of this observation, we do not find it surprising.

Table D.4.1. Distribution of the observation for the willingness to swap

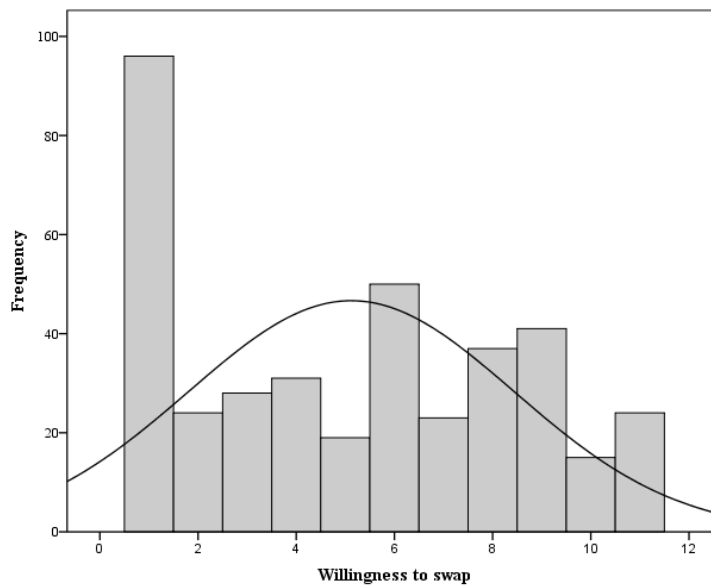
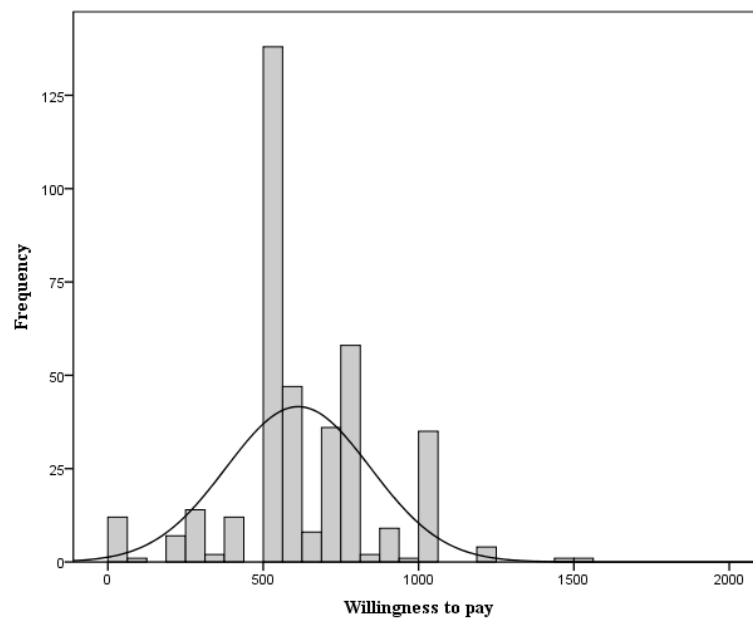
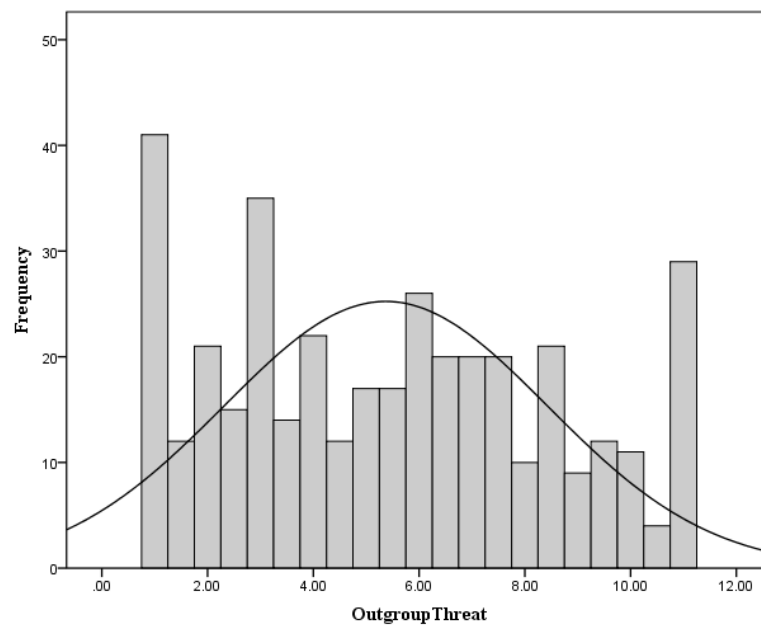


Table D.4.2. Distribution of the observation for the willingness to pay**Table D.4.3. Distribution of the observation for the outgroup threat**

D.4.3 Homoscedasticity

Table D.4.4. Homogeneity of variance

	Levene Statistic	Sig.
Liking	1.310	.253
Attractiveness	.226	.635
Attributes	1.886	.170
Willingness to swap	1.417	.235
Likelihood	.158	.691
Willingness to pay	.952	.330

Note: bold characters indicate violation of homogeneity of variance.

D.5 Main effect

Table D.5.1. Descriptive statistics

	Ingroup host			Outgroup host		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Liking	191	6.77	2.044	196	6.07	1.944
Attractiveness	191	6.81	2.188	196	6.04	2.150
Attributes	191	7.08	1.675	196	6.52	1.853
Willingness to swap	191	5.37	3.417	196	4.56	3.196
Likelihood	191	5.63	2.717	196	4.81	2.598
Willingness to pay	191	640.24	246.203	196	609.08	288.663

Note: bold characters indicate statistically significant differences (t-test).

Table D.5.2. Independent-samples t-test

Source	t	df	p
Liking	3.444	385	.001
Attractiveness	3.471	385	.001
Attributes	3.115	385	.002
Willingness to swap	2.410	385	.016
Likelihood	3.062	385	.002
Willingness to pay	1.141	385	.254

Note: bold characters indicate statistically significant differences at $p < 0.05$.

D.6 Moderation effect

D.6.1 Moderation effect of the Political orientation

Table D.6.1. Interaction effect of the Host ethnicity and Political orientation

	Coefficient	SE	t	p	LLCI	ULCI
Liking	-.0855	.0871	-.9816	.3269	-.2567	.0857
Attractiveness	-.1299	.0913	-1.4221	.1558	-.3095	.0497
Attributes	-.1675	.0733	-2.2845	.0229	-.3116	-.0233
Willingness to swap	-.3263	.1368	-2.3860	.0175	-.5952	-.0574
Likelihood	-.2941	.1118	-2.6313	.0088	-.5138	-.0743
Willingness to pay	-26.6126	9.4826	-2.8065	.0053	-45.2569	-7.9683

Note: bold characters indicate significance.

Table D.6.2. Johnson-Neyman significance regions for the moderation effect of the Political orientation

	Johnson-Neyman significance regions	Pattern	
Liking	Neg. [3.3798, 11]	Neg. [1, 11]	
Attractiveness	Neg. [3.6614, 11]	Neg. [1, 11]	
Attributes	Neg. [5.4048, 11]	Neg. [1, 11]	
Willingness to swap	Neg. [6.1932, 11]	Pos. [1, 4]	Neg. [4.5, 11]
Likelihood	Neg. [4.9732, 11]	Pos. [1, 2.5]	Neg. [3, 11]
Willingness to pay	Neg. [5.3528, 11]	Pos. [1, 3.5]	Neg. [4, 11]

D.6.2 Moderation effect of the Perceived outgroup threat

Table D.6.3. Interaction effect of the Host ethnicity and Perceived outgroup

	Coefficient	SE	t	p	LLCI	ULCI
Liking	-.0407	.0703	-.5790	.5630	-.1789	.0975
Attractiveness	-.0434	.0735	-.5911	.5548	-.1879	.1010
Attributes	-.0868	.0589	-1.4743	.1412	-.2026	.0290
Willingness to swap	-.1911	.1098	-1.7399	.0827	-.4071	.0248
Likelihood	-.1084	.0902	-1.2018	.2302	-.2857	.0689
Willingness to pay	-11.2144	7.6907	-1.4582	.1456	-26.3356	3.9067

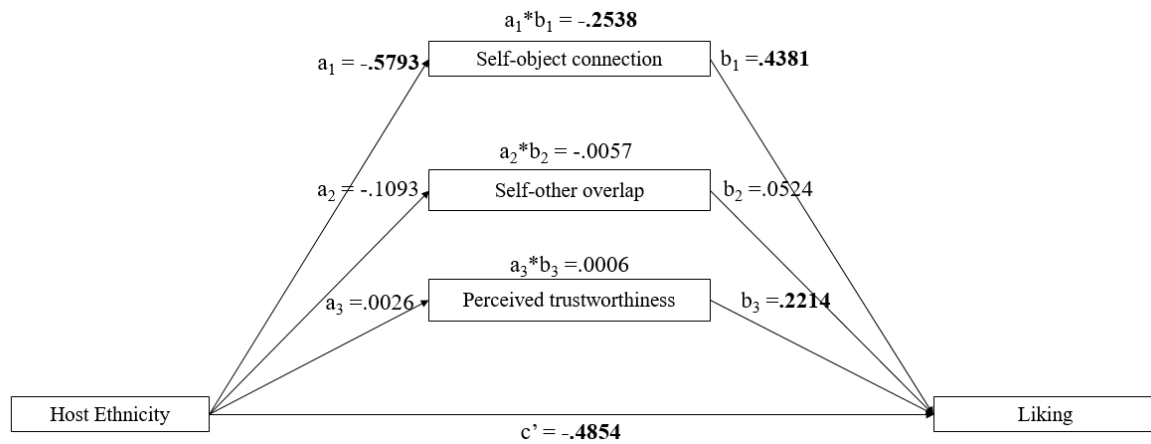
Note: bold characters indicate significance.

**Table D.6.4. Johnson-Neyman significance regions
for the moderation effect of the Perceived outgroup threat**

	Johnson-Neyman significance regions	Pattern
Liking	Neg. [1.6686, 11]	Neg. [1, 11]
Attractiveness	Neg. [1.3531, 11]	Neg. [1, 11]
Attributes	Neg. [4.3017, 11]	Neg. [1, 11]
Willingness to swap	Neg. [5.6745, 11]	Pos. [1, 2] Neg. [2.5, 11]
Likelihood	Neg. [3.1788, 11]	Neg. [1, 11]
Willingness to pay	Neg. [4.2305, 11]	Neg. [1, 11]

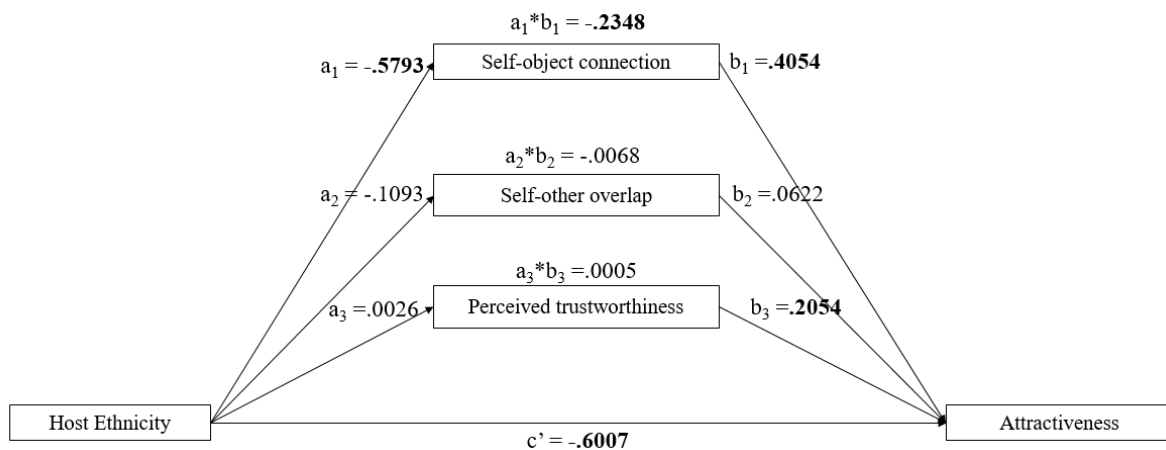
D.7 Mediation effect

D.7.1 Statistical diagram of the mediation effect of the host ethnicity on consumer outcomes



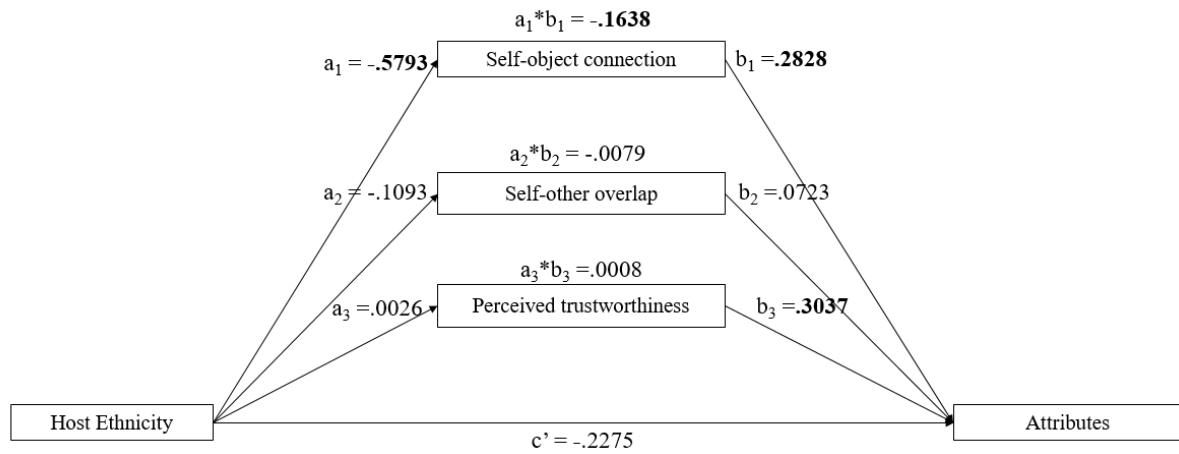
Note: bold characters indicate significance at $p < 0.05$.

Figure D.7.1. Parallel mediation model.
Liking of the apartment regarding host ethnicity.



