ANONYMITY AND ITS PSYCHOLOGICAL IMPLICATIONS IN CONSUMER BEHAVIOUR

by

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To my mother, my advisor, and those who have faith in me

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The dissertation sheds light on the construct anonymity and its applications in consumption contexts. The rapid growth of media platforms and online technology has transformed the way we communicate and exchange information. Simultaneously, concerns for online privacy protection have considerably increased. Under the domain of privacy, anonymity is often regarded as an online tool to protect personal information. This understanding, however, narrows the scope of the construct and hinders its research in the consumer behaviour domain. As one of the first studies to explore the psychological implications of anonymity, the dissertation endeavours to lift the "online label" of the construct and position it more properly in consumer research. To achieve this purpose, I develop a scale of consumer attitudes towards anonymity in Essay 1 and use this scale to explore the manifestations of anonymity in everyday behaviour in Essay 2. The findings make significant contributions to the literature and marketing practices.

ACKNOWLEDGMENTS

"Faith is not belief without proof, but trust without reservation."

- D. Elton Trueblood

In this unprecedented time of hardship and challenges, humans around the world strive to survive the pandemic. Through an individual outlook on life, I compare my struggles for the dissertation with others' struggles for their daily routines, and I know that I am still lucky. Yet, the impact of the pandemic pervades all walks of life, individually and socially. No matter how resilient a mind is, without external support, it is incapable of going as far as it wishes to. Thanks to the faith of others, to their trust without reservation, I have reached the farthest point of my PhD journey, the completion of my dissertation.

The lucid image that automatically appears in my head when I want to thank someone is that of my advisor, Professor Zeynep Gürhan Canlı. During our collaboration, I learned from her two profound messages. The first is "homework never ends" and the second, which was years later, is "there is always a way". Maybe finally there is a way to end all those homework nightmares. However, when I combined the two messages and reflected them on their author and my own experience, it suddenly dawned on me that it is not about what is being thrown at you (which is non-stop) but it is about how you cope with it. As Dean and Director of the Business School, Professor Zeynep is *more than* busy (I found no proper construct to capture the degree of her busyness). Nonetheless, she is always willing to help me and always finds time to answer any of my request. Her consistency, modesty, and kindness help shape this dissertation to a great extent. For that, I am indebted to my advisor.

I thank Nilüfer Aydınoğlu for her helpfulness, especially during our independent study. She was generous in sharing with me the studying materials and providing me with many insights for experimental research. I appreciate her open-mindedness, patience, and sympathy

when I made costly mistakes. I really look forward to our future cooperation. As for Zeynep Cemalcilar, she plays an important role in my intellectual development at Koç University (but she does not know that, until now). I remember distinctly that in April 2019 when I conducted my first experiment ever, she took out her pencil, checked each word of my manipulation on the printed paper, and gave me valuable feedback. That was the moment of enlightenment, the day I started to understand how to manipulate people (in experiments) and how a single word may change the research outcomes. Thanks to her insightful comments, I have become much more vigilant and receptive since I know anything can happen in research.

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The last and the most important person that I would like to thank is my mother. Born in a typical working family, she did not have the chance to pursue proper education. However, what she lacks in formal schooling she makes up in endless love and caring. My persistence, humbleness, and thoughtfulness all are nurtured by her guidance. Thinking about her, I feel that the dissertation is no longer a task that needs to be finished. It becomes a gift, an opportunity to share what I know with others and to receive their feedback. Not many people are bestowed with this gift, and fewer think that it is a gift.

Now, I share my gift with you, and I sincerely hope you will like it.

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1. INTRODUCTION

"I value my anonymity. I'm happy to come in on the tube or the train and watch other people reading 'Fifty Shades.'"

- E. L. James

In the contemporary world, people are familiar with the idea of being anonymous. When reading a piece of online news, they often see multiple references to privacy and anonymity. In online contexts, anonymity plays an important role in securing personal information. As a means to an end, anonymity serves the goal of privacy protection. Research and theories in online anonymity abound, and both positive and negative effects of anonymity in online communication have been thoroughly discussed (Pinsonneault & Heppel, 1997; Anonymous, 1998; Marx, 1999; Lapidot-Lefler & Barak, 2012; Gerhart, & Koohikamali, 2019). In offline contexts, anonymity is far under-researched.

Anonymity is not about being unknown or namelessness, but about whether an attribute or a behaviour can be traced to its source. The quotation at the beginning of the introduction aptly describes this essence of anonymity. E. L. James, the author of the "Fifty Shades" book series, is undoubtedly popular among young adults. However, on public transportation, she enjoys her anonymity since people cannot link the books to her identity. Also, fewer people may recognize the name Erika Mitchell since E. L. James is a pseudonym, which further obscures the identity of the author. Applying this understanding of anonymity to consumer research, an intriguing, yet fundamental, question is how the construct is portrayed in daily consumption, or more precisely, what an anonymous consumption behaviour normally looks like. The dissertation attempts to answer this question.

The dissertation comprises two essays. In the first essay, in order to capture the construct, we develop a scale of consumer attitudes towards anonymity, and propose that

anonymity should be considered as a coping mechanism. Our perspective challenges the narrow understanding that anonymity is simply an online tool to protect personal identity. Across six studies conducted with more than 1300 participants, the scale demonstrates its test-retest and internal consistency reliability, construct, convergent, discriminant, and nomological validity. The results show that consumer attitudes towards anonymity have two dimensions: the individual-centric dimension where consumers actively seek anonymity and the situation-centric dimension where anonymity is a contextual motivation. Individual-centric anonymity includes two further factors: freedom which reflects the breadth of consumer choice and independence which portrays the depth of consumer decision when free of social influence. Situation-centric anonymity consists of two factors: ease and norm of anonymity.

In the second essay, using the anonymity scale, we explore the applications of anonymity in consumption contexts. Similar to Essay 1, we treat consumers themselves as anonymous sources and investigate the way they adopt anonymity in everyday behaviour. To know exactly what anonymous consumption behaviour is, we distinguish it from other related constructs such as private and secret consumption. Across five studies, we provide insights into what type of products consumers often adopt anonymity for, what type of consumers are more likely to use anonymity, and why they do so. The results indicate that there seems to be a nuance between online and offline anonymous consumptions, calling for a unifying framework to examine anonymity across contexts. The practical implications of anonymity also help marketing managers to develop a better product strategy (e.g., a new package design), especially when anonymity is integral in the purchasing process (e.g., in online donation, virtual payment).

From both essays, readers have a better understanding of the scope and applicability of anonymity. No longer exclusive to the online domain, anonymity is a construct of its own and manifests in various types of consumer behaviour. Different individual characteristics create

different attitudes towards anonymity, which in turn have different effects on anonymous behaviour. In brief, the applications of anonymity deserve more attention and research.

Next, I present the two essays respectively by elaborating on their theoretical backgrounds, describing their studies, discussing the results, and making suggestions for future research. The dissertation ends with a concluding remark, reflecting on the significance of anonymity and its new position in the consumer behaviour domain.

2. CONSUMER ATTITUDES TOWARDS ANONYMITY - A SCALE DEVELOPMENT

2.1. Introduction

Since the advent of the Internet, communication has evolved dramatically within the new world of online and virtual representations. A notable advantage of online communication is the widespread use and ease of instant connection. Yet, now that accessing information takes only a fraction of a second, issues arise as to how people can protect their online privacy and deal with anonymous sources and content. In response, research on privacy and anonymous communication has become prolific (Goodwin, 1991; Marx, 1999; Postmes, Spears, Sakhel, & de Groot, 2001).