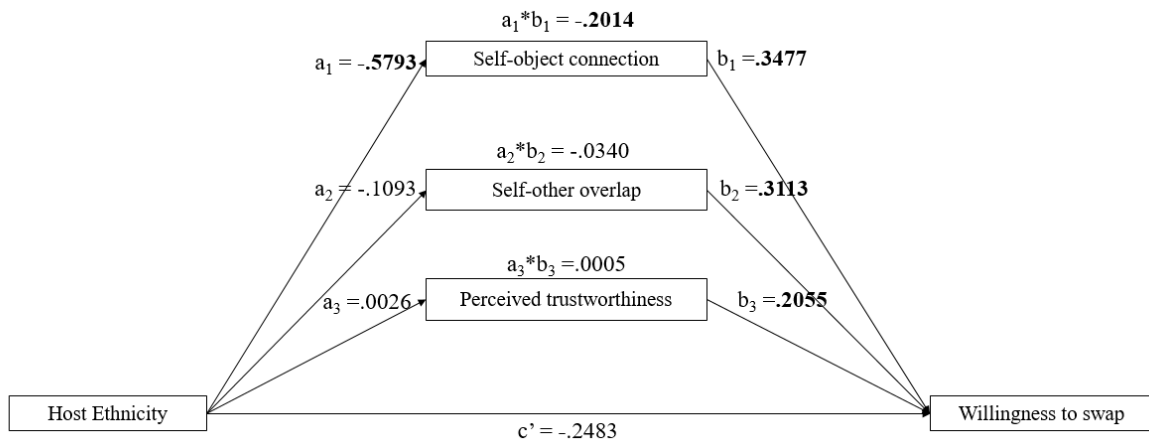
Note: bold characters indicate significance at $p < 0.05$.

Figure D.7.2. Parallel mediation model.
Attractiveness of the apartment regarding host ethnicity.



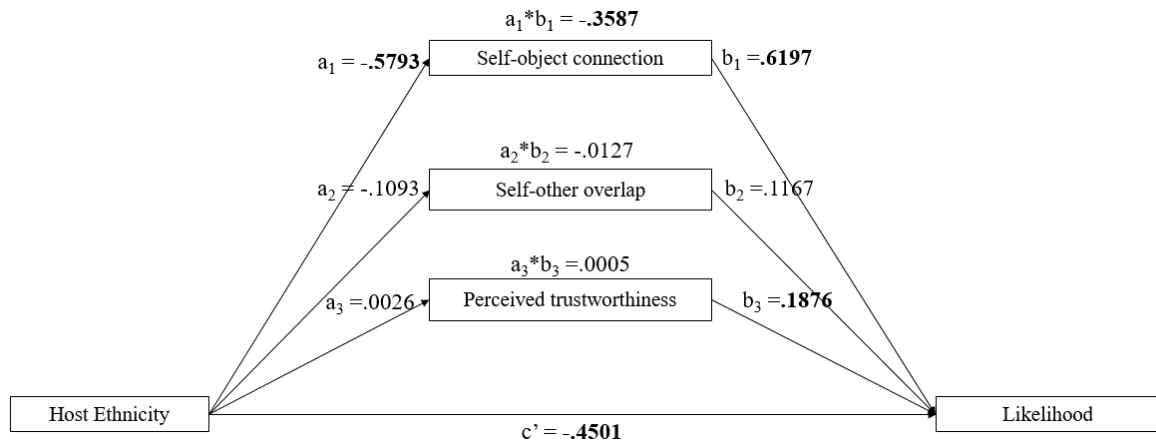
Note: bold characters indicate significance at $p < 0.05$.

Figure D.7.3. Parallel mediation model.
Attributes of the apartment regarding host ethnicity.



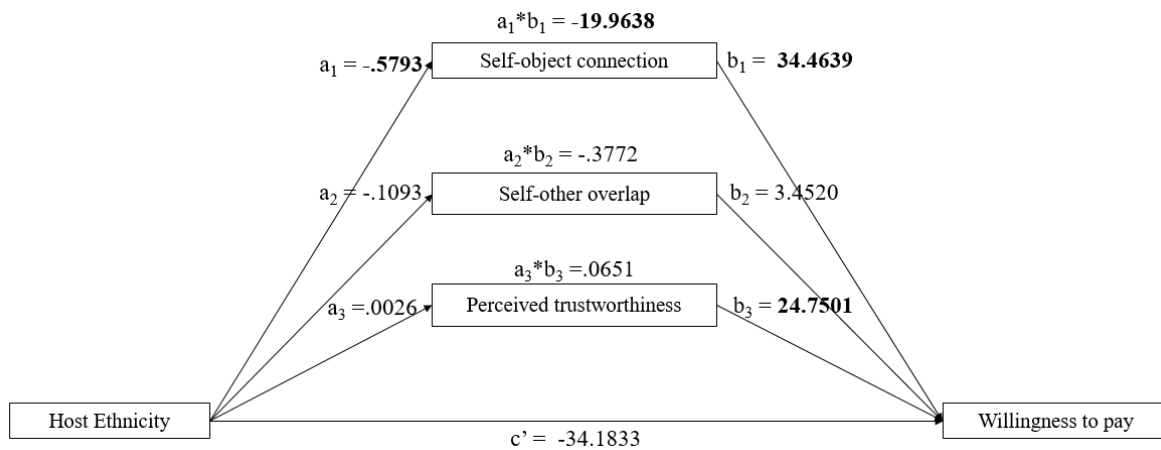
Note: bold characters indicate significance at $p < 0.05$.

Figure D.7.4. Parallel mediation model.
Willingness to swap regarding host ethnicity.



Note: bold characters indicate significance at $p < 0.05$.

Figure D.7.5. Parallel mediation model.
Likelihood to choose the apartment regarding host ethnicity.



Note: bold characters indicate significance at $p < 0.05$.

Figure D.7.6. Parallel mediation model.
Willingness to pay regarding host ethnicity.

D.7.2 Indirect effects presented per mediator

Table D.7.1. Indirect effects of the self-object connection

Dependent Variable	Index	BootSE	BootLLCI	BootULCI
Liking	-.2538	.1092	-.4818	-.0510
Attractiveness	-.2348	.1029	-.4503	-.0469
Attributes	-.1638	.0724	-.3111	-.0301
Willingness to swap	-.2014	.0983	-.4324	-.0447
Likelihood	-.3589	.1546	-.6743	-.0666
Willingness to pay	-19.9638	8.9807	-39.9156	-4.5249

Note: bold characters indicate significance.

Table D.7.2. Indirect effects of the self-other overlap

Dependent Variable	Index	BootSE	BootLLCI	BootULCI
Liking	-.0057	.0191	-.0728	.0157
Attractiveness	-.0068	.0218	-.0822	.0191
Attributes	-.0079	.0201	-.0665	.0197
Willingness to swap	-.0340	.0779	-.2195	.0993
Likelihood	-.0127	.0333	-.1057	.0362
Willingness to pay	-.3772	1.9361	-7.4000	1.8782

Note: bold characters indicate significance.

Table D.7.3. Indirect effects of the perceived trustworthiness

Dependent Variable	Index	BootSE	BootLLCI	BootULCI
Liking	.0006	.0482	-.0949	.1012
Attractiveness	.0005	.0463	-.0965	.0940
Attributes	.0008	.0641	-.1263	.1298
Willingness to swap	.0005	.0477	-.0995	.0980
Likelihood	.0005	.0430	-.0791	.1010
Willingness to pay	.0651	5.4687	-11.0437	11.7966

Note: bold characters indicate significance.

D.8 Moderated mediation effect

Table D.8.1. Direct effects of the host ethnicity on the consumer outcomes

Dependent variable	Effect	SE	t	p	LLCI	ULCI
Liking	-.4854	.1598	-3.0374	.0025	-.7995	-.1712
Attractiveness	-.6007	.1793	-3.3503	.0009	-.9533	-.2482
Attributes	-.2275	.1288	-1.7666	.0781	-.4808	.0257
Willingness to swap	-.2483	.2943	-.8438	.3993	-.8271	.3304
Likelihood	-.4501	.1989	-2.2634	.0242	-.8412	-.0591
Willingness to pay	-34.1833	20.1501	-1.6964	.0906	-73.8021	5.4354

Note: bold characters indicate significance.

D.8.1 Moderated mediation effect of the Political orientation

Table D.8.2. Interaction effects of the Political orientation and the host ethnicity

Mediators	Coefficient	SE	t	p	LLCI	ULCI
Self-object connection	-.2155	.0987	-2.1836	.0296	-.4096	-.0215
Self-other overlap	-.2545	.0942	-2.7018	.0072	-.4397	-.0693
Perceived trustworthiness	-.3696	.0835	-4.4285	.0000	-.5337	-.2055

Note: bold characters indicate significance.

Table D.8.3. Conditional effects of the Political orientation on the relation between the host ethnicity and the dependent variables

Mediator	Dependent variable	Index	BootSE	BootLLCI	BootULCI
Self-object connection	Liking	-.0944	.0449	-.1842	-.0056
	Attractiveness	-.0874	.0426	-.1751	-.0091
	Attributes	-.0609	.0304	-.1264	-.0077
	Willingness to swap	-.0749	.0409	-.1723	-.0097
	Likelihood	-.1336	.0654	-.2628	-.0075
	Willingness to pay	-7.4279	3.7004	-15.5718	-.8170
Self-other overlap	Liking	-.0133	.0165	-.0548	.0131
	Attractiveness	-.0158	.0178	-.0658	.0099
	Attributes	-.0184	.0135	-.0536	.0003
	Willingness to swap	-.0792	.0410	-.1838	-.0185
	Likelihood	-.0297	.0233	-.0942	.0018
	Willingness to pay	-.8785	1.7800	-5.1626	2.1882
Perceived trustworthiness	Liking	-.0818	.0345	-.1667	-.0287
	Attractiveness	-.0759	.0341	-.1617	-.0221
	Attributes	-.1122	.0350	-.1933	-.0534
	Willingness to swap	-.0760	.0447	-.1862	-.0067
	Likelihood	-.0693	.0365	-.1580	-.0114
	Willingness to pay	-9.1484	3.7635	-18.2411	-3.1610

Note: bold characters indicate significance.

D.8.1.1. Further analysis of the moderation of the mediators by the political orientation

Table D.8.4. Johnson-Neyman significance regions for the moderation effect of the Political orientation

	Johnson-Neyman significance regions			Pattern
Self-object connection	Neg. [5.1469, 11]			Pos. [1, 2.5] Neg. [3, 11]
Self-other overlap	Pos. [1, 1.3483], Neg. [7.1252, 11]			Pos. [1, 5] Neg. [5.5, 11]
Perceived trustworthiness	Pos. [1, 4.4035], Neg. [6.8510, 11]			Pos. [1, 5.5] Neg. [6, 11]

D.8.2 Moderated mediation effect of the Perceived outgroup threat

Table D.8.5. Interaction effects of the Perceived outgroup threat and the host ethnicity

Mediators	Coefficient	SE	t	p	LLCI	ULCI
Self-object connection	-.0187	.0800	-.2340	.8151	-.1760	.1386
Self-other overlap	-.3062	.0743	-4.1184	.0000	-.4523	-.1600
Perceived trustworthiness	-.2204	.0675	-3.2643	.0012	-.3531	-.0876

Note: bold characters indicate significance.

Table D.8.6. Conditional effects of the Perceived outgroup threat on the relation between the host ethnicity and the dependent variables

Mediator	Dependent variable	Index	BootSE	BootLLCI	BootULCI
Self-object connection	Liking	-.0082	.0365	-.0829	.0611
	Attractiveness	-.0076	.0342	-.0728	.0604
	Attributes	-.0053	.0241	-.0533	.0429
	Willingness to swap	-.0065	.0305	-.0720	.0511
	Likelihood	-.0116	.0520	-.1120	.0901
	Willingness to pay	-.6454	2.9401	-6.4475	5.0045
Self-other overlap	Liking	-.0160	.0182	-.0581	.0158
	Attractiveness	-.0191	.0194	-.0638	.0146
	Attributes	-.0221	.0147	-.0569	.0011
	Willingness to swap	-.0953	.0399	-.1937	-.0312
	Likelihood	-.0357	.0244	-.0946	.0033
	Willingness to pay	-1.0568	2.0860	-5.8359	2.7352
Perceived trustworthiness	Liking	-.0488	.0252	-.1161	-.0128
	Attractiveness	-.0453	.0239	-.1098	-.0112
	Attributes	-.0669	.0270	-.1308	-.0234
	Willingness to swap	-.0453	.0283	-.1239	-.0052
	Likelihood	-.0413	.0254	-.1103	-.0071
	Willingness to pay	-5.4547	2.6727	-12.4737	-1.4715

Note: bold characters indicate significance.

D.8.2.1. Further analysis of the moderation of perceived trustworthiness by the perceived outgroup threat

Table D.8.7. Johnson-Neyman significance regions for the moderation effect of the perceived outgroup threat

	Johnson-Neyman significance regions		Pattern	
Self-object connection	Neg. [1, 2.9397], Neg. [8.7608, 11]		Neg. [1, 11]	
Self-other overlap	Pos. [1, 2.7059], Neg. [6.1387, 11]	Pos. [1, 4.5]	Neg. [5, 11]	
Perceived trustworthiness	Pos. [1, 2.2532], Neg. [6.9474, 11]	Pos. [1, 4.5]	Neg. [5, 11]	

D.9 Visual representation of the findings

D.9.1 Main effect, moderation effect and mediation effect

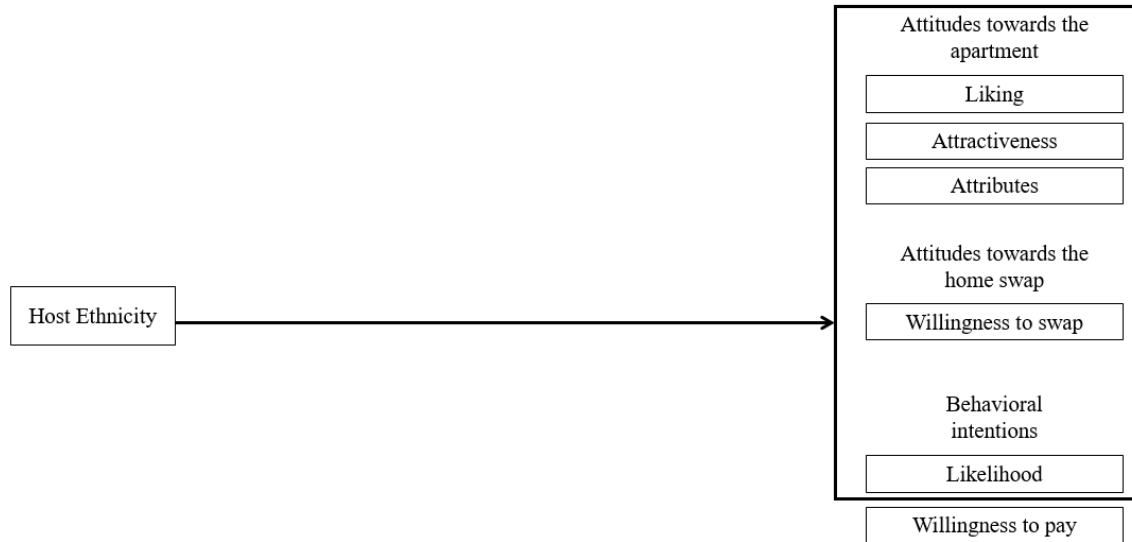


Figure D.9.1. Visual representation of the significant direct effect

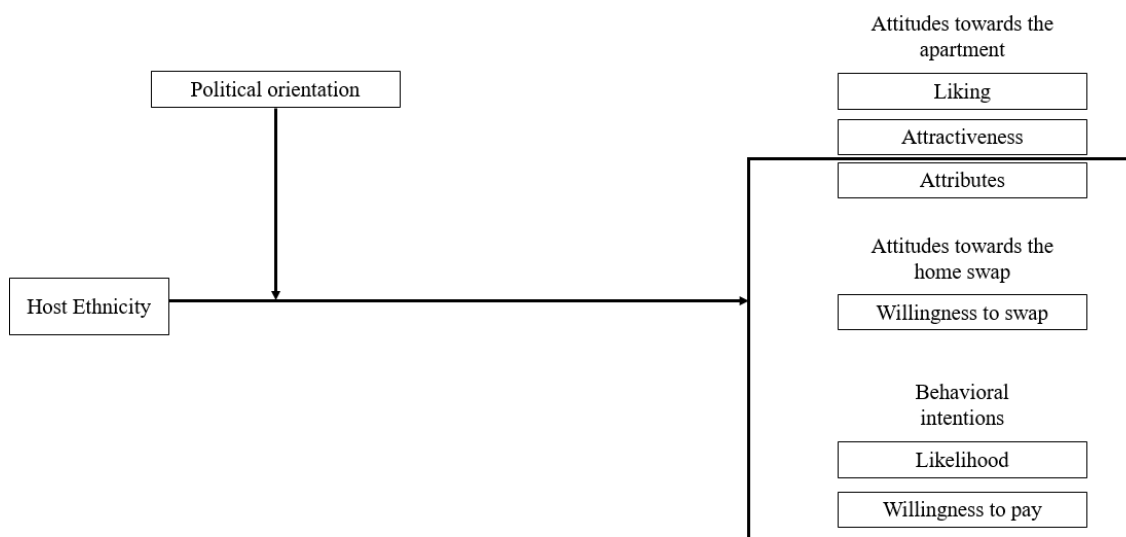


Figure D.9.2. Visual representation of the significant moderation effect

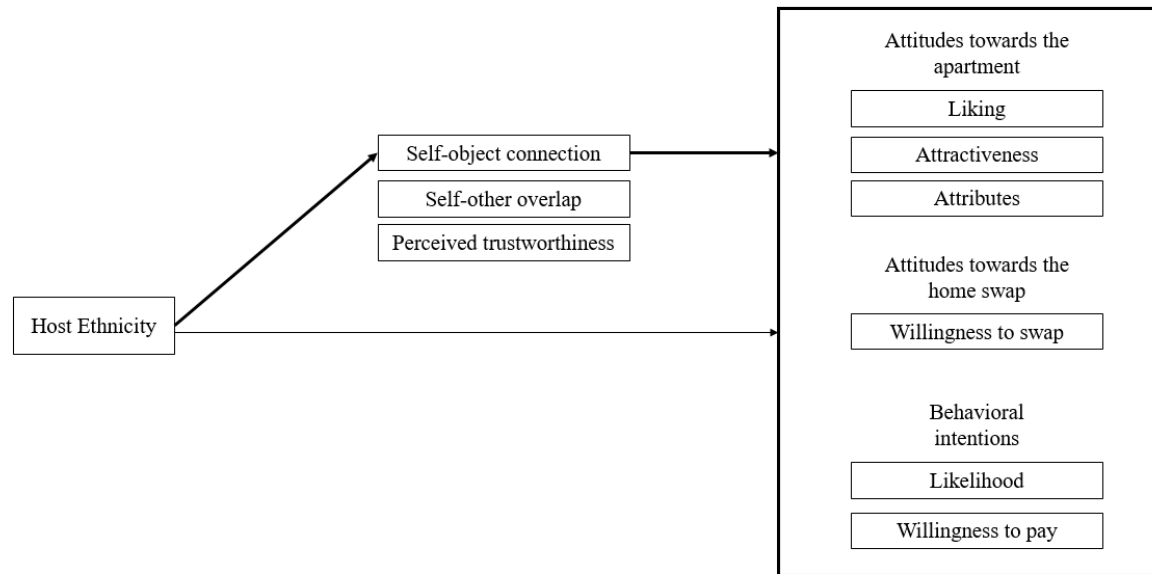


Figure D.9.3. Visual representation of the significant mediation effect

D.9.2 Moderated mediation effect

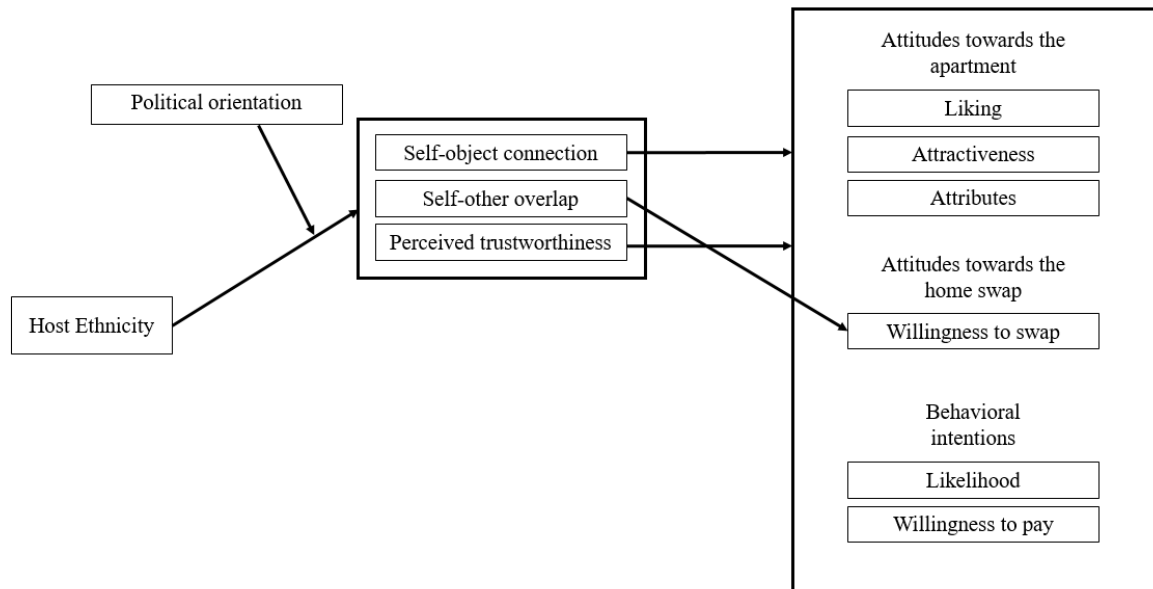


Figure D.9.4. Visual representation of the significant moderated mediation effects

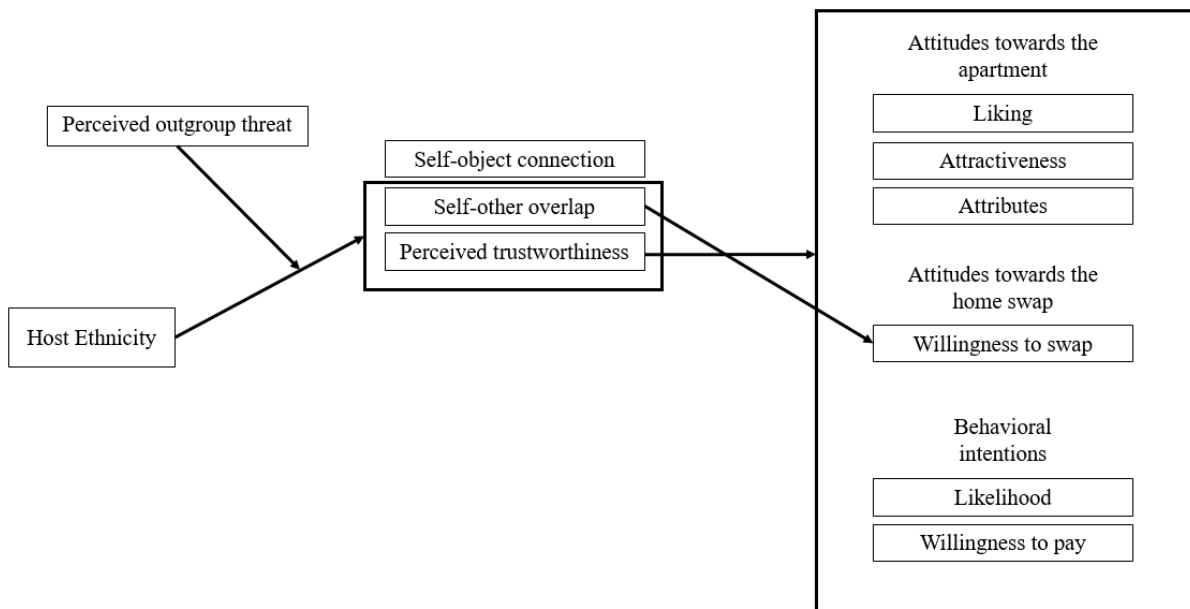


Figure D.9.5. Visual representation of the significant moderated mediation effects

Appendix E Political parties in Norway

Table D.9.1. Main Norwegian parties and views on immigration, social and economic policies

	Left		Center-Left		Center		Right		
Ideology	Socialist	Environmental	Socialist	Social democrat	Agrarian/Nationalist	Liberal/Centrist	Conservative / Christian	Conservative	Nationalist/Populist
Immigration policy	Liberal	Liberal	Liberal	Open to a certain extent, concerned by immigration consequences	Centre	Liberal	Liberal	Open to a certain extent, concerned by immigration consequences	Opposed to immigration
Social policy	Liberal, class society	Liberal	Liberal "Freedom for everyone, not the few ones"	Liberal	Liberal	Liberal	Slightly conservative	Liberal	Liberal
Economic policy	Socialist, strong position of the state	Mixed economy with a strong state	Mixed economy with a strong state	Mixed economy with a strong state	Against liberalism and free market	Mixed economy, small state	Mixed economy, small state	Free market and liberalism	Free market and liberalism, reduce taxes
Parties	Rødt (Red party)	Miljøpartiet De Grønne (Green Party)	Sosialistisk Venstreparti, SV (Socialist Left Party)	Arbeiderpartiet (Labor Party)	Senterpartiet (Center Party)	Venstre (Liberal Party)	Kristelig Folkeparti (Christian Democratic Party)	Høyre (Conservative Party)	Fremskrittspartiet (Progress Party)

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Appendix F Manipulations – Study 2



[Overview](#) · [Reviews](#) · [The Host](#) · [Location](#)



Thomas

Nice apartment in the Center of Copenhagen

Entire apartment · København

 1 guest  1 bedroom  1 bed

The apartment is situated in the central area of Indre By in Copenhagen, close to Tivoli and everything the city has to offer. 10-minute walk to the train station.

The apartment is fully equipped, with a kitchen, living room and one bedroom.

Figure D.9.1. Description of the apartment for the ingroup host scenario

Your host



Thomas

Copenhagen, Denmark

Hi. My name is Thomas, I am a 25-year-old Belgian student living in Copenhagen.

I am renting out my apartment as I frequently travel to Belgium to see my friends and family.

Figure D.9.2. Description of the host for the ingroup host scenario



[Overview](#) · [Reviews](#) · [The Host](#) · [Location](#)



Mohamed

Nice apartment in the Center of Copenhagen

Entire apartment · København

1 guest 1 bedroom 1 bed

The apartment is situated in the central area of Indre By in Copenhagen, close to Tivoli and everything the city has to offer. 10-minute walk to the train station.

The apartment is fully equipped, with a kitchen, living room and one bedroom.

Figure D.9.3. Description of the apartment for the outgroup host scenario

Your host



Mohamed

Copenhagen, Denmark

Hi. My name is Mohamed, I am a 25-year-old Belgian-Moroccan student living in Copenhagen.

I am renting out my apartment as I frequently travel to Morocco to see my friends and family.

Figure D.9.4. Description of the host for the outgroup host scenario

Appendix G Surveys – Study 2

G.1 Normal rental condition

Start of Block: Welcome

[This survey is available in English and French. You can select language on the drop-down menu above. Cette enquête est disponible en Anglais et en Français. Sélectionnez la langue dans le menu déroulant ci-dessus.]

This survey is about Airbnb, an online marketplace where users can book accommodation all over the world. In contrast to traditional accommodation (hotel), this is a service where private individuals can rent out their home to other private individuals through a safe payment platform. In this survey, we would like to ask you a few questions about your opinions about an Airbnb ad. It takes about 10 minutes to complete the survey. Your answers are completely anonymous. This survey is part of a research project at the Norwegian School of Economics (NHH, Norway) and of a joint master thesis between this school and the Louvain School of Management (LSM, Belgium). If you have questions, please contact master student Emeline Picard: Emeline.Picard@student.nhh.no

By clicking «Yes, I want to participate» below, you confirm that you have read the information above, and that you participate voluntarily in this survey.