In stark contrast to this trend, a clear definition of anonymity is absent in consumer behaviour research. Bardhi and Eckhardt (2002) claim that anonymity manifests in two ways: interpersonal anonymity - "the extent to which the context of use is private or public" (p. 884), and spatial anonymity - "the proximity between the object and the consumer that shapes the intimacy of the consumptionscape" (p. 885). For interpersonal anonymity, the authors equate anonymity with privacy, though others argue that privacy and anonymity are distinct concepts (Matthews, 2010). Indeed, while privacy refers to the control of information (Smith, Milberg, & Burke, 1996), anonymity involves the identity of the source (Christopherson, 2007).

On the other hand, anonymity is different from the dichotomy publicness and privateness in that the dichotomy focuses on the message itself, while anonymity emphasizes the message source (Anonymous, 1998, p. 383). This means that whether a consumer is anonymous is not about her private (or secret) consumption, but about the ability of others to link her behaviour to her identity. To elucidate the concept of anonymity and position it

properly in consumer research, we propose a scale about consumer attitudes towards anonymity, and make several theoretical and practical contributions.

First, our research paves the way for subsequent studies by uniquely conceptualizing anonymity in the consumption context. Our scale posits that anonymity can be both strategically adopted and situationally motivated, and can act as a general coping mechanism across online and offline contexts.

Second, we distinguish anonymity from the need for privacy and portray the focal construct in meaningful nomological networks. We argue that anonymity is not a mere subcategory of privacy but rather, anonymity adoption is an important factor in consumer purchase decisions, be it strategically or contextually motivated.

Third, we discuss the applications of anonymity by showing how practitioners can make use of it in marketing their products, either as an integral feature of the product or service, or as a beneficial incentive. Our scale has high (test-retest) reliability and validity, implying that consumer attitudes towards anonymity can be captured consistently across individuals and situations. In addition, our scale is domain-free, which means that as long as it is about legitimate consumption such as purchasing, sharing, trading, or donation, the scale is useful in examining the impact of anonymity on consumer behaviour.

The rest of the essay is organized in the following way. First, we briefly review anonymity in the extant literature and introduce our definition of anonymity in the consumption context. Then, we present six studies that generate, refine and validate the measurement items, and portray the significance of the construct in nomological networks. Finally, we discuss the findings, explicate how our scale can be employed by future research, and elaborate on the implications of our results.

2.2. Literature

2.2.1. Anonymity in extant literature

In communication research, different conceptualizations of anonymity have emerged: technical and social anonymity (Hayne & Rice, 1997), process and content anonymity (Sia, Tan, & Wei, 2002), and self- and other-anonymity (Spears & Lea, 1994). Some researchers emphasize the fundamental characteristic of anonymity as the message source rather than the message content, stating that it "must be viewed on a continuum from fully anonymous to fully identified" (Anonymous, 1998, p. 387). Others, however, indicate anonymity as "the inability of group members to identify the origin of messages they receive and the destination of messages they send" and as "either present or absent" (Pinsonneault and Heppel, 1997, p. 90-91). Diverse as it may seem, the overarching conceptualization here is the unidentifiability aspect of being anonymous.

Unidentifiability is not about "namelessness" (Lapidot-Lefler and Barak, 2012), but about the "non-coordinatability of traits in a given respect" in which "others are unable to relate a given feature of the person to other characteristics" (Wallace, 1999, p. 24). For example, in social networks, a real name may not be useful to identify a person unless more identifying personal details are provided. Furthermore, anonymity should be a matter of perception. In fact, since anonymity refers to the inability to link an attribute to its source, to what extent something or someone is anonymous may highly depend on the subjective interpretation of the perceiver. As a result, perceived anonymity is presented in two ways. It can be the perception of the respondent towards anonymous sources (i.e., how I perceive others' anonymity), or the respondent's perception of how others think about his or her own anonymity (i.e., how *I think* others perceive me). In this dissertation, the perspective is about how consumers think about their own anonymity (i.e., consumers are the anonymous sources themselves). We define anonymity as "*the extent to which a consumer's consumption behaviour is unlinkable or*

untraceable back to his or her identity", and anonymous consumption is "*consumption of a product where the identity of the consumer cannot be linked or traced through the consumption*". Next, we elaborate on our scale of consumer attitudes towards anonymity.

2.2.2. The need for a scale of consumer attitudes towards anonymity

Studies in online anonymity is extensive, whereas that in offline are rare. To understand how anonymity manifests in consumer behaviour domain, we find it necessary to develop a measurement scale to capture anonymity effects. Since anonymity literature is dominantly online, it is speculative whether offline anonymity has any distinction. However, as the dissertation attempts to explore anonymity in everyday consumption, it is rational that the anonymity scale should be applicable to both online and offline contexts. In other words, given the scanty research on anonymity in consumer behaviour domain, we make the first step by creating an anonymity scale which should be robust across situations, a scale of consumer attitudes towards anonymity.

Attitude towards something reflects an individual's psychological tendency to evaluate that thing. It can be either an enduring readiness to respond or a temporally constructed judgement (Cohen & Reed II, 2006). Accordingly, attitude towards anonymity portrays consumer belief and assessment of anonymity, be it a stored evaluation of or an altered accessibility to anonymity (Schwarz & Bohner, 2001). As we investigate consumers attitudes towards anonymity when consumers themselves are the anonymous sources, these attitudes then become evaluations of anonymity when consumers are using it. That is, attitudes towards anonymity exist on the premise that consumers should adopt anonymity to develop such attitudes. At that time, a scale of consumer attitudes towards anonymity should reflect the assessment and perception of consumers towards their anonymous behaviour. This facilitates the need to understand why consumers adopt anonymity, the basis for our scale development.

2.2.3. Consumer motivations to adopt anonymity – The theory of planned behaviour

Since consumers are the agents of their anonymous behaviour, the theory of planned behaviour is useful to examine consumer attitudes towards anonymity. The theory proposes that behavioural intention can be reliably predicted by three components: attitudes towards the behaviour, subjective norms, and perceived behavioural control. Those intentions, together with perceptions of behavioural control, can considerably explain the actual behaviour (Ajzen, 1991, 2011). Applying this framework to anonymity contexts, attitudes should reflect the behavioural belief regarding the outcomes of anonymity. In other words, these attitudes stem directly from what consumers think about anonymity when they apply it to their consumption process. Norm of anonymity should reflect the perceived social pressure to adopt anonymity (subjective norm), and perceived behavioural control is consumer perceptions towards the ease or difficulty of performing anonymous behaviour. Ensuring the content validity of these factors requires a good understanding of why consumers adopt anonymity.

From previous research, there are numerous reasons for people to seek anonymity, psychologically and sociologically. For example, Kang, Brown, and Kiesler (2013) found that online anonymity helps to build social connections (e.g., avoid disliked others), increase reputation (e.g., give honest recommendation), enhance security (e.g., protect personal safety), and build personal images (e.g., avoid criticism). In addition, anonymity encourages emotional catharsis (e.g., confide in someone they trust), increases experimentation and risk-taking (e.g., do things that may not fit their usual roles), and facilitates recovery (e.g., take refuge from the outside world) (Pedersen, 1997; Marx, 1999). A scale of consumer attitudes towards anonymity should capture these benefits across online and offline contexts. Importantly, attitude is only one component of the theory of planned behaviour. To subsume both norm and perceived behavioural control, which are more about perceptions than attitudes, under the anonymity scale that focuses on consumers as anonymous sources, it is advisable to use the motivations

to adopt anonymity as a starting point. To this extent, consumers can be either internally or externally motivated. we name internal motivation as individual-centric anonymity and external motivation as situation-centric anonymity. Particularly,

The individual-centric dimension refers to the conscious choice of using anonymity in that consumers actively seek anonymity because of its benefits. This dimension reflects the attitude component of the theory of planned behaviour. Based on extant literature, we propose that the dimension involves three factors: freedom, independence, and security. Freedom indicates that the consumption choices are no longer restricted (e.g., consumers can freely try new products). Independence refers to the absence of influence imposed by social ties and social presence. For instance, when anonymous, consumers feel less responsible for their behaviour in the eyes of their significant others. While freedom and independence comprehensively cover the quantitative and qualitative aspect of anonymous choice, security, as the third factor, refers to the emotional consequences that result from such choice (e.g., consumers feel safe and comfortable).