- ☐ Yes, I want to participate (1)
 - ☐ No, I do not want to participate (screen out) (2)
-

Page Break

End of Block: Welcome

Start of Block: Getting started

Two steps before you start:

1. Push F11 on your keyboard for full screen view. (If this does not work on your device, that is ok. In that case, please close all other tabs, so that you are not distracted during the survey)
 2. Answer each question individually: do not communicate with others during the survey, neither face-to-face nor via Internet.
-

Page Break

Before you continue: Imagine that you are traveling to Copenhagen for a weekend, and you are interested in renting an Airbnb apartment in the price range of 50-150 Euro per night.

On the next page, you will be presented for an apartment in the central area of Copenhagen within this price range. Please read the information in the ad, and click to proceed to information about the host (the person renting out the apartment). You cannot move on from the ad or the

information about the host before at least 10 seconds have passed. Afterwards, you will be asked to respond to a few questions about the ad.

Page Break

End of Block: Getting started

Start of Block: Random assignment to conditions - In group host

[Figure D.9.1. Description of the apartment for the ingroup host scenario, p.39]

Page Break

[Figure D.9.2. Description of the host for the ingroup host scenario, p.39]

Page Break

Q1 If you were making a decision here and now, how likely is it that you would choose Thomas' apartment?

	Very unlikely										Very likely
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q2 In general, how much did you like Thomas' apartment?

	Did not like at all										Liked it very well
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q3 The apartment you saw was priced within the range of 50-150 Euro per night. How much would you be willing to pay for this apartment per night? (Report a sum in euros.)

Page Break

Q4 How attractive do you think this apartment would be to an average Belgian consumer?

	Very unattractive										Very attractive
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q5a Based on your general impression, how do you think this apartment has been rated by previous guests?

	Very low standard										Very high standard
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q5b

	Very unclean										Very clean
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q5c

	Not nice at all										Very nice
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q6 I immediately felt that this apartment is «typically me».

	Completely disagree										Completely agree
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q7 To what extent do you agree or disagree about the following statements about the host?

	Completely disagree										Completely agree
(1)	0	1	2	3	4	5	6	7	8	9	10
(2)	0	1	2	3	4	5	6	7	8	9	10
(3)	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

(1) I think Thomas is a host who first and foremost wants what is best for his guests.

(2) I think Thomas is trustworthy.

(3) Thomas and I probably have similar values and principles.

Page Break

Q8 How risky do you feel it would be to rent Thomas' apartment?

	Not risky at all										Very risky
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

End of Block: Random assignment to conditions - In group host

Start of Block: Random assignment to conditions - Out group host

[Figure D.9.3. Description of the apartment for the outgroup host scenario, p.40]

Page Break

[Figure D.9.4. Description of the host for the outgroup host scenario, p.40]

Page Break

Q1 If you were making a decision here and now, how likely is it that you would choose Mohamed's apartment?

	Very unlikely										Very likely
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q2 In general, how much did you like Mohamed's apartment?

	Did not like at all										Like it very much
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q3 The apartment you saw was priced within the range of 50-150 Euro per night. How much would you be willing to pay for this apartment per night? (Report a sum in euros.)

Page Break

Q4 How attractive do you think this apartment would be to an average Belgian consumer?

	Very unattractive										Very attractive
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q5a Based on your general impression, how do you think this apartment has been rated by previous guests?

	Very low standard										Very high standard
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q5b

	Very unclean										Very clean
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q5c

	Not nice at all										Very nice
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q6 I immediately felt that this apartment is «typically me».

	Completely disagree										Completely agree
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q7 To what extent do you agree or disagree about the following statements about the host?

	Completely disagree										Completely agree
(1)	0	1	2	3	4	5	6	7	8	9	10
(2)	0	1	2	3	4	5	6	7	8	9	10
(3)	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

(1) I think Thomas is a host who first and foremost wants what is best for his guests.

(2) I think Thomas is trustworthy.

(3) Thomas and I probably have similar values and principles.

Page Break

Q8 How risky do you feel it would be to rent Mohamed's apartment?

	Not risky at all										Very risky
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

End of Block: Random assignment to conditions - Out group host

Start of Block: General questions

Q9 When you go on holiday, how likely is it that you would use Airbnb to find accommodation?

	Very unlikely										Very likely
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q10 Have you ever used Airbnb?

- ☐ Yes, as a host. (1)
☐ Yes, as a guest. (2)
☐ Yes, as both host and guest. (3)
☐ No. (4)
-

Page Break

Q11 Finally, we would like to ask you some questions about yourself and your attitudes on different topics.

How would you describe your ethnic background?

- ☐ Belgian (1)
☐ Other: specify (2) _____
-

Page Break

Q12 In politics, one often talks about the «left side» and the «right side». Below is a scale where 0 represents those who are all the way to the left politically, and 10 represents those who are all the way to the right politically. Where would you place yourself on such a scale?

	Left										Right
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q13 To what extent do you think Muslims pose a threat to western culture?

	Not at all										To a large extent
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q14 To what extent do you think Muslims pose a threat to Belgian values?

	Not at all 0	1	2	3	4	5	6	7	8	9	To a large extent 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q15 To what extent do you think Moroccans pose a threat to western culture?

	Not at all 0	1	2	3	4	5	6	7	8	9	To a large extent 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q16 To what extent do you think Moroccans pose a threat to Belgian values?

	Not at all 0	1	2	3	4	5	6	7	8	9	To a large extent 10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q17 Below are some statements about personal attitudes and traits. Read each item and decide whether the statement is TRUE or FALSE for you personally.

(1-10)	True	False
Recorded scores	1	2

- (1) I have never intensely disliked anyone
- (2) I sometimes feel resentful when I don't get my way
- (3) No matter who I'm talking to, I'm always a good listener
- (4) There have been occasions when I took advantage of someone

- (5) I'm always willing to admit it when I make a mistake
 - (6) I sometimes try to get even, rather than forgive and forget
 - (7) There have been occasions when I felt like smashing things
 - (8) There have been times when I was quite jealous of the good fortune of others
 - (9) I have never felt that I was punished without cause
 - (10) I have never deliberately said something that hurt someone's feelings
-

Page Break

End of Block: General questions

Start of Block: Demographics

Q18 What age group are you in?

- ☐ 18-29 (1)
 - ☐ 30-39 (2)
 - ☐ 40-49 (3)
 - ☐ 50-99 (4)
-

Q19 What is your gender?

- ☐ Male (1)
 - ☐ Female (2)
-

Q20 What is your current status?

- ☐ Student (1)
- ☐ Unemployed (2)
- ☐ Employed (3)
- ☐ Self-employed (4)
- ☐ Homemaker (5)
- ☐ Unable to work (6)
- ☐ Retired (7)

End of Block: Demographics

Start of Block: End

Do you have any comments to the survey?

Page Break

End Thank you for participating in this study. We would like to inform you that the study is NOT conducted in cooperation with Airbnb, and that all of the ads presented in this study are fictitious, created for investigating how consumers respond to different types of ads.

If you have questions regarding the study, please contact: Emeline Picard:

Emeline.Picard@student.nhh.no

Please click on "**next**" to send your answers and see details of the cinema tickets prize draw.

End of Block: End

G.2 Home swap service condition

Start of Block: Welcome

[This survey is available in English and French. You can select language on the drop-down menu above. Cette enquête est disponible en Anglais et en Français. Sélectionnez la langue dans le menu déroulant ci-dessus.]

This survey is about Airbnb, an online marketplace where users can book accommodation all over the world. In contrast to traditional accommodation (hotel), this is a service where private individuals can rent out their home to other private individuals through a safe payment platform. In this survey, we would like to ask you a few questions about your opinions about an Airbnb ad and a new service that the company considers offering. It takes about 10 minutes to complete the survey. Your answers are completely anonymous.

This survey is part of a research project at the Norwegian School of Economics (NHH, Norway) and a joint master thesis between this school and the Louvain School of Management (LSM, Belgium). If you have questions, please contact master student Emeline Picard:

Emeline.Picard@student.nhh.no

By clicking «Yes, I want to participate» below, you confirm that you have read the information above, and that you participate voluntarily in this survey.

- ☐ Yes, I want to participate (1)
- ☐ No, I do not want to participate (2) → SCREEN OUT

End of Block: Welcome

Start of Block: Getting started

Two steps before you start:

1. Push F11 on your keyboard for full screen view. (If this does not work on your device, that is ok. In that case, please close all other tabs, so that you are not distracted during the survey)
 2. Answer each question individually: do not communicate with others during the survey, neither face-to-face nor via Internet.
-

Page Break

Airbnb is considering offering a new service that will facilitate mutual home swaps. As an example, let us say that you are going to Copenhagen the same weekend another Airbnb host is going to your hometown. Then you would be able to find each other through Airbnb's home swap service, so that both could save money by sharing each other's apartment at the same time. Let's say your apartment is worth 50-150 Euros per night, and you are looking for an apartment within the same price range in Copenhagen, so you can swap.

On the next page, you will be presented for an apartment in the central area of Copenhagen. Please read the information in the ad, and click to proceed to information about the host (the

person renting out the apartment). You cannot move on from the ad or the information about the host before at least 10 seconds have passed.

After you have seen the ad, we will ask you to answer a few questions about this apartment and your attitudes towards this type of home exchange service.

Page Break

Start of Block: Conditions - In Group Host

[Figure D.9.1. Description of the apartment for the ingroup host scenario, p.39]

Page Break

[Figure D.9.2. Description of the host for the ingroup host scenario, p.39]

Page Break

Q1 Let us say that you own a 2-room apartment similar to the one that Thomas is renting out in Copenhagen. If you were making a decision here and now, how likely is it that you would choose to swap homes with Thomas for a weekend?

	Very unlikely										Very likely
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q2 In general, how much did you like Thomas' apartment?

	Did not like at all										Liked it very well
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q3 How attractive do you think this apartment would be to an average Belgian consumer?

	Very unattractive										Very attractive
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q4a Based on your general impression, how do you think this apartment has been rated by previous guests?

	Very low standard										Very high standard
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q4b

	Very unclean										Very clean
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q4c

	Not nice at all										Very nice
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q5 I immediately felt that this apartment is «typically me».

	Completely disagree										Completely agree
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q6 To what extent do you agree or disagree about the following statements about the host?

	Completely disagree										Completely agree
(1)	0	1	2	3	4	5	6	7	8	9	10
(2)	0	1	2	3	4	5	6	7	8	9	10
(3)	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

(1) I think Thomas is a host who first and foremost wants what is best for his guests.

(2) I think Thomas is trustworthy.

(3) Thomas and I probably have similar values and principles.

Page Break

Q7 How risky do you feel it would be to swap apartments with Thomas?

	Not risky at all										Very risky
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q8 We would like to know your attitudes towards a home swapping service like this. Please indicate the degree to which you agree with the following statement:

	Completely disagree											Completely agree
(1)	0	1	2	3	4	5	6	7	8	9	10	
Recorded scores	1	2	3	4	5	6	7	8	9	10	11	

(1) I am positive towards this kind of service

End of Block: Conditions - In Group Host

Start of Block: Conditions - Out Group Host

[Figure D.9.3. Description of the apartment for the outgroup host scenario, p.40]

Page Break

[Figure D.9.4. Description of the host for the outgroup host scenario, p.40]

Page Break

Q1 Let us say that you own a 2-room apartment similar to the one that Mohamed is renting out in Copenhagen. If you were making a decision here and now, how likely is it that you would choose to swap homes with Mohamed for a weekend?

	Very unlikely											Very likely
	0	1	2	3	4	5	6	7	8	9	10	
Recorded scores	1	2	3	4	5	6	7	8	9	10	11	

Page Break

Q2 In general, how much did you like Mohamed's apartment?

	Did not like at all											Liked it very much
	0	1	2	3	4	5	6	7	8	9	10	
Recorded scores	1	2	3	4	5	6	7	8	9	10	11	

Page Break

Q3 How attractive do you think this apartment would be to an average Belgian consumer?

	Very unattractive										Very attractive
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q4a Based on your general impression, how do you think this apartment has been rated by previous guests?

	Very low standard										Very high standard
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q4b

	Very unclean										Very clean
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Q4c

	Not nice at all										Very nice
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q5 I immediately felt that this apartment is «typically me».

	Completely disagree										Completely disagree
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q6 To what extent do you agree or disagree about the following statements about the host?

	Completely disagree										Completely agree
(1)	0	1	2	3	4	5	6	7	8	9	10
(2)	0	1	2	3	4	5	6	7	8	9	10
(3)	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

(1) I think Mohamed is a host who first and foremost wants what is best for his guests.

(2) I think Mohamed is trustworthy.

(3) Mohamed and I probably have similar values and principles.

Page Break

Q7 How risky do you feel it would be to swap apartments with Mohamed?

	Not risky at all										Very risky
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q8 We would like to know your attitudes towards a home swapping service like this. Please indicate the degree to which you agree with the following statement:

	Completely disagree										Completely agree
(1)	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

(1) I am positive towards this kind of service

End of Block: Conditions - Out Group Host

Start of Block: General question

Q9 When you go on holiday, how likely is it that you would use Airbnb to find accommodation?

	Very unlikely										Very likely
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q10 Have you ever used Airbnb?

- ☐ Yes, as a host. (1)
- ☐ Yes, as a guest. (2)
- ☐ Yes, as both host and guest. (3)
- ☐ No. (4)

Page Break

Q11 Finally, we would like to ask you some questions about yourself and your attitudes on different topics.

How would you describe your ethnic background?

- ☐ Belgian (1)
- ☐ Other: specify (2) _____

Page Break

Q12 In politics, one often talks about the «left side» and the «right side». Below is a scale where 0 represents those who are all the way to the left politically, and 10 represents those who are all the way to the right politically. Where would you place yourself on such a scale?

	Left										Right
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q13 To what extent do you think Muslims pose a threat to western culture?

	Not at all										To a very large extent
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q14 To what extent do you think Muslims pose a threat to Belgian values?

	Not at all										To a very large extent
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q15 To what extent do you think Moroccans pose a threat to western culture?

	Not at all										To a very large extent
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q16 To what extent do you think Moroccans pose a threat to Belgian values?

	Not at all										To a very large extent
	0	1	2	3	4	5	6	7	8	9	10
Recorded scores	1	2	3	4	5	6	7	8	9	10	11

Page Break

Q17 Below are some statements about personal attitudes and traits. Read each item and decide whether the statement is TRUE or FALSE for you personally.

(1-10)	True	False
Recorded scores	1	2

- (1) I have never intensely disliked anyone
- (2) I sometimes feel resentful when I don't get my way
- (3) No matter who I'm talking to, I'm always a good listener
- (4) There have been occasions when I took advantage of someone
- (5) I'm always willing to admit it when I make a mistake
- (6) I sometimes try to get even, rather than forgive and forget
- (7) There have been occasions when I felt like smashing things
- (8) There have been times when I was quite jealous of the good fortune of others
- (9) I have never felt that I was punished without cause
- (10) I have never deliberately said something that hurt someone's feelings

Page Break

End of Block: General question

Start of Block: Demographics

Q18 What age group are you in?

- ☐ 18-29 (1)
 - ☐ 30-39 (2)
 - ☐ 40-49 (3)
 - ☐ 50-99 (4)
-

Q19 What is your gender?

- ☐ Male (1)
 - ☐ Female (2)
-

Q20 What is your current status?

- ☐ Student (1)
- ☐ Unemployed (2)
- ☐ Employed (3)
- ☐ Self-employed (4)
- ☐ Homemaker (5)
- ☐ Unable to work (6)
- ☐ Retired (7)

End of Block: Demographics

Start of Block: End

Do you have any comments to the survey?

Page Break

Thank you for participating in this study. We would like to inform you that the study is NOT conducted in cooperation with Airbnb, and that all of the ads presented in this study are fictitious, created for investigating how consumers respond to different types of ads. The home swapping service you were asked about is NOT a real service, and we do not have information about whether Airbnb really considers offering such a service in the future. The purpose of the question was to investigate attitudes towards this kind of service, in case it launches at a later time. If you have questions regarding the study, please contact:

Emeline Picard: Emeline.Picard@student.nhh.no

Please click on "**next**" to send your answers and see details of the cinema tickets prize draw.

End of Block: End

Appendix H Results – Study 2

H.1 Reliability check and factor analysis

Table H.1.1. Factor analysis and Cronbach's Alpha for the Attributes of the apartment

Items	Factor loadings
Standards	.766
Cleanliness	.725
Pleasant	.819
Eigenvalue	2.309
Cronbach's alpha	.849

Table H.1.2. Factor analysis and Cronbach's Alpha for the Trustworthiness

Items	Factor loadings
Benevolence	.818
Trust	.818
Eigenvalue	1.636
Cronbach's alpha	.778

Table H.1.3. Factor analysis and Cronbach's Alpha for the Outgroup Threat

Items	Factor loadings
Muslims and Western culture	.888
Muslims and Belgian culture	.887
Moroccans and Western culture	.911
Moroccan sand Belgian culture	.907
Eigenvalue	2.309
Cronbach's alpha	.961

H.2 Descriptive statistics

Table H.2.1. Descriptive statistics

Source		N	Min	Max	Mean	SD	Skewness		Kurtosis	
							Statistic	SE	Statistic	SE
Dependent variable	Liking	232	1	11	7.28	1.696	-.527	.160	.531	.318
	Attractiveness	232	2	11	7.43	1.631	-.481	.160	.244	.318
	Attributes	232	4	11	7.91	1.219	-.315	.160	.290	.318
	Attitude	123	1	11	7.03	2.354	-.588	.218	.220	.433
	Likelihood	232	1	11	6.86	2.434	-.734	.160	.014	.318
	Willingness to pay	108	25	120	62.56	17.929	.749	.233	1.240	.461
Mediators	Self-object connection	232	1	11	6.45	2.094	-.466	.160	.457	.318
	Self-otheroverlap	232	1	11	6.47	1.969	-.450	.160	.281	.318
	Trustworthiness	232	2	11	7.02	1.605	-.273	.160	.446	.318
	Perceived risk	232	1	11	5.39	2.252	.355	.160	-.212	.318
Moderators	Political orientation	232	1	11	6.07	2.045	-.452	.160	-.067	.318
	Outgroup threat	232	1	11	3.52	2322	-.691	.160	-.503	.318

Note: bold characters indicate violation of normality at ± 1 .

H.2.1 Descriptive statistics sorted by treatments

Table H.2.2. Frequencies of the different treatments

	n	Percent	Cumulative Percent
In group host with normal rental	58	25.0	25.0
In group host with home swap	65	28.0	53.0
Out group host with normal rental	51	22.0	75.0
Out group host with home swap	58	25.0	100.0
Total	232	100.0	

Table H.2.3. Mean of the variables regarding the different combination of treatments

Source		In group host with normal rental	In group host with home swap	Out group host with normal rental	Out group host with home swap
Dependent variables	Liking	6.93	7.40	7.25	7.52
	Attractiveness	7.40	7.62	7.02	7.60
	Attributes	7.74	7.97	7.95	7.99
	Attitude		6.98		7.09
	Likelihood	7.09	6.75	6.71	6.88
	Willingness to pay	61.60		63.63	
Mediators	Self-object connection	6.21	6.54	6.27	6.74
	Self-other overlap	6.29	6.43	6.29	6.86
	Trustworthiness	6.56	6.98	7.25	7.30
	Perceived risk	5.95	5.77	4.67	5.03
Mediators	Political orientation	6.14	6.15	5.92	6.05
	Outgroup threat	3.75	3.16	3.73	3.51

H.3 Preliminary analysis

Prior to test hypothesis of the model, the following assumptions have been tested.

H.3.1 Independence of the observations

The independence of the observations is presumed as participants were asked to answer the survey individually.

H.3.2 Normal distribution of the observations

Violation of the normality is not problematic with large samples (Pallant, 2013). Some even argue the distribution of the data can be disregarded for sample larger than hundred responses (Altman & Bland, 1995; Ghasemi & Zahediasl, 2012).

In assessing normality, the rule of thumb is ± 1 when looking at skewness and kurtosis. However, some literature argues the acceptable limit is ± 2 (Gravetter & Wallnau, 2016; Trochim & Donnelly, 2006). For large sample ($n \geq 200$), the limit can be extended to ± 2.58 (Ghasemi & Zahediasl, 2012).

The positive kurtosis for the willingness to pay indicate the distribution is rather peaked. This is not surprising as we do not expect a wide variation around the prices suggested in the study. Because we gave a point on comparison, it is not surprising that people value the apartment accordingly.

Most variables have a negative skewness which indicates they are clustered to the right of the scale. The perceived risk has a positive skewness, meaning the data are grouped on the left tail end of the normality graph. The kurtosis of this variable is negative which usually indicates a flat distribution (Pallant, 2013). However, the histogram reveals a normal distribution. Kurtosis here can result from a wrong estimation of variance (Tabachnick & Fidell, 2013). A priori, perceived risk seems moderate.

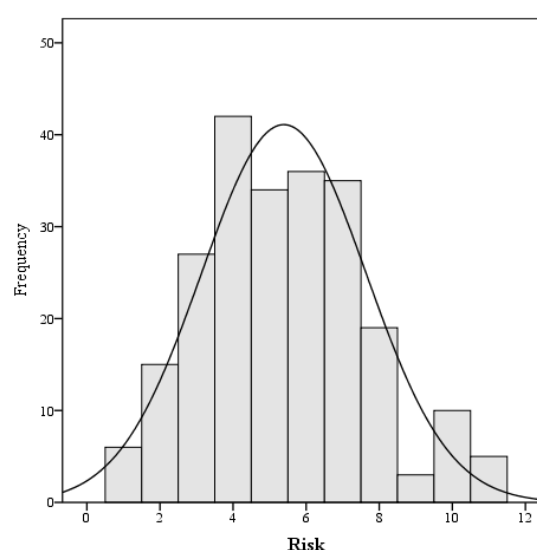


Figure H.3.1.
Histogram of the
perceived risk

H.3.3 Homoscedasticity

Before comparing groups, it is important to check homoscedasticity (Miao, 2009). We conducted Levene's test, which is assumed to be robust (Lim & Loh, 1996).

Levene's test showed heterogeneity of variance for *attributes of the apartment* ($F(3,228) = 2.963, p = .033$) and *attitude towards the home swap service* ($F(1,121) = 6.534, p = .012$). This means that the means of absolute difference between groups are not similar. Such conditions can influence results of further tests and create bias (Zimmerman, 2000). However, it might also be caused by the relatively small size of the groups taken separately, and the difference in size between them. For those variables, we will evaluate the results of analysis of variance (ANOVA) based on the assumption of unequal variance.

Table H.3.1. Homogeneity of variance

	Levene Statistic	Sig.
Liking	2.433	.066
Attractiveness	1.677	.173
Attributes	2.963	.033
Attitude	6.534	.012
Likelihood	2.054	.107
Willingness to pay	.023	.880

Note: bold characters indicate violation of homogeneity of variance.

H.4 Main effect

Table H.4.1. Group statistics

	Ingroup host			Outgroup host		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Liking	123	7.18	1.856	109	7.39	1.497
Attractiveness	123	7.51	1.560	109	7.33	1.711
Attributes	123	7.86	1.333	109	7.97	1.078
Attitude	65	6.98	2.684	58	7.09	1.940
Likelihood	123	6.91	2.541	109	6.80	2.317
Willingness to pay	57	61.60	17.102	51	63.63	18.923

Note: bold characters indicate statistically significant differences (t-test).

Table H.4.2. Independent-samples t-test

	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Liking	-.966	230	.335	-.216	.223	-.655	.224
Attractiveness	.847	230	.398	.182	.215	-.241	.605
Attributes	-.707	230	.480	-.113	.160	-.430	.203
Attitude	-.238	121	.812	-.102	.427	-.947	.743
Likelihood	.350	230	.726	.112	.321	-.520	.744
Willingness to pay	-.586	106	.559	-2.031	3.466	-8.903	4.842

Note: bold characters indicate statistically significant differences at $p < 0.05$.

H.5 Moderation effect

H.5.1 Moderation effect of the Service Type

Table H.5.1. Interaction effect of the Host ethnicity and Service type

	Coefficient	SE	t	p	LLCI	ULCI
Liking	-.2066	.4462	-.4630	.6438	-1.0859	.6727
Attractiveness	.3650	.4283	.8521	.3950	-.4790	1.2090
Attributes	-.1993	.3221	-.6188	.5367	-.8341	.4354
Attitude ^a						
Likelihood	.5058	.6445	.7847	.4334	-.7642	1.7758
Willingness to pay ^b						

Note: bold characters indicate significance.

a. variable only tested in the home swap scenario, hence not tested here.

b. variable only tested in the normal rental scenario, hence not tested here.

Table H.5.2. Conditional effects of the Host ethnicity on the Consumer outcomes at the different Service type

	Normal rental			Home Swap		
	Effect	LLCI	ULCI	Effect	LLCI	ULCI
Liking	.3239	-.3165	.9642	.1172	-.4853	.7198
Attractiveness	-.3769	-.9916	.2377	-.0119	-.5903	.5664
Attributes	.2186	-.2437	.6809	.0193	-.4157	.4542
Attitude ^a						
Likelihood	-.3803	-1.3053	.5446	.1255	-.7449	.9958
Willingness to pay ^b						

Note: bold characters indicate significance.

a. variable only tested in the home swap scenario, hence not tested here.

b. variable only tested in the normal rental scenario, hence not tested here.

H.5.2 Moderation effect of the Political orientation

Table H.5.3. Interaction effect of the Host ethnicity and Political orientation

	Coefficient	SE	t	p	LLCI	ULCI
Liking	.0346	.1091	.3166	.7518	-.1805	.2496
Attractiveness	-.0345	.1040	-.3314	.7406	-.2395	.1705
Attributes	-.0656	.0785	-.8358	.4041	-.2203	.0891
Attitude	.3953	.2218	1.7824	.0772	-.0438	.8345
Likelihood	.0852	.1540	.5531	.5807	-.2183	.3886
Willingness to pay	-.3114	1.5736	-.1979	.8435	-3.4318	2.8091

Note: bold characters indicate significance.

Table H.5.4. Conditional effects of the Host ethnicity on the Consumer outcomes at different level of Political orientation

	-1 SD from the mean			Mean			+1 SD from the mean		
	Effect	LLCI	ULCI	Effect	LLCI	ULCI	Effect	LLCI	ULCI
Liking	.1255	-.4920	.7430	.1961	-.2405	.6327	.2668	-.3549	.8884
Attractiveness	-.1372	-.7259	.4515	-.2077	-.6239	.2085	-.2782	-.8708	.3145
Attributes	.2335	-.2107	.6778	.0994	-.2148	.4135	-.0348	-.4821	.4125
Attitude	-.6749	-1.8439	.4942	.0790	-.7422	.9002	.8329	-.3439	2.0097
Likelihood	-.3300	-1.2015	.5415	-.1559	-.7720	.4603	.0183	-.8590	.8957
Willingness to pay ¹	2.3962	-7.2887	12.0812	1.7093	-5.1436	8.5623	1.0224	-8.7197	10.7645

Note: bold characters indicate significance.

H.5.3 Moderation effect of the Perceived outgroup threat

Table H.5.5. Interaction effect of the Host ethnicity and Perceived outgroup threat

	Coefficient	SE	t	p	LLCI	ULCI
Liking	.0058	.0967	.0596	.9525	-.1848	.1964
Attractiveness	-.0746	.0928	-.8040	.4222	-.2574	.1082
Attributes	-.1070	.0682	-1.5678	.1183	-.2414	.0275
Attitude	.1615	.1975	.8179	.4151	-.2295	.5525
Likelihood	-.1121	.1370	-.8181	.4141	-.3822	.1579
Willingness to pay	-1.8120	1.4298	-1.2674	.2079	-4.6474	1.0233

Note: bold characters indicate significance.