On the other hand, when anonymity is externally motivated, we suggest that there are two factors which may account for anonymity adoption: ease and norm of anonymity. Specifically, sometimes consumers may not initially strive for anonymity. Instead, if anonymity is convenient and accessible, consumers prefer to be anonymous. This notion is prevalent in online domain where consumers can comfortably provide anonymous product feedback. This reflects the ease (i.e., perceived behavioural control) with which consumers adopt anonymity. Meanwhile, in contemporary society where privacy is an ongoing concern, there should be a general expectation of protecting one's information and identity. Indeed, the outburst of information technology has strengthened the belief that anonymity is a right (Woo, 2006). As such, consumers are motivated to adopt anonymity when there is a salient norm encouraging them to do so, hence a (subjective) norm of anonymity. Next, to support the

proposed dimensions and understand the incentives for anonymity adoption, we conduct an open-ended survey examining the construct in the consumption context.

2.3. Methodology

2.3.1. Study 1: Item generation

Following the established procedures in the literature (Churchill, 1979; Clark & Watson 1995), we began the scale development by creating a pool of items based on both extant literature and the results of an open-ended survey.

Some research considers anonymity as one of the six components of the need for privacy which is composed of three dimensions: recovery, catharsis, and autonomy (Peddersen, 1997). Moreover, anonymity is perceived as the degree to which individuals feel liberated from social judgment and threats of punishment (Pinsonneault & Heppel, 1997). From this perspective, anonymity, as liberation, consists of three factors: lack of identification, diffused responsibility, and proximity. Rationales for adopting anonymity and identifiability as well as the trade-off between being anonymous versus being identifiable have also been discussed in communication literature (Marx, 1999; Kang et al., 2013). However, because anonymity in consumer research is rare, extant anonymity literature is not readily applicable. Therefore, we use the relevant insights to create an open-ended survey and probe consumer ideas about anonymity.

2.3.1.1. Participants and procedure

Our survey was conducted on Prolific Academic, a UK-based crowdsourcing platform for scientific research. Twenty-three Prolific participants joined the survey and received compensation for their participation (M_{age} = 35.17, SD_{age} = 13.44, range = 21-73 years; 60.9% female). There were six questions in the survey. The first question asked the participants to

describe and share three examples of when and where consumers may prefer anonymity. The second question asked them to explain why they think consumers may want to be anonymous. The third question asked the participants to describe a context in which they, as consumers, preferred to be anonymous, and the fourth question asked their reasons for this preference. The fifth question asked how they felt when they were anonymous, and the final question asked whether they thought anonymity did indeed help them in the context they previously described. After participants answered the questions, they indicated some demographics items and were thanked for their participation.

2.3.1.2. Results and discussion

Out of sixty-nine contexts in which consumers preferred anonymity, nineteen of them were about buying personal care, hygienic, or sensitive products such as condoms, sex toys, and adult services. Other contexts were as diverse as online chatrooms, buying medicine, making donations, as well as references to more illicit consumption behaviour such as gambling and purchasing stolen goods. Participants wanted to be anonymous because it protected their identity from something embarrassing and shameful, from the threat of privacy, and from fear of judgment. When anonymous, they felt safe, relaxed, free, and in more control. Above all, the majority of participants indicated that anonymity did help them in the specified contexts (i.e., 17 “yes” and 2 “maybe”, out of 23 participants).

From these results and the extant literature, we created 27 items of consumer attitudes towards anonymity. The items belonged to the proposed two second-order factors: individual-centric anonymity (which includes freedom, independence, and security), and situation-centric anonymity (which includes norm and ease). An important note is that we excluded measuring items related to illicit consumption (e.g., drug, gambling), and focused on items that were derived from legitimate consumption contexts. Our rationale is that the scale should reflect

consumer behaviour and augment their well-being. In other words, we think of anonymity as a general coping mechanism rather than a pure "hiding" tool. Also, our decision is related to the applicability of the scale in future consumer research.

2.3.1.3. Face validity

To ensure the face and content validity of our item pool, we sought feedback from five marketing specialists (four PhD candidates and one PhD student). They were presented with the definitions of the five factors along with the items. Based on their evaluations, we eliminated and changed the wording of some items. The final pool of 22 items were used for further analyses (see Appendix for the original and retained items).

2.3.2. Study 2: Item purification and factor analysis

In this study, we used exploratory factor analysis to extract the items and confirmatory factor analysis to validate and compare different models.

2.3.2.1. Exploratory Factor Analysis (EFA)

2.3.2.1.1. Participants and procedure

We recruited 240 Prolific participants with monetary compensation. Eight participants failed the attention check. One participant failed the longstring screening technique (i.e., this person indicated the same choice for 12 consecutive items; Meade, & Craig, 2012; Desimone & Harms, 2017). The final sample size was 231 (M_{age} = 42.49, SD_{age} = 13.30, range = 18-83; 63.2% female). The ratio of the number of questionnaires per item was 10:1.

The survey was described as a study about anonymity in consumption contexts. After agreeing to participate, participants indicated their level of agreement or disagreement with the

set of 22 items on a seven-point Likert scale (1 = Strongly Disagree, 7 = Strongly Agree). Then, participants completed demographics items and were thanked for their participation.

2.3.2.1.2. Results and discussion

Exploratory factor analysis was conducted by SPSS v.26. We used Principal Component Analysis and Varimax Rotation to extract factors that have Eigenvalues of at least one (Kaiser, 1960), with an additional criterion that each factor should contain at least three items. The following retention criteria were used for individual items: each item must (1) load on its primary factor at .60 or greater, (2) not cross-load on any other factor at .40 or greater, and (3) have a corrected item-to-total correlation of .40 or greater (Reich, Beck, & Price, 2018, p. 853).

The KMO value was .836 and Bartlett's Test of Sphericity was significant ($p < .001$), suggesting that the sample size was suitable for factor analysis. Four factors with high reliability were retained and explained 65.629% of the variance in the items. The first factor included all five items of freedom ($\alpha = .891$). The second comprised all four items of ease ($\alpha = .832$). The third factor consisted of all four items of norm ($\alpha = .815$), and the fourth factor was composed of three items of independence and one item of security ($\alpha = .707$). As a result, we named the four factors as freedom, ease, norm, and independence respectively. Table 2.1 shows the final items and their descriptive statistics.

Table 2.1: Exploratory Factor Analysis Results.

	Factor Loadings	**Corrected Item-Total Correlation**	**Eigenvalues**	**Variance Explained (%)**	**CR**	**AVE**
Factor 1: Freedom (α = .891)			**5.193**	**30.544**	**.902**	**.651**
If I am anonymous, I think I can purchase a wider variety of products and services.	.898	.860				
As a consumer, I feel like I have more options when I am anonymous.	.857	.812				
Anonymity gives me more courage to try new products.	.855	.769				

If people around me do not know who I am, I feel free to purchase whatever I want.	.712	.594				
I can freely purchase and consume sensitive products when I am anonymous.	.692	.648				
Factor 2: Ease (α = .832)			**2.668**	**15.693**	**.885**	**.659**
Companies help consumers to easily conceal their identity.	.863	.743				
It is easy to be anonymous as a consumer.	.846	.715				
I can easily purchase something without disclosing my identity.	.806	.647				
Technology makes it easier for consumers to be anonymous.	.726	.560				
Factor 3: Norm (α = .815)			**2.151**	**12.652**	**.859**	**.604**
I think every consumer prefers anonymity.	.841	.687				
Consumers expect to be anonymous when they make their purchases.	.773	.600				
When purchasing products, consumers generally do not want to reveal their identity.	.767	.665				
Anonymity is necessary when consumers are purchasing something.	.724	.590				
Factor 4: Independence (α = .707)			**1.146**	**6.740**	**.774**	**.461**
Anonymous consumption helps me to separate my private life from my public life.	.698	.556				
When I do not want my friends and my family to know what I buy, I buy it anonymously.	.689	.542				
I feel anxious if someone can link my purchases to my identity.	.679	.433				
People might judge me when I do not buy my products anonymously.	.650	.450				
Total Variance Explained				**65.629**		

Convergent and discriminant validity of each factor were further evaluated. A factor has a good discriminant validity when its average variance extracted (AVE) is greater than the square of the correlation coefficient between that factor and another factor (Fornell & Larcker, 1981). Table 2.2 shows that this criterion was satisfied for all four factors. Convergent validity is satisfied if factor loading ≥ 0.5, AVE ≥ 0.5, and construct validity (CR) ≥ 0.7 (Fornell & Larcker, 198; Hair et al., 2009). The factor independence did not satisfy the AVE criterion (AVE = .461). However, we refrained from mechanically deleting any item in this factor just to increase AVE for the following reasons.

From our proposed definition, independence indicates how people strategically choose anonymity because it reduces social influence. While freedom displays the range of choice facilitated by anonymity, independence focuses on the nature of anonymous consumption. As a result, independence items should reflect the emotional consequences of adopting anonymity. Four items in this factor display different characteristics of anonymous consumption. Their factor loadings (each ≥ .650), corrected item-to-total correlation (each ≥ .433), and construct validity (CR = .774) were highly satisfactory, and deleting any of the four items would reduce Cronbach's Alpha. Consequently, we decided to keep all four items for the independence factor.

Our results showed that the security factor was excluded with only one item left in the independence factor. This may strengthen our conceptualization that since it is a component of strategic anonymity, independence portrays how consumers change the nature of their choices when they are free from social influence, and such choices inherently embody consumer emotional reactions.

Table 2.2: Correlation matrix of the four factors.

Dimensions	Freedom	Ease	Norm	Independence
Freedom	.807	.158*	.267**	.506**
Ease	.158*	.812	.187**	.089
Norm	.267**	.187**	.777	.394**
Independence	.506**	.089	.394**	.679

Note: Diagonal values are the square root of AVE for each dimension.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

2.3.2.2. Confirmatory Factor Analysis (CFA) and model comparison

We used Mplus v. 7.4 to conduct CFA for the 17 items of the 231 participants. Our model of the two second-order factors, each of which included two first-order factors, demonstrated an overall goodness of fit: χ^2 = 255.759, df = 115, p < .001, CFI = 0.923, TLI = 0.909, RMSEA = 0.073, SRMR = 0.066 (Hu, & Bentler, 1999). The alternative model consists of four correlated factors. This competing model also demonstrated the goodness of fit: χ^2 = 254.127, df = 113, p < .001, CFI = 0.923, TLI = 0.907, RMSEA = 0.074, SRMR = 0.064. Since both models showed similar fit indices, we relied on our conceptualization to decide.

One argument for the competing model is that the factors that we propose seem disparate. The merit of this argument is enhanced by the fact that consumers may have different attitudes towards anonymity, and these attitudes may be correlated but unnecessarily be subsumed under the same categories. Yet, the purposes of being anonymous can either be intentional (i.e., consciously seeking) or motivational (i.e., situationally induced). Consumers may actively pursue anonymity because it promotes beneficial outcomes and prevents harmful consequences; that is, anonymity is driven by conscious goals. In other contexts, anonymity is not the result of a conscious choice; rather, it is easy to obtain (e.g., online chat) or is an integral part of a process (e.g., voting), meaning anonymity is driven by situational factors.

In consequence, we keep our model of the two second-order factors. Further, we assert that our model fit is equivalent to the four correlated factors model. Figure 2.1 displays structural equation modelling diagram of all factors of the anonymity scale.

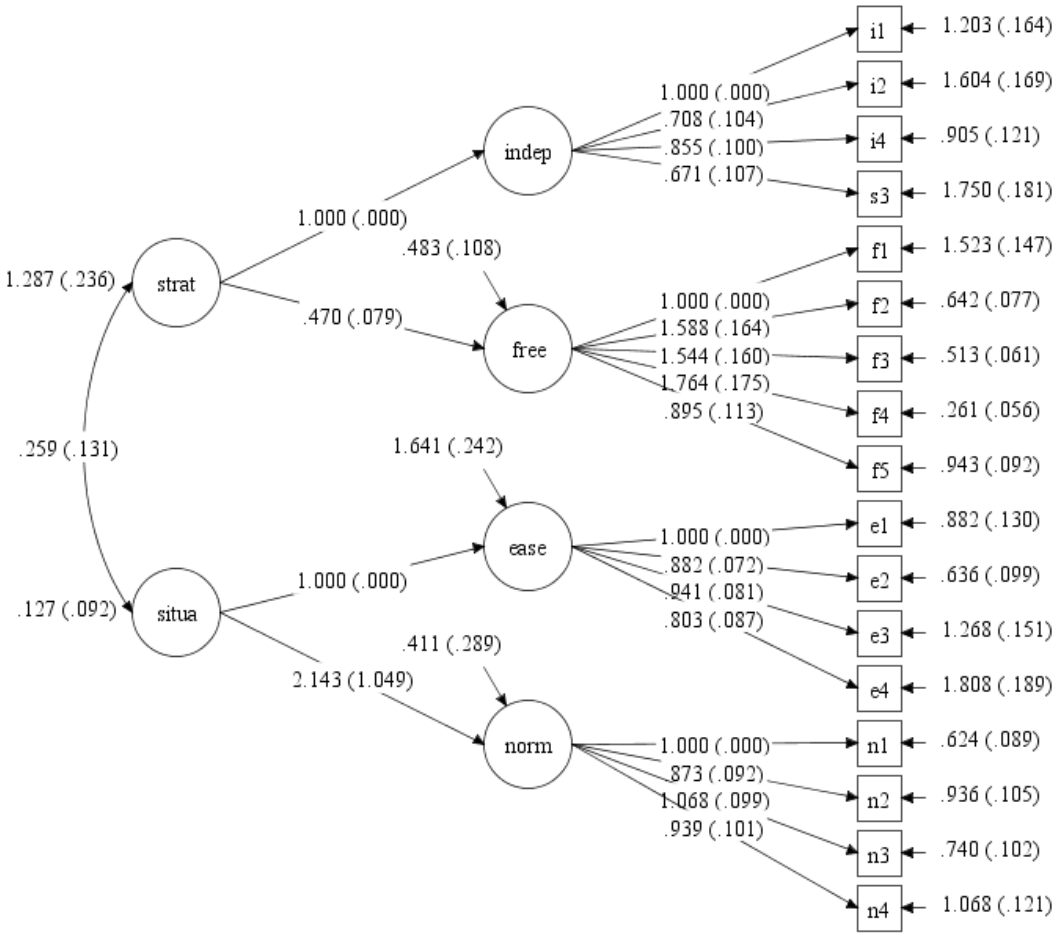


Figure 2.1: Structural Equation Modelling Diagram of the Anonymity Scale.