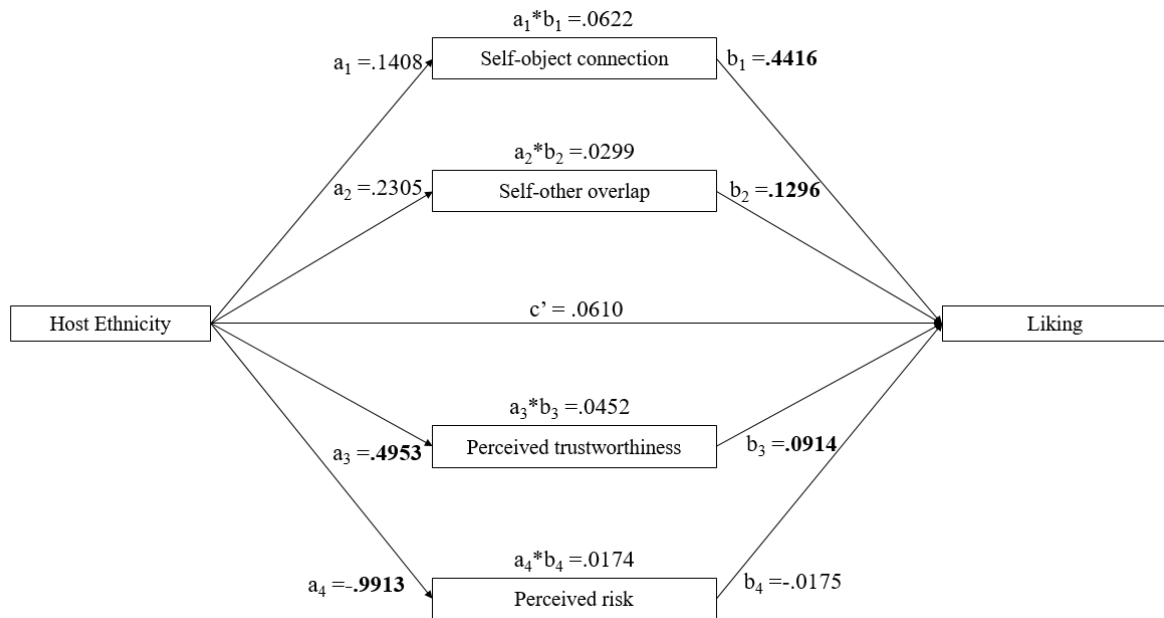
Table H.5.6. Conditional effects of the Host ethnicity on the Consumer outcomes at different level of Political orientation

	-1 SD from the mean			Mean			+1 SD from the mean		
	Effect	LLCI	ULCI	Effect	LLCI	ULCI	Effect	LLCI	ULCI
Liking	.2199	-.4049	.8447	.2333	-.2044	.6709	.2467	-.3733	.8666
Attractiveness	.0110	-.5883	.6103	-.1622	-.5820	.2576	-.3354	-.9300	.2593
Attributes	.3832	-.0575	.8239	.1349	-.1738	.4436	-.1135	-.5508	.3238
Attitude	-.2024	-1.4126	1.0079	.1505	-.6931	.9940	.5034	-.6875	1.6943
Likelihood	.1883	-.6970	1.0735	-.0721	-.6922	.5480	-.3324	-1.2108	.5460
Willingness to pay ¹	6.4605	-3.3204	16.2414	2.0101	-4.8761	8.8964	-2.4402	-12.2460	7.3656

Note: bold characters indicate significance.

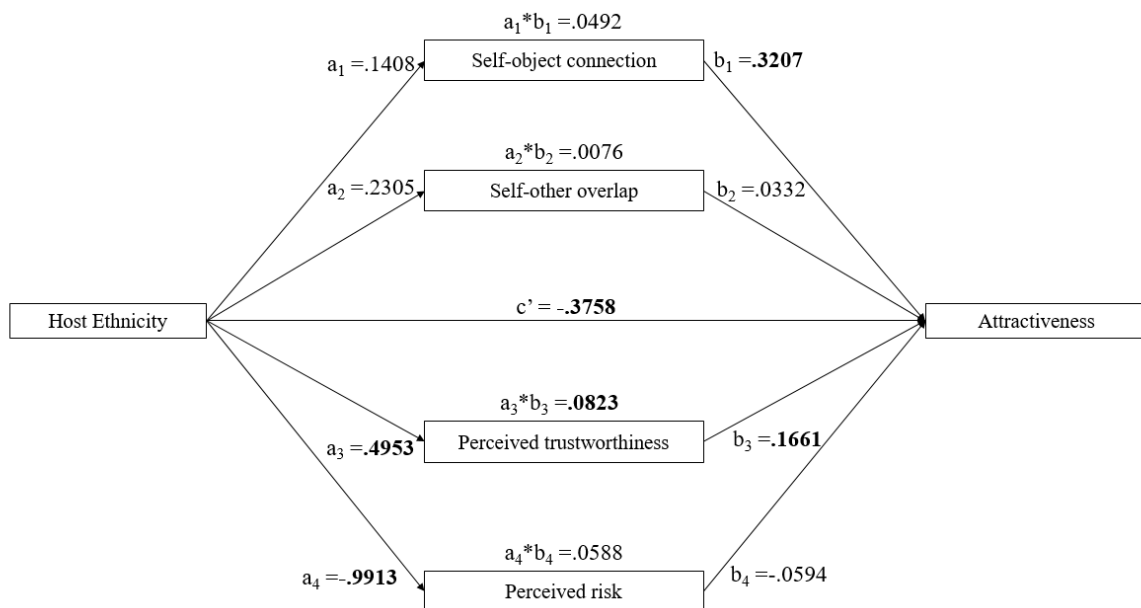
H.6 Mediation effect

H.6.1 Statistical diagram of the mediation effect of the host ethnicity on consumer outcomes



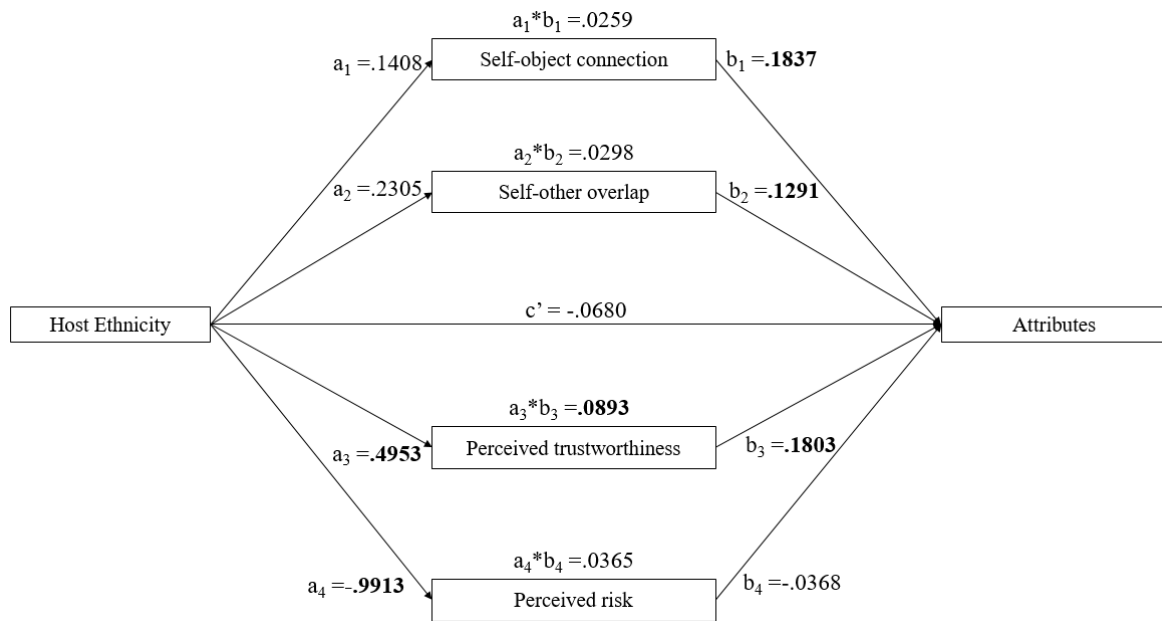
Note: bold characters indicate significance at $p < 0.05$.

Figure H.6.1. Parallel mediation model.
Liking of the apartment regarding host ethnicity.



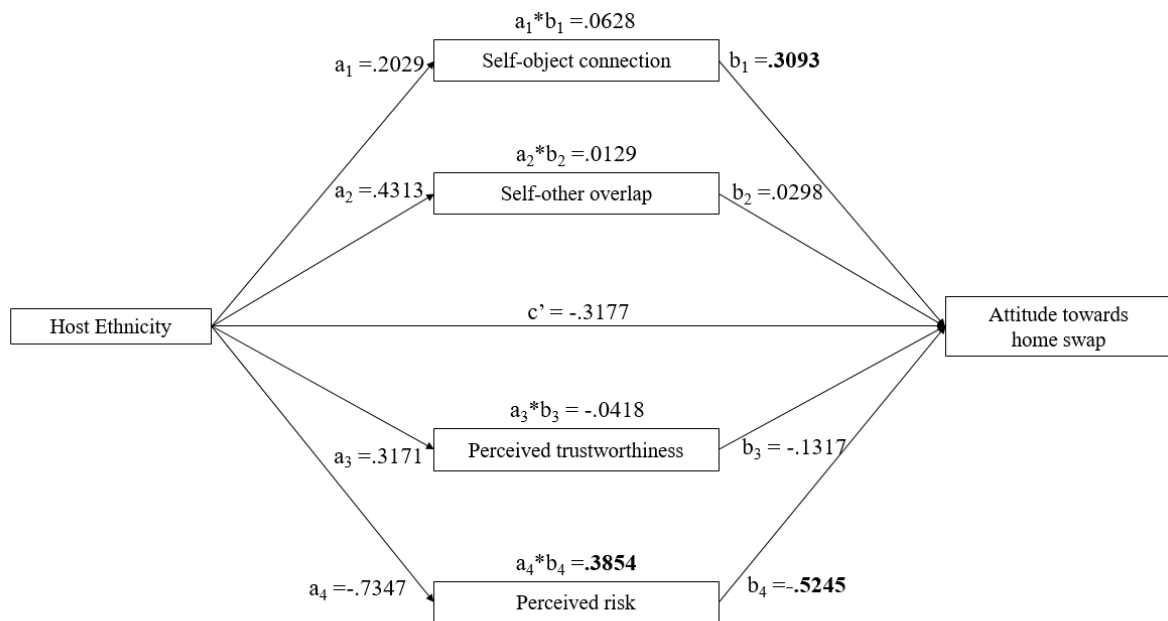
Note: bold characters indicate significance at $p < 0.05$.

Figure H.6.2. Parallel mediation model.
Attractiveness of the apartment regarding host ethnicity.



Note: bold characters indicate significance at $p < 0.05$.

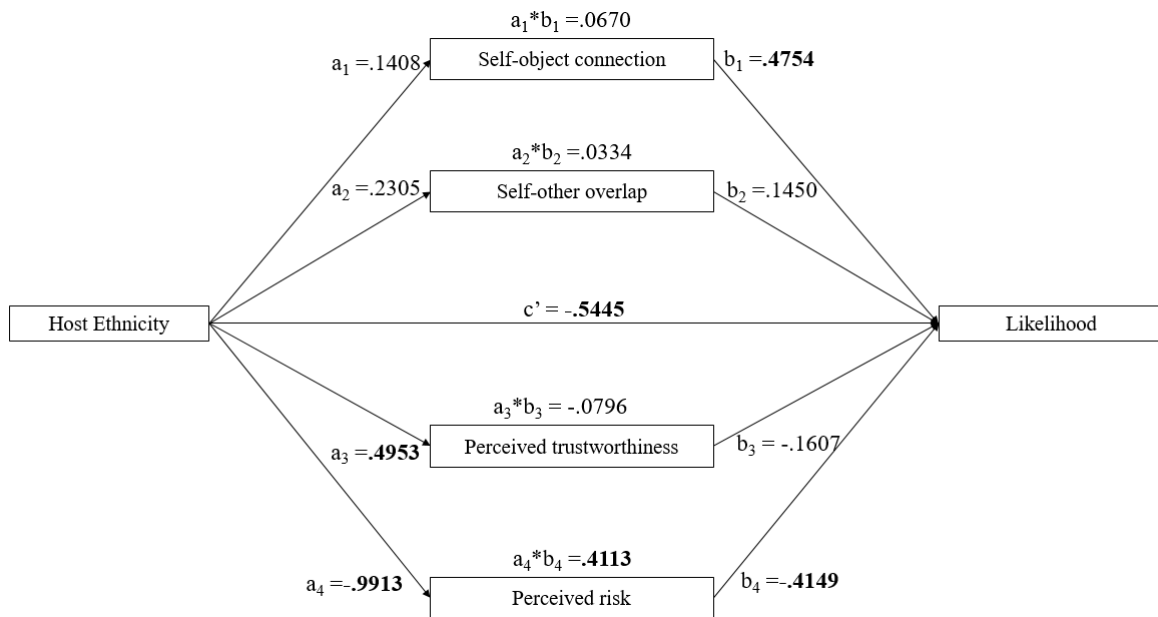
Figure H.6.3. Parallel mediation model.
Attributes of the apartment regarding host ethnicity.



*Significant at $p < .05$

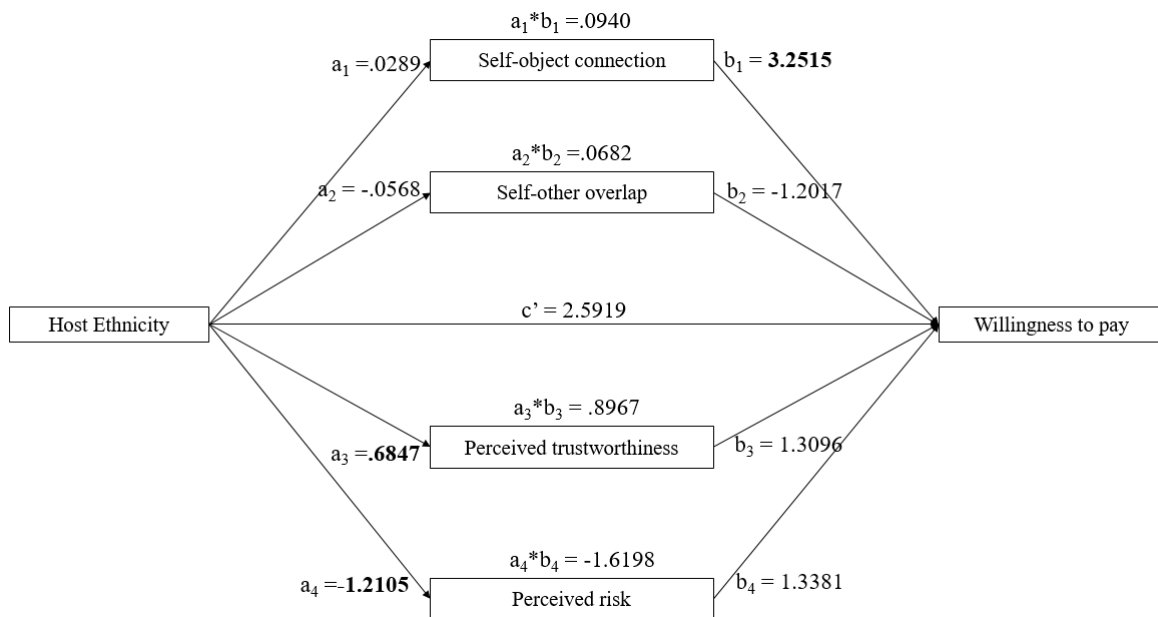
Note: bold characters indicate significance at $p < 0.05$.