2.3.3. Study 3: Test-retest reliability

A concern about attitude scales, especially attitudes towards anonymity, is that such attitudes can be fleeting and not replicable for the same population. Also, for a subscale that can be susceptible to specific circumstances, ease of anonymity may fluctuate across populations and, even within the same individual, across different time and contexts. To attenuate this concern about consistency, we conducted a test-rest reliability.

2.3.3.1. Participants and procedure

We sent the same survey of 22 items to the 231 participants from the original study (with the same monetary compensation). The retest was conducted 8 days after the original test, and the

survey was available for 3 days. In the message to these participants, we emphasized that there was no right or wrong answer, and that we simply wished to know their opinions when they joined the survey this second time. One hundred and forty-five Prolific participants (62.77% of the original sample size) participated in the survey again (M_{age} = 44.52, SD_{age} = 13.12, range = 20-83; 60% female).

2.3.3.2. Results and discussion

Test-retest reliability scores were obtained for the final 17 items. We used Pearson correlation analysis for each factor. The correlation before and after retest was significant for freedom (r = .727, p < .001), ease (r = .665, p < .001), norm (r = .628, p < .001), and independence (r = .696, p < .001). Also, the internal consistency reliability was satisfactory for all factors ($\alpha_{Freedom}$ = .903, α_{Ease} = .821, α_{Norm} = .840, $\alpha_{Independence}$ = .776). The strong correlations and reliability of the retest findings substantiated the credibility of our scale's values.

2.3.4. Study 4: Relationship with Need for Privacy

A perusal of extant literature may give the impression that anonymity is simply a product of privacy (Peddersen, 1997). While we do not deny that in some contexts, anonymity is employed for the purpose of information control, incorporating anonymity as a component of privacy inadvertently narrows the construct, obscuring our insight. Our scale is the first step arguing for a more comprehensive evaluation of consumer attitudes towards anonymity. If our assumptions are correct (i.e., that anonymity and privacy are distinct constructs), a higher need for privacy does not necessarily transfer to more positive attitudes towards anonymity. We tested this claim in the current study.

2.3.4.1. Participants and procedure

Three hundred Prolific participants joined the survey for monetary compensation (M_{age} = 41.95, SD_{age} = 12.73, range = 18-76; 57% female). The study was introduced as a survey about anonymity and privacy. Participants indicated their level of agreement with 17 items of anonymity and 12 items of the need for privacy (Trepte, & Masur, 2017), which consisted of three subscales: informational privacy, physical privacy, and interactional privacy. We chose Trepte and Masur (2017)'s privacy scale because of its comprehensive components (i.e., the scale is not restricted to online contexts, similar to our anonymity scale). The ratio of the number of questionnaires per item was 10:1. Half of the participants answered the anonymity scale first and the other half responded to the privacy scale first.

2.3.4.2. Results and discussion

Since it was necessary to examine which aspects of attitudes towards anonymity were related to privacy, we conducted Pearson correlations between all factors in the survey. Table 2.3 shows the correlations of anonymity and the need for privacy subscales.

Of the four anonymity factors, freedom (α = .899) and independence (α = .792) were significantly correlated with informational (α = .732), physical (α = .727), and interactional privacy (α = .757; *ps* < .001). The positive correlations ranged from low (*r* = .190) to moderate (*r* = .407). Ease of anonymity (α = .808) was not correlated with any dimension of the need for privacy, whereas norm (α = .875) was positively related to informational and interactional privacy (*r* = .280 and *r* = .221 respectively, *ps* < .001).

Table 2.3: Correlation matrix of Consumer Attitudes towards Anonymity and Need for Privacy.

Factors	Free	Ease	Norm	Indep	InfoP	PhysiP	InterP
Free	1	.146*	.365**	.564**	.272**	.198**	.267**
Ease	.146*	1	.206**	.107	-.043	.075	.099
Norm	.365**	.206**	1	.537**	.280**	.080	.221**
Indep	.564**	.107	.537**	1	.407**	.190**	.327**
InfoP	.272**	-.043	.280**	.407**	1	.365**	.357**
PhysiP	.198**	.075	.080	.190**	.365**	1	.447**
InterP	.267**	.099	.221**	.327**	.357**	.447**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The results support our claim that a higher need for privacy is not necessarily equivalent to having more favourable attitudes towards anonymity. Also, there were distinct effects for the two dimensions. For individual-centric anonymity where people strive for anonymity, the need for privacy was more positively related to consumer attitudes towards anonymity (freedom and independence). This relationship was stronger for informational and interactional privacy than physical privacy. This is sensible because, based on face validity of the items, physical privacy is about being left alone (private vs. public), while information privacy is about being not known (vs. known) and interactional privacy is about not sharing (vs. sharing) personal information. By contrast, for situation-centric anonymity, ease of anonymity was irrelevant to such a need for privacy, while norm had a weak correlation. In sum, the results confirmed the differential effects of our proposed anonymity dimensions.

2.3.5. Study 5: A nomological network with other constructs

To validate our scale further, we evaluated attitudes towards anonymity with other consumer characteristics. To guarantee that we have a good ratio of the number of questionnaires per item, we tested the nomological validity in two studies.

In the first study (5A), we investigated the relationship between the focal construct and social anxiety (Peters et al., 2012) and privacy concern (Smith et al., 1996). Even though we did not have a specific hypothesis, we expected that for individual-centric anonymity, the relationship with these scales should be stronger than that for situation-centric anonymity. For instance, a socially anxious consumer or one with high privacy concerns may strategically attempt to achieve anonymity. The more likely she intends to use anonymity, the more favourable attitudes she may have towards it. This relationship might be less direct for ease and norm of anonymity.

In the second study (5B), we explored the relationship between the focal construct and need for influence, consumer susceptibility to interpersonal influence, and consumer need for uniqueness. The rationale behind examining these factors was due to their meaningful relationship to consumption behaviour, especially when the direction of the relationship could be interpreted in multiple ways. For example, a person with a high need for uniqueness may not prefer anonymity because before being considered unique, the person should be known (i.e., identified). Thus, a higher need for uniqueness implies a lower preference for being anonymous. However, if uniqueness is interpreted as being oneself by making unpopular choices (Tian, Bearden, & Hunter, 2001), an individual who has a high need for uniqueness may evaluate anonymity more favourably. Either direction may provide meaningful implications for future research.

2.3.5.1. Participants and procedure (5A)

Two hundred and fifty-four students participated in the study for course credits. Six participants failed the attention check and one failed the longstring screening technique (i.e., the participant chose the middle point for all items of anonymity). Remaining was a sample size of 247 (58.7% female) for further analyses.

Participants indicated their level of agreement with 17 items of anonymity, 12 items of social anxiety (Peters et al., 2012), and four items of the "collection" subscale of privacy concern (Smith et al., 1996). Also, participants indicated the six-item short form of social desirability scale (Ballard, Crino, & Rubenfeld, 1988). Then, participants answered demographics items and were thanked for their participation. The ratio of the number of questionnaires per item was more than 5:1. All factors within each construct were randomized.

2.3.5.2. Results and discussion (5A)

Table 2.4 illustrates significant positive relationships between freedom (α = .904) and social anxiety (α = .904, r = .152, p = .017) and privacy concern (α = .883, r = .232, p < .001), and between independence (α = .697) and the two constructs (r = .180 and r = .264 respectively, *ps* < .001). This meant that socially anxious and high privacy-concern consumers were more likely to agree with the benefits of anonymity, both quantitatively (freedom) and qualitatively (independence). To put it differently, these people may be more likely to use anonymity for those advantages.

Meanwhile, there was no clear relationship between ease (α = .708) and anxiety or privacy concern, whereas privacy concern was positively related to norm (α = .821, r = .240, p < .001). This implies that the more people are concerned about privacy, the more they think anonymity protection should be established as a standard. There was no social desirability response bias in the study (*ps* > .05).

Table 2.4: Correlation matrix of Consumer Attitudes towards Anonymity, Social Anxiety, Privacy Concern and Social Desirability.

Factors	Free	Ease	Norm	Indep	Anxiety	PConcern	SDesir
Free	1	.169**	.453**	.573**	.152*	.232**	-.029
Ease	.169**	1	-.025	-.003	.066	-.044	.019
Norm	.453**	-.025	1	.421**	.106	.240**	-.015
Indep	.573**	-.003	.421**	1	.180**	.264**	-.010
Anxiety	.152*	.066	.106	.180**	1	.076	.030
PConern	.232**	-.044	.240**	.264**	.076	1	-.122
SDesir	-.029	.019	-.015	-.010	.030	-.122	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

2.3.5.3. Participants and procedure (5B)

Two hundred and eighty-one Prolific participants joined the study for monetary compensation. Three failed the attention check and one failed the longstring screening technique (i.e., this participant indicated the same choice for 28 consecutive items at the low extreme anchor). The sample size of 277 (M_{age} = 39.81, SD_{age} = 12.597, range = 18-67; 57.8% female) was used for further analyses.

Participants indicated their level of agreement with 17 items of anonymity, nine items of need for influence (NFI; Bennett, 1988), 12 items of consumer susceptibility to interpersonal influence (CSII; Bearden, Netemeyer, & Teel, 1989), 12-item short version of consumer need for uniqueness (CNFU; Ruvio, Shoham, & Makovec Brenčič, 2008), and the same social desirability scale. Then, participants answered some demographics items and were thanked for their participation. The ratio of the number of questionnaires per item was around 5:1. All factors within each construct were randomized.

2.3.5.4. Results and discussion (5B)

The relationships between freedom and independence with NFI, CSII, and CNFU were significantly positive, ranging from $r = .218$ to $r = 373$ ($ps < .001$). The same relationship was observed for norm ($ps < .05$). Ease of anonymity was not significantly correlated with CNFU, but it had a positive relationship with NFI and CSII ($r = .119$ and $r = .153$ respectively, $ps < .05$). Table 2.5 shows the correlation matrix of all constructs. Social desirability was negatively related with freedom, independence, and CNFU ($r = -.177$, $r = -.136$, and $r = -.198$ respectively, $ps < .001$)

Table 2.5: Correlation matrix of Consumer Attitudes towards Anonymity, Need for Influence, Consumer Susceptibility to Interpersonal Influence, Consumer Need for Uniqueness, and Social Desirability.

Factors	Free	Ease	Norm	Indep	NFI	CSII	CNFU	SDesir
Free	1	.184**	.432**	.552**	.218**	.352**	.338**	-.177**
Ease	.184**	1	.169**	.217**	.119*	.153*	.105	.105
Norm	.432**	.169**	1	.497**	.143*	.277**	.280**	.041
Indep	.552**	.217**	.497**	1	.247**	.373**	.328**	-.136*
NFI	.218**	.119*	.143*	.247**	1	.318**	.218**	-.028
CSII	.352**	.153*	.277**	.373**	.318**	1	.116	-.009
CNFU	.338**	.105	.280**	.328**	.218**	.116	1	-.198**
SDesir	-.177**	.105	.041	-.136*	-.028	-.009	-.198**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The findings are intriguing. For instance, both those who had higher need for influence and those who were more susceptible to influence evaluated anonymity more positively. This suggests that regardless of a consumer's relationship to influence, he or she may favour

anonymity. This positive attitude increases when the context facilitates the adoption of anonymity (ease).

On the other hand, the higher the need for uniqueness, the more positive attitudes towards anonymity. This may imply that being unique does not necessary require that consumers have to be known. In fact, thanks to the opportunity to try new products (freedom) and the absence of social influence (independence), consumers can actualize their creative or unpopular choice and enjoy being themselves (Tian, Bearden, & Hunter, 2001). Because our survey was correlational in nature, we could not establish whether these individual characteristics would actually result in anonymity usage. This calls for further experimental research.

2.4. General discussion

Anonymity has been a common topic in communication literature (Christopherson, 2007), but under-researched in consumer behaviour. Little is known about how consumers adopt and react to anonymity, be it a strategic choice or a situational inducement. Further, the prevalence of the Internet and the emergence of diverse social media platforms both advance anonymity and obscure its understanding beyond the online environment. The current essay aims to bridge this gap and draw attention to the nature of anonymity adoption in consumption contexts.

The scale of consumer attitudes towards anonymity portrays its reliability, validity, and usefulness. The two dimensions (individual- and situation-centric anonymity) indicate how consumers think about anonymity when it is a conscious goal or a contextual outcome. Across six studies, we show that consumers perceived anonymity as a way to broaden their choice (i.e., freedom – breadth of anonymity), a tactic for breaking free from social influence (i.e., independence – depth of anonymity), an expected standard (i.e., norm), and a by-product of

technology advancement (i.e., ease). A total sample size of more than 1300 participants lent credence to our findings.

Concerning the theoretical foundation for the scale, the application of the theory of planned behaviour seems limited. The main reason is that the theory focuses on behavioural intentions and actual behaviour, whereas the current research, in the spirit of scale development, portrays a general nomological network which illustrates the validity of the subscales. Subsequent studies are encouraged to make use of the theory when examining the behavioural aspect of anonymity.

Despite the lack of an overarching theoretical framework, our studies make important contributions to the literature and managerial practices. As one of the first to conceptualize anonymity in consumer research, our combined studies provide a new lens from which anonymity can be viewed at an inter-disciplinary level. Specifically, moving away from simply serving as a feature of privacy, anonymity has become a strategic consumer decision used across contexts. Moreover, we showed that a stronger need for privacy was not always synonymous with a more positive attitude towards anonymity. This correlation may be more likely when anonymity is a conscious goal than when it is not. In other words, we argue that anonymity should no longer be thought of as an online tool for information control. Instead, it should be considered as a general coping mechanism utilized to achieve consumption goals.

Second, the distinct relationships between the two dimensions of anonymity and other individual differences provide many insights. On the one hand, they support our claim that different types of attitudes towards anonymity can be driven by different individual characteristics. On the other hand, the directions of the relationships are intriguing. For example, individuals with high need for influence evaluated anonymity more positively. This is counter-intuitive because power often comes from name and title. To be able to influence others, one should be identified. However, because of this very reason, it may be easier to

persuade others when the individual remains anonymous, especially when her identity holds less influence. This may be the case when the need for influence was both positively correlated with norm and ease, suggesting those possessing such need were familiar with using anonymity. Because the studies were exploratory in nature, further research is needed to reach decisive conclusions.

Third, the applicability of the scale in both online and offline contexts substantiates its appealing use in future studies. Synthesized from extant literature, the scale items capture the nature of anonymity and apply it to consumer decision-making process. The scale is comprehensive when it evaluates anonymity as both an individual purpose and a contextual incentive. Future studies may employ the scale across consumption situations such as medical donations, charity giving, or product and service purchases. For instance, some purchase decisions are more socially influenced than others. Hence, anonymity adoption may be more applicable. Also, consumers play different roles in a buying process (e.g., as an influencer, a buyer, or a user). We expect that consumer attitudes towards anonymity changes according to these roles. In addition, cultural differences are worth considering. Indeed, the norm and ease of anonymity should vary depending on the demographics or where anonymity is a plausible choice. Meanwhile, we anticipate that the strategic dimension could be more robust because it lies more in the vital need, rather than plausibility, of anonymity.