Figure H.6.4. Parallel mediation model.
Attitudes towards the home swap regarding host ethnicity.



Note: bold characters indicate significance at $p < 0.05$.

Figure H.6.5. Parallel mediation model.
Likelihood to choose the apartment regarding host ethnicity.



Note: bold characters indicate significance at $p < 0.05$.

Figure H.6.6. Parallel mediation model.
Willingness to pay regarding host ethnicity.

H.6.2 Indirect effects presented per mediator

Table H.6.1. Indirect effects of the self-object connection

Dependent Variable	Index	BootSE	BootLLCI	BootULCI
Liking	.0622	.1219	-.1787	.2989
Attractiveness	.0452	.0887	-.1196	.2282
Attributes	.0259	.0505	-.0717	.1347
Attitude	.0628	.1171	-.1341	.3559
Likelihood	.0563	.0627	-.0616	.1859
Willingness to pay	.0911	.5856	-1.1143	1.2525

Note: bold characters indicate significance.

Table H.6.2. Indirect effects of the self-other overlap

Dependent Variable	Index	BootSE	BootLLCI	BootULCI
Liking	.0299	.0424	-.0243	.1601
Attractiveness	.0076	.0279	-.0228	.1007
Attributes	.0298	.0392	-.0270	.1387
Attitude	.0129	.0958	-.1502	.2679
Likelihood	.0005	.0236	-.0470	.0544
Willingness to pay	.1654	.3037	-.1700	1.2786

Note: bold characters indicate significance.

Table H.6.3. Indirect effects of the perceived trustworthiness

Dependent Variable	Index	BootSE	BootLLCI	BootULCI
Liking	.0452	.0502	-.0243	.1920
Attractiveness	.0823	.0533	.0112	.2370
Attributes	.0893	.0520	.0168	.2265
Attitude	-.0418	.0828	-.3034	.0571
Likelihood	.0302	.0325	-.0108	.1234
Willingness to pay	-.1766	.3602	-1.4885	.1928

Note: bold characters indicate significance.

Table H.6.4. Indirect effects of the perceived risk

Dependent Variable	Index	BootSE	BootLLCI	BootULCI
Liking	.0174	.0523	-.0896	.1262
Attractiveness	.0588	.0509	-.0230	.1822
Attributes	.0365	.0378	-.0278	.1266
Attitude	.3854	.2409	.0021	.9634
Likelihood	.4113	.1540	.1654	.7649
Willingness to pay	.0202	.3113	-.5440	.8380

Note: bold characters indicate significance.

H.7 Moderated mediation effect

Table H.7.1. Direct effects of the host ethnicity on the consumer outcomes

Dependent variable	Effect	SE	t	p	LLCI	ULCI
Liking	.0610	.1674	.3641	.7162	-.2690	.3909
Attractiveness	-.3758	.1843	-2.0395	.0426	-.7390	-.0127
Attributes	-.0680	.1252	-.5434	.5874	-.3147	.1786
Attitude ^a	-.3177	.3645	-.8715	.3853	-1.0396	.4043
Likelihood	-.5445	.2588	-2.1036	.0365	-1.0545	-.0345
Willingness to pay ^b	2.5919	3.5094	.7385	.4619	-4.3691	9.5528

Note: bold characters indicate significance.

a. variable only tested in the home swap scenario, hence not tested with the service type as a moderator.

b. variable only tested in the normal rental scenario, hence not tested with the service type as a moderator.

H.7.1 Moderated mediation effect of the Service type

Table H.7.2. Interaction effects of the Service type and the host ethnicity

Mediators	Coefficient	SE	t	p	LLCI	ULCI
Self-object connection	.1353	.5528	.2448	.8069	-.9540	1.2246
Self-other overlap	.4303	.5188	.8293	.4078	-.5921	1.4526
Perceived trustworthiness	-.3774	.4188	-.9012	.3684	-1.2027	.4478
Perceived risk	.5469	.5815	.9405	.3480	-.5989	1.6926

Note: bold characters indicate significance.

Table H.7.3. Conditional effects of the Service type on the relation between the host ethnicity and the dependent variables

Mediator	Dependent variable	Index	BootSE	BootLLCI	BootULCI
Self-object connection	Liking	.0598	.2471	-.4284	.5415
	Attractiveness	.0434	.1766	-.3159	.3893
	Attributes	.0249	.1034	-.1928	.2198
	Attitude ^a				
	Likelihood	.0643	.2717	-.4686	.6111
	Willingness to pay ^b				
Self-other overlap	Liking	.0557	.0820	-.0544	.2929
	Attractiveness	.0143	.0544	-.0460	.2154
	Attributes	.0556	.0743	-.0632	.2426
	Attitude ^a				
	Likelihood	.0624	.1105	-.0712	.3972
	Willingness to pay ^b				
Perceived trustworthiness	Liking	-.0345	.0643	-.2776	.0301
	Attractiveness	-.0627	.0821	-.3019	.0459
	Attributes	-.0680	.0885	-.3160	.0556
	Attitude ^a				
	Likelihood	.0606	.1093	-.0513	.4421
	Willingness to pay ^b				
Perceived risk	Liking	-.0096	.0425	-.1398	.0471
	Attractiveness	-.0325	.0505	-.2126	.0225
	Attributes	-.0201	.0376	-.1524	.0169
	Attitude ^a				
	Likelihood	-.2269	.2393	-.7011	.2397
	Willingness to pay ^b				

Note: bold characters indicate significance.

a. variable only tested in the home swap scenario, hence not tested here.

b. variable only tested in the normal rental scenario, hence not tested here.

H.7.2 Moderated mediation effect of the Political orientation

Table H.7.4. Interaction effects of the Political orientation and the host ethnicity

Mediators	Coefficient	SE	t	p	LLCI	ULCI
Self-object connection	.1185	.1346	.8802	.3797	-.1468	.3838
Self-other overlap	.0037	.1246	.0299	.9761	-.2417	.2492
Perceived trustworthiness	-.1878	.1024	-1.8338	.0680	-.3895	.0140
Perceived risk	-.0332	.1420	-.2339	.8153	-.3130	.2466

Note: bold characters indicate significance.

Table H.7.5. Conditional effects of the Political orientation on the relation between the host ethnicity and the dependent variables

Mediator	Dependent variable	Index	BootSE	BootLLCI	BootULCI
Self-object connection	Liking	.0523	.0574	-.0593	.1656
	Attractiveness	.0380	.0416	-.0438	.1213
	Attributes	.0218	.0247	-.0261	.0736
	Attitude	.0733	.0812	-.0299	.3146
	Likelihood	.0563	.0622	-.0658	.1794
	Willingness to pay	.0911	.5736	-1.1468	1.1512
Self-other overlap	Liking	.0005	.0191	-.0379	.0432
	Attractiveness	.0001	.0104	-.0206	.0247
	Attributes	.0005	.0177	-.0328	.0408
	Attitude	.0045	.0440	-.0610	.1378
	Likelihood	.0005	.0228	-.0449	.0549
	Willingness to pay	.1654	.3075	-.1558	1.3287
Perceived trustworthiness	Liking	-.0172	.0190	-.0719	.0086
	Attractiveness	-.0312	.0215	-.0892	-.0007
	Attributes	-.0339	.0223	-.0948	-.0032
	Attitude	.0321	.0541	-.0412	.1830
	Likelihood	.0302	.0324	-.0105	.1262
	Willingness to pay	-.1766	.3597	-1.4506	.2141
Perceived risk	Liking	.0006	.0080	-.0109	.0246
	Attractiveness	.0020	.0112	-.0143	.0342
	Attributes	.0012	.0074	-.0088	.0250
	Attitude	.0518	.1273	-.1805	.3397
	Likelihood	.0138	.0614	-.1038	.1406
	Willingness to pay	.0202	.3101	-.5526	.7595

Note: bold characters indicate significance.

H.7.2.1. Further analysis of the moderation by the political orientation

**Table H.7.6. Johnson-Neyman significance regions
for the moderation effect of the Political orientation**

	Johnson-Neyman significance regions		Pattern	
Self-object connection				
Self-other overlap				
Perceived trustworthiness	Pos. [6.4260, 8,5], Neg. [9, 11]	Pos. [1, 8.5]	Neg. [9, 11]	
Perceived risk	Neg. [3.6216, 9.3316]		Neg. [1,11]	

H.7.3 Moderated mediation effect of the Perceived outgroup threat

Table H.7.7. Interaction effects of the Perceived outgroup threat and the host ethnicity

Mediators	Coefficient	SE	t	p	LLCI	ULCI
Self-object connection	-.0671	.1191	-.5632	.5739	-.3019	.1677
Self-other overlap	-.2186	.1067	-2.0487	.0416	-.4288	-.0084
Perceived trustworthiness	-.2882	.0880	-3.2753	.0012	-.4615	-.1148
Perceived risk	.2284	.1200	1.9034	.0583	-.0080	.4649

Note: bold characters indicate significance.

Table H.7.8. Conditional effects of the Perceived outgroup threat on the relation between the host ethnicity and the dependent variables

Mediator	Dependent variable	Index	BootSE	BootLLCI	BootULCI
Self-object connection	Liking	-.0296	.0571	-.1481	.0778
	Attractiveness	-.0215	.0422	-.1116	.0561
	Attributes	-.0123	.0247	-.0667	.0300
	Attitude	-.0036	.0652	-.1569	.1122
	Likelihood	-.0319	.0617	-.1577	.0874
	Willingness to pay	-.3306	.6515	-1.8135	.8180
Self-other overlap	Liking	-.0283	.0220	-.0903	.0000
	Attractiveness	-.0072	.0198	-.0607	.0205
	Attributes	-.0282	.0190	-.0782	-.0021
	Attitude	-.0006	.0309	-.0770	.0581
	Likelihood	-.0317	.0338	-.1304	.0086
	Willingness to pay	.4309	.4459	-.1745	1.7735
Perceived trustworthiness	Liking	-.0263	.0265	-.0912	.0162
	Attractiveness	-.0479	.0272	-.1152	-.0062
	Attributes	-.0520	.0271	-.1233	-.0114

	Attitude	.0375	.0588	-.0464	.1966
	Likelihood	.0463	.0439	-.0212	.1591
	Willingness to pay	-.4020	.5992	-2.0831	.4200
Perceived risk	Liking	-.0040	.0135	-.0400	.0179
	Attractiveness	-.0136	.0143	-.0586	.0038
	Attributes	-.0084	.0102	-.0396	.0041
	Attitude	-.0400	.0988	-.2499	.1487
	Likelihood	-.0948	.0573	-.2339	-.0078
	Willingness to pay	.4595	.3900	-.0106	1.6927

Note: bold characters indicate significance.

H.7.3.1. Further analysis of the moderation by the perceived outgroup threat

Table H.7.9. Johnson-Neyman significance regions for the moderation effect of the perceived outgroup threat

Johnson-Neyman significance regions		Pattern	
Self-object connection			
Self-other overlap	Pos. [1 ,2.2917]	Pos. [1, 4.5]	Neg. [5, 11]
Perceived trustworthiness	Pos. [1, 3.9300], Neg. [8.7669, 11]	Pos. [1, 5]	Neg. [5.5, 11]
Perceived risk	Neg. [1, 5.1747]	Neg. [1, 8]	Pos. [8.5, 11]

H.8 Visual representation of the results

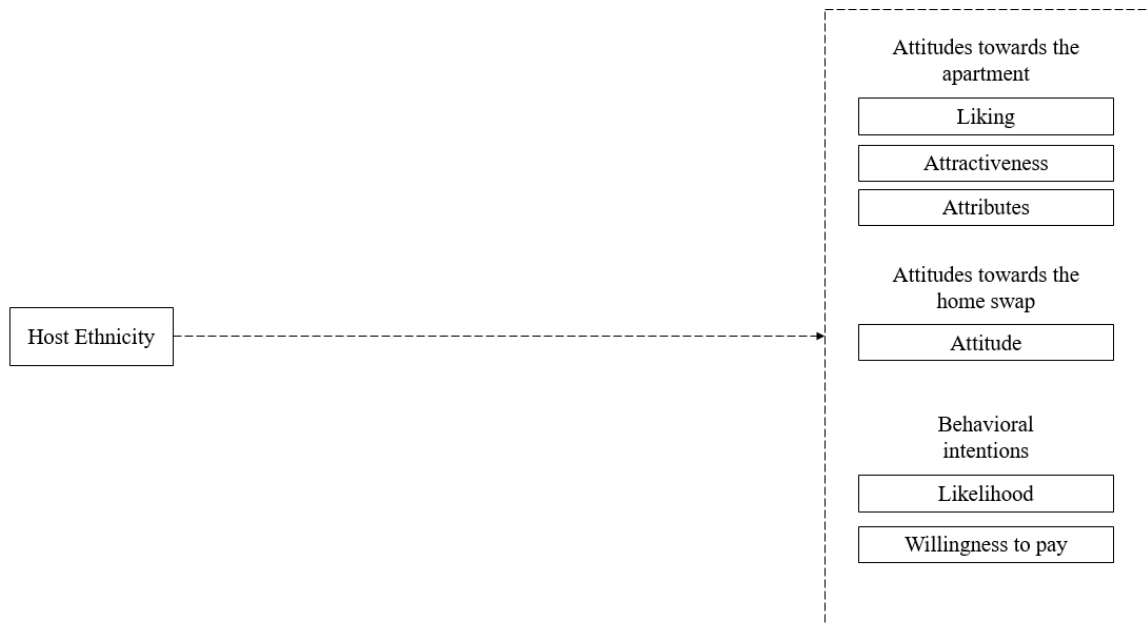


Figure H.8.1. Visual representation of the main effect.