For managerial implications, marketing practitioners have a more lucid view of how consumers use anonymity. Anonymity can be tangible in terms of product package (Jones, Barney, & Farmer, 2018), or intangible in terms of identity such as secure payment methods. Recently, anonymous social media platforms have become a phenomenon (Gerhart, & Koohikamali, 2019). These applications highlight a very strategic and conscious choice of using anonymity. In fact, anonymity is the core value of these products and creates a whole

market of its own. Our scale may provide initial understanding of why and how anonymity is factored into the consumption of the products.

Moreover, marketing managers are aware that anonymity may not be initially sought after as our scales demonstrate (i.e., the situation-centric dimension). Instead, it can be made salient to achieve beneficial reactions. For example, in a crowdfunding project, naturally the amount that people donate may correlate with their altruism and impression management. Nonetheless, allowing people to donate anonymously may trigger the thought of "any penny counts", leading to a larger donation. Sharing is another segment where anonymity may be deployed (Bardhi, & Eckhardt, 2012). Per freedom and independence subscales, we suggest that anonymity may expand the variety of products people choose to share. Marketing practitioners may try to ease the process of using anonymity so that consumer mindset may shift from "sharing because I want" to "sharing because I can". This idea is especially appealing when consumers increasingly perceive anonymity as a norm.

2.5. Limitations and suggestions for future research

First, since we focus on legitimate consumption, our scale may not be readily applied to illicit contexts. Although strategic anonymity should be robust across situations, ease and norm of anonymity may not be relevant in the case of illicit behaviour. Rather, exploring the factors that delineate the psychological aspects of anonymity may be more insightful.

Second, our nomological network serves as an initial step to depict how anonymity is related to consumer characteristics. Because we used the survey method, the findings should be treated as exploratory rather than causal. The valence of the correlations (i.e., positive or negative) should be interpreted with care.

Third, experimental manipulation is a good alternative to evaluate how individual differences influence anonymity adoption. However, based on our previous research, we

interpret anonymity to be a highly contextual construct. Researchers who pursue causal explanations should first decide on the situations where anonymity does matter (i.e., consumers want to use anonymity in their purchase). Only at that time may other moderators be useful.

Lastly, in our scale, both dimensions are related to how consumers actively seek out or are encouraged to adopt anonymity. This means that consumers are anonymous sources themselves. There is much yet to learn about how consumers perceive anonymous others (Spears, & Lea, 1994). To the best of our knowledge, there is no scale which captures consumer attitudes towards anonymous sources. A pursuit of this line of research may be fruitful.

3. ANONYMITY IN EVERYDAY BEHAVIOUR – AN APPLICATION OF THE SCALE OF CONSUMER ATTITUDES TOWARDS ANONYMITY

3.1. Introduction

Prevalent as it may seem in communication literature (Postmes, Spears, Sakhel, & Groot, 2001), anonymity is rare in consumer behaviour research. On the one hand, the rapid growth in research on privacy concerns inadvertently obscures the understanding of anonymity, which is often perceived as an online tool for privacy protection even though privacy and anonymity are distinct (Smith, Dinev, & Xu, 2011). On the other hand, little is known about the psychological consequences of anonymity. In fact, since it is often regarded as a feature of technological advancement, few studies examine how consumers strategically pursue anonymity and how it is reflected in their decision process. To bridge this gap, in the current research, we use the scale of consumer attitudes towards anonymity to investigate anonymous consumption behaviour across online and offline contexts. Doing so, we make several theoretical and practical contributions.

First, we extend the nomological network of the anonymity scale by exploring its antecedents and consequences. Our results provide insights into what types of consumers are more likely to use anonymity, for what products, and why they do so. The findings facilitate a better understanding of the construct and position it more properly in consumer research.

Second, to the best of our knowledge, theory of anonymity in consumer research is scant. Also, in Essay 1, the application of the theory of planned behaviour was narrow. Consequently, in this essay, we use another theory to enrich our interpretation of the results, i.e., regulatory focus theory. However, since the explanatory power of each theory is limited, the diverse motivations for anonymity adoption require a unifying conceptual framework upon which categories of anonymous behaviour are built. Specifically, our research shows that

consumers utilize anonymity for various reasons, to the extent that one context may be anonymity-related to some individuals but not to others. More importantly, while online anonymous behaviour may bear some resemblance to privacy control, offline anonymous consumption is rather distinct, especially from secret consumption.

Third, across multiple survey designs and samples, the differential effects of the anonymity subscales strengthen their validity and reliability. Through ecologically valid scenarios, we establish meaningful correlations between attitudes towards anonymity and anonymous behaviour. This implies that anonymity is more pervasive in consumption than previously thought, evidently in its exhibitions in offline contexts.

The rest of the essay is as follows. First, we briefly describe the focal anonymity scale. Second, we discuss the theoretical foundation for our research and distinguish anonymity from its closely related constructs. Then, we present five studies to examine the instances of anonymity in consumption contexts. Last, we discuss the implications of our results and elaborate on their significant contributions to the literature and marketing practices.

3.2. Literature review

3.2.1. Consumer attitudes towards anonymity

Earlier, we developed a scale related to consumer attitudes towards anonymity. The scale has two dimensions: individual- and situation-centric. The individual-centric dimension refers to the conscious choice of consumers actively seeking anonymity because of its benefits. This dimension involves two further factors: freedom and independence. While freedom indicates that the consumption choices are no longer restricted, independence refers to the absence of influence imposed by social ties.

The situation-centric dimension involves the ease and norm of anonymity. In some cases, consumers may not initially strive for anonymity. Instead, when anonymity is made

convenient, consumers prefer to be anonymous. This reflects the ease with which consumers adopt anonymity. In addition, in contemporary society where privacy is an ongoing concern, we expect that there is a general expectation of protecting one's information and identity, hence a norm of anonymity.

The scale has demonstrated its reliability and validity across contexts and populations. In the current research, we will use this scale to examine anonymity in everyday consumption behaviour. Doing so, we endeavour to portray the differential effects of consumers' attitudes towards anonymity on their behaviour, extrapolating the significant influence of anonymity and strengthening the applicability of the scale.

3.2.2. Theoretical background for anonymity in consumer research

In Essay 1, we used the theory of planned behaviour to explain the effects of our anonymity subscales (Ajzen, 1991). Since this theory focuses on what factors drive behavioural intention, it does not clarify their concurrent effects. That is, using the theory, we may not readily answer why one factor has a significant influence on the behaviour while others simultaneously do not. Common criticisms towards the theory are that it does not account for other elements such as affect and emotions, habit and past experience, and the willingness to perform the behaviours in question (Ajzen, 2011). Considering that anonymity helps consumers to feel secure and comfortable (Marx, 1999; Christopherson, 2007), these limitations become significant.

Further, while the theory mentions the influence of perceived behavioural control, it fails to take into consideration the actual control over behaviour. This means that the subscale ease (and also norm) of anonymity tends to vary according to different individual (and cultural) factors, casting doubt on their predictive validity. To circumvent this hindrance in interpreting the findings, we shift the focus from the effects of each subscale to the anonymous behaviour per se by regarding anonymous consumption as a goal. In other words, we also apply the

regulatory focus theory (Higgins, 1987, 1997) to elaborate on the motivations to adopt anonymity.