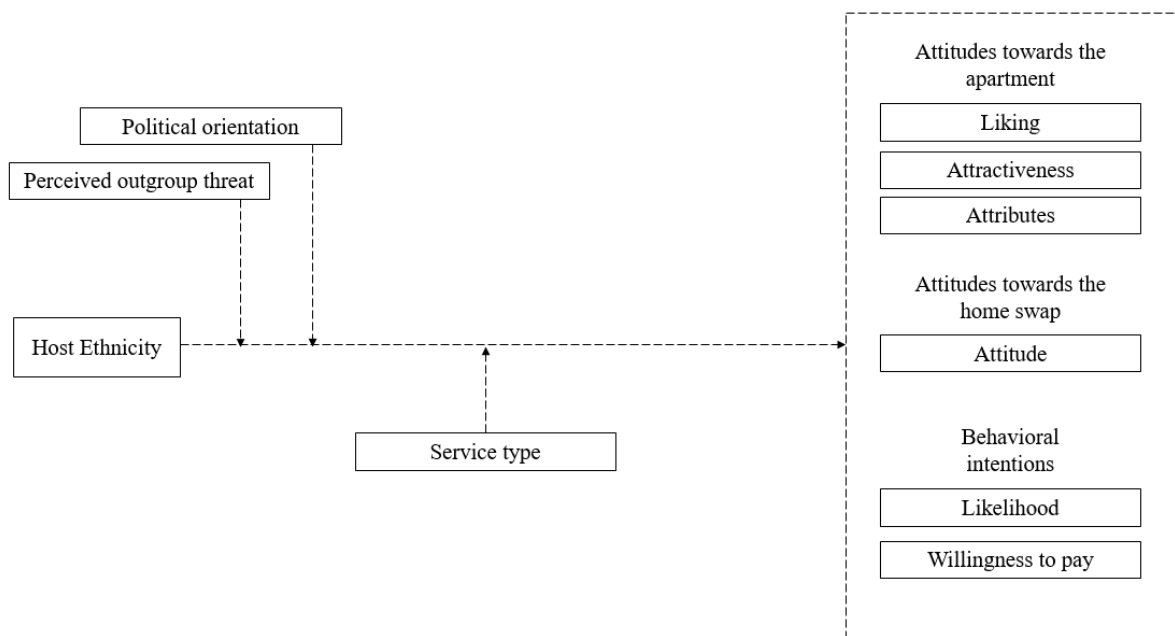


Figure H.8.2. Visual representation of the moderation effects.

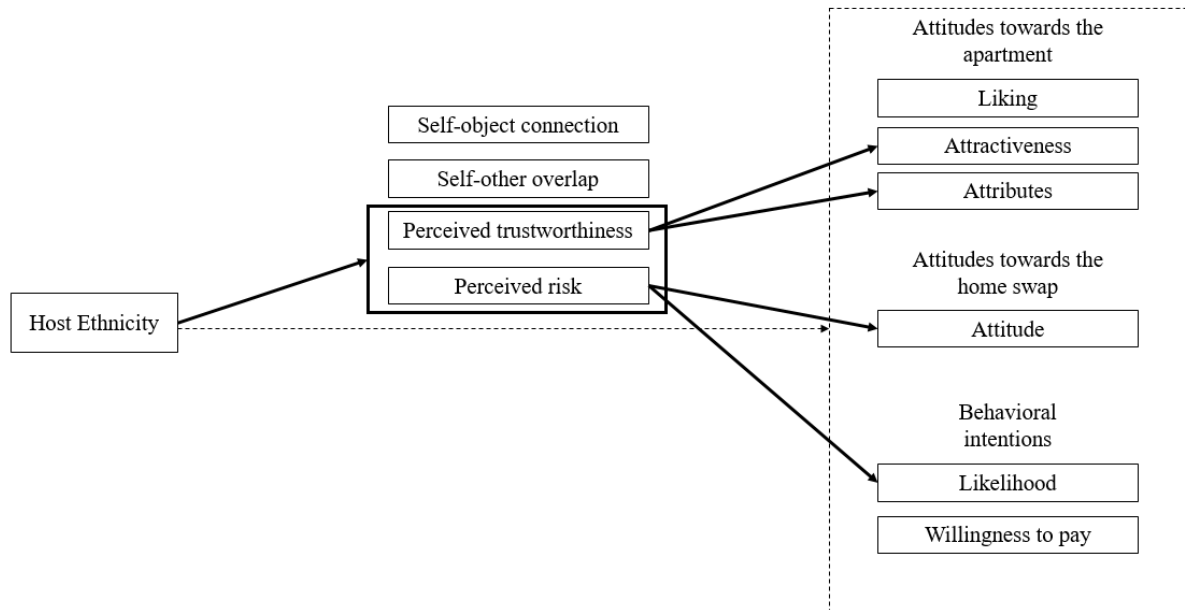


Figure H.8.3. Visual representation of the significant mediation effect.

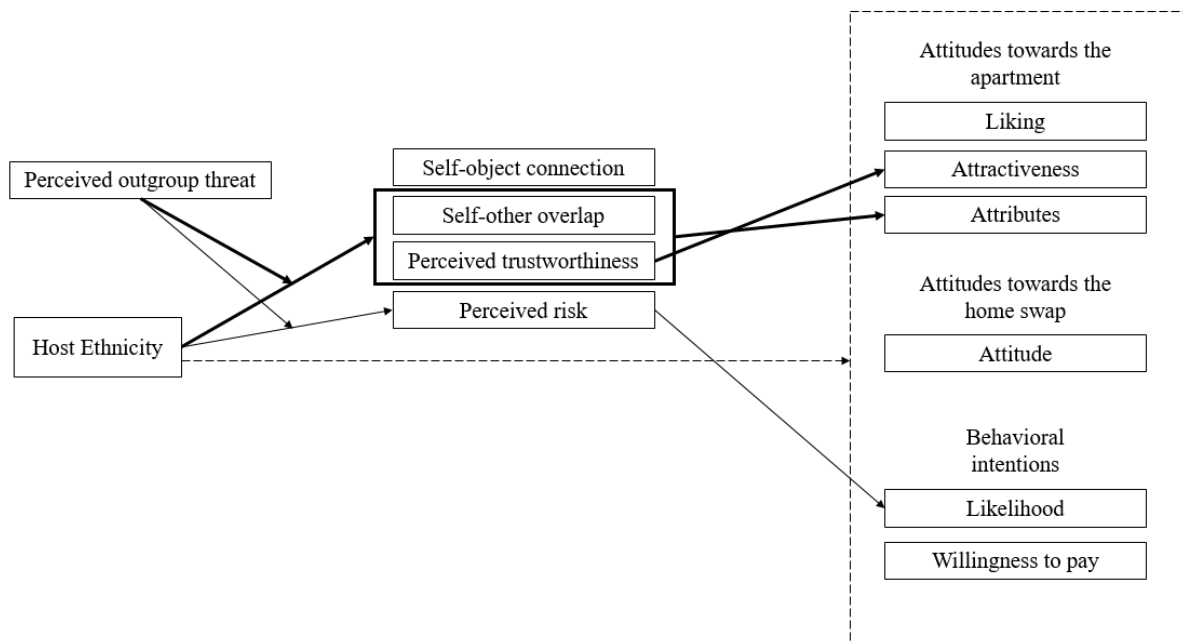


Figure H.8.4. Visual representation of the significant moderated mediation effect.

Appendix I Political parties in Belgium

Figure I.1. Main Belgian parties and views on immigration, social and economic policies

	Radical Left	(Left)	Center-Left	Center	Center-Right	Right	Radical right			
Ideology	Anti-capitalist/ communism		Political ecology	Social democracy	Christian democracy	Federalism	Liberalism	Nationalism	Neoliberal populism	National populism
Immigration policy	Favorable to immigration		Open to immigration	Promoting liberty of immigration	Tolerant position (cdH) Strict policy (CD&V)	Different views	Concerned by immigration consequences (MR) Open to immigration as working force for areas in need (Open VLD)	Opposed to large immigration, in favor of a specific integration policy and chosen immigration	Control and limitation of immigration	Border shutdown
Social policy	Progressive		Progressive	Progressive	Conservative	Federalist, centrist perspective	Progressive	Conservative	Conservative (PP) Libertarian (LDD)	Conservative and traditionalist
Economic policy	In favor of a strong intervention of the state		In favor of a global regulation	In favor of a strong position of the state	Social market economy	Not their focus	Reduction of social contribution, tax levy and social burden for self-employed	Focus on the reduction of fiscal pressure (RWF) Advocate individual responsibility (NVA)	Ultra-liberalism, Promote individual responsibility	Protectionist economy
Parties	Parti communiste de Belgique (PCB) Ligue communiste révolutionnaire (LCR) Socialistische Arbeiderspartij (SAP) Parti du travail de Belgique (PTB) Partij van de Arbeid van België (PVDA) Parti socialiste de lutte (PSL) Linkse Socialistische Partij (LSP)	Vert Groen	Parti socialiste (PS) Socialisten en Progressieven Anders (SPA)	Centre démocrate humaniste (cdH) Christen-Democratisch en Vlaams (CD&V)	Fédéralistes démocrates francophones (FDF) ProBruxsel Pro Deutschsprachige Gemeinschaft (ProDG)	Mouvement réformateur (MR) Open Vlaamse Liberalen en Democraten (Open VLD)	Rassemblement Wallonie-France (RWF) Nieuw-Vlaamse Alliantie (NVA)	Parti populaire (PP) Lijst Dedecker (LDD)	Démocratie nationale (DN) Vlaams Belang (VB)	

Adapted from Cultures&Santé (2013a).

Reference:

Cultures&Santé. (2013a). *Les couleurs politiques - Fiches*. Retrieved from <http://www.cultures-sante.be/component/phocadownload/category/14-pdf-ep-2013.html?download=123:couleurs-politiques-fiches>

Appendix J Comparison of the studies

J.1 Descriptive statistics

Table J.1.1. Descriptive statistics

Source		Study 1				Study 2			
		N	Min	Max	Mean	N	Min	Max	Mean
Dependent variable	Liking	388	1	11	6.39	232	1	11	7.28
	Attractiveness	388	1	11	6.38	232	2	11	7.43
	Attributes	388	1	11	6.87	232	4	11	7.91
	Willingness to swap/Attitudes	388	1	11	5.12	123	1	11	7.03
	Likelihood	388	1	11	5.22	232	1	11	6.86
	Willingness to pay ^a	388	0	1500	612.59	108	25	120	62.56
Mediators	Self-object connection	388	1	11	4.39	232	1	11	6.45
	Self-otheroverlap	388	1	11	5.70	232	1	11	6.47
	Trustworthiness	388	1	11	6.91	232	2	11	7.02
	Perceived risk					232	1	11	5.39
Moderators	Political orientation	388	1	11	5.96	232	1	11	6.07
	Outgroup threat	388	1	11	5.36	232	1	11	3.52

Note: bold characters indicate violation of normality at ± 1 .

^a Expressed in Norwegian kroner in Study 1, and in Euros in Study 2.

J.2 Descriptive statistics sorted by treatments

Table J.2.1. Descriptive statistics

Source		Study 1		Study 2	
		Ingroup	Outgroup	Ingroup	Outgroup
Dependent variable	Liking	6.77	6.03	7.18	7.39
	Attractiveness	6.81	5.96	7.51	7.33
	Attributes	7.08	6.68	7.86	7.97
	Willingness to swap/Attitudes	5.37	4.88	6.98	7.09
	Likelihood	5.63	4.81	61.60	63.63
	Willingness to pay ^a	640.24	585.78	6.91	6.80
Mediators	Self-object connection	4.69	4.11	6.38	6.52
	Self-otheroverlap	5.75	5.64	6.37	6.60
	Trustworthiness	6.91	6.92	6.78	7.28
	Perceived risk			5.85	4.86
Moderators	Political orientation	6.28	5.64	6.15	5.99
	Outgroup threat	5.76	4.99	3.44	3.61

Note: bold characters indicate violation of normality at ± 1 .

^a Expressed in Norwegian kroner in Study 1, and in Euros in Study 2.

Appendix K UN's Campaign – More than meet the eye



Reference:

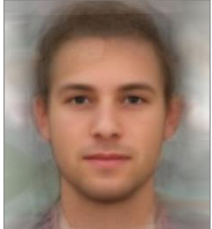
UN. (2011). Let's Fight Racism. Retrieved from <http://www.un.org/en/letsfightracism/>

Appendix L Example of attributes display

L.1 Ingroup host scenario

Hosted by Thomas

Copenhagen, Denmark



Hi. My name is Thomas I am a 25-years-old Belgian student living in Copenhagen.
I am renting out my apartment as I frequently travel to Belgium to see my friends and family.

Figure L.1.1. Ingroup host scenario

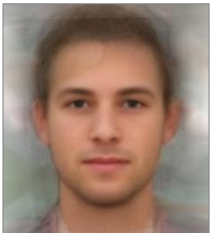
Hosted by Thomas

Copenhagen, Denmark

Student in Economics

Likes outdoor sports

Next trip: France



Hi. My name is Thomas I am a 25-years-old Belgian student living in Copenhagen.
I am renting out my apartment as I frequently travel to Belgium to see my friends and family.

Figure L.1.2. Ingroup host scenario with attributes priming

L.2 Outgroup host scenario

Hosted by Mohamed

Copenhagen, Denmark

Hi. My name is Mohamed I am a 25-years-old Belgian-Moroccan student living in Copenhagen. I am renting out my apartment as I frequently travel to Belgium to see my friends and family.



Figure L.2.1. Outgroup host scenario

Hosted by Mohamed

Copenhagen, Denmark

Student in Economics

Likes outdoor sports

Next trip: France

Hi. My name is Mohamed I am a 25-years-old Belgian-Moroccan student living in Copenhagen. I am renting out my apartment as I frequently travel to Belgium to see my friends and family.



Figure L.2.2. Outgroup host scenario with attributes priming

Place des Doyens, 1 bte L2.01.01, 1348 Louvain-la-Neuve, Belgique www.uclouvain.be/lsm