Regulatory focus theory defines two types of goals: approach and avoidance. Individuals are said to have an approach goal when the end state of the goal pursuit process is positive and desired, whereas an avoidance goal refers to when the end state is negative and avoided. To achieve a desired end state (approach goal), individuals may maximize the presence or minimize the absence of positive outcomes. To avoid an undesired end state (avoidance goal), individuals may minimize the presence or maximize the absence of negative outcomes (Aaker, & Lee, 2001). By common sense, using anonymity helps to achieve an avoidance goal. However, it is interesting to investigate whether anonymity can also aid consumers to reach an approach goal. In previous research (Essay 1, Study 5B), we found that those who have higher need for influence and uniqueness have positive attitudes towards anonymity. These results indicate that using anonymity to maximize the presence of positive outcomes is plausible. Yet, using regulatory focus theory will assume anonymity adoption as a consumer strategy to reach a specific goal, while consumers may simply use anonymity because of its ease or because others do the same thing.

To sum up, as there is no established anonymity theory in consumer research, we take into consideration the two theories above when discussing the results. Since each of the theories has its own limitations, our discussion calls for a better overarching framework which may explain the applications of anonymity in the consumer behaviour domain. In the next part, we elaborate on what exactly anonymous consumption is.

3.2.3. Anonymity and other related constructs

Before investigating the indicators of anonymous behaviour, we find it necessary to distinguish between anonymity and its related constructs. Particularly, we attempt to clarify what

anonymous consumption behaviour is and what it is not. One of the most common constructs that is often regarded as an umbrella for anonymity is privacy.

Privacy is a multidimensional construct and has no single definition across disciplines. Still, it is generally considered as the control of or the ability to control information (Smith et al., 2011). Meanwhile, anonymity refers to the characteristic of the source (Anonymous, 1998) or the inability to identify the origin of the message (Pinsonneault & Heppel, 1997). We speculate that this relationship of a means (i.e., being anonymous) to an end (i.e., controlling information) has incidentally narrowed the construct anonymity to nothing but a tool for privacy protection. The outburst of online platforms may deepen this misconception. By applying our anonymity scale, we hope to lift the "online label" of anonymity and apply the construct to a broader context.

When anonymity is inspected in offline consumption, it is important to differentiate between anonymity and secrecy. Secrecy is defined as intentional concealment of information, typically achieved by the sharing of potentially inaccurate information (Zwick & Dholakia, 2004). Thus, secret consumption is "consumption of a product with the intent of hiding the consumption from others" (Rodas & John, 2019, p. 2). At first sight, both anonymity and secrecy seem to serve the same purpose of hiding something. Upon a closer look, however, secrecy is an act of deception by omitting information (Wegner, Lane, & Dimitri, 1994), whereas anonymity is the extent to which the identity of the source cannot be traced.

For example, a worker may pour alcohol into a dark-coloured water bottle and consume it at his workplace while his colleagues are nearby (Rodas & John, 2019, p. 2). This is secrecy since it hides the consumption from others, and the consumption is not private. At the same time, this is not anonymity because his colleagues may know that the bottle belongs to the worker. That is, during the consumption from the bottle, be it alcohol or not, the source of the consumption (i.e., the identity of the bottle owner) can be traced to the worker (no anonymity)

even though the worker can successfully hide his consumption (secrecy). Actually, if the identity of the consumer cannot be traced, the worker does not even need to hide his consumption (e.g., he can freely drink alcohol in public places where he is anonymous to others).

Moreover, since anonymous consumption severs the link between the consumption and its source identity, this may lead to the misperception that anonymous consumption is equivalent to neutralizing consumer status, the definition of inconspicuous consumption (Ordabayeva & Chandon, 2011). In reality, anonymous and inconspicuous consumption are distinct. Particularly, consumption which is not meant for social competition and status signalling (e.g., showy display) is considered inconspicuous (Rucker & Galinsky, 2009). Inconspicuous purchases are often nonvisible, small, and unnoticeable. Still, even if a purchase is inconspicuous, it does not mean that one's identity cannot be traced from the purchase. Vice versa, when the source of the consumption is unidentifiable, it does not necessarily mean that the consumption is not meant for social competition. Plainly, while anonymous consumption focuses on the characteristic of the source, inconspicuous consumption refers to the nature of the consumption itself.

In extant literature, based on Zwick and Dholakia' s (2004) conceptualization of identity management, Smith et al. (2011) used two dimensions (i.e., the amount of personal information externalized and the accuracy of that information) to portray how various constructs are related to the digital representation of an individual (p. 996-997). The authors showed that anonymity (high amount and low accuracy), secrecy (low amount and low accuracy), transparency (high amount and high accuracy), and confidentiality (low amount and high accuracy) are all different from privacy. Since the framework is applied mainly in information privacy, it is limited to the online domain and not readily applicable to (offline) consumption contexts. Consequently, the current research aims to position anonymity as a construct with significant

psychological implications in the consumer behaviour domain. Next, we conduct and present our exploratory studies.

Table 3.1: Anonymity and other related constructs

Construct	Definition	References
Anonymity	a characteristic of the source, from fully anonymous to fully identified	Anonymous (1998)
	the inability to identify the origin of messages, either present or absent	Pinsonneault and Heppel (1997)
	not about "namelessness", but about the "non-coordinatability of traits in a given respect"	Lapidot-Lefler and Barak (2012); Wallace (1999)
	the extent to which a consumer's consumption behaviour is unlinkable or untraceable back to his or her identity	Our proposed definition
Privacy	the control of or the ability to control information	Smith et al. (2011)
Secrecy	intentional concealment of information, typically achieved by the sharing of potentially inaccurate information	Zwick and Dholakia (2004)
Transparency	the amount of externalized information and its accuracy are high	Smith et al. (2011)
Confidentiality	the amount of externalized information is low but its accuracy is high	Smith et al. (2011)
In consumption contexts		
Anonymous consumption	consumption of a product where the identity of the consumer cannot be linked or traced through the consumption	Our proposed definition
Secret consumption	consumption of a product with the intent of hiding the consumption from others	Rodas and John (2019)
Private consumption	consumption of a product where the consumer is alone	Ratner and Kahn (2002)
(In)conspicuous consumption	consumption with(out) the intention of gaining social status through social competition	Ordabayeva and Chandon (2011)

3.3. Methodology

3.3.1. Study 1: Types of purchase and reasons for anonymity adoption

An immediate question for consumer research in anonymity is what type of products for which consumers adopt anonymity and why they do so. One popular product classification in the literature is that of material and experiential purchases.

Van Boven and Gilovich (2003) was among the first to distinguish between material and experiential purchases (Gilovich, Kumar, & Jampol, 2015, p. 152). They defined a material purchase as "spending money with the primary intention of acquiring a material possession - a tangible object that you obtain and keep in your possession", and experiential purchase as

"spending money with the primary intention of acquiring a life experience - an event or series of events that you personally encounter or live through" (p. 1194). Categorized as they are, it is obvious that some purchases can be both material (e.g., having a bicycle) and experiential (e.g., riding a bicycle). Also, the difference between material and experiential is somewhat similar to that between utilitarian (e.g., buying a bicycle because of its practical function) and hedonic (e.g., riding a bicycle gives joy and fun), though some search successfully discriminated between the two (Dai, Chan, & Mogilner, 2019, p. 1067). In this study, we use both classifications (material/experiential and hedonic/utilitarian) to determine whether anonymity adoption is a function of purchase type.

3.3.1.1. Participants and procedure

Two hundred and nineteen students joined the study for course credits (57.1% female). Participants read the following introduction of the study: "*Consumers often adopt anonymity in their purchase or consumption. For example, consumers can purchase something (e.g., a product or service) anonymously, provide an anonymous review after their purchase, or consume what they purchase in an anonymous way.*" Then, participants were asked to name five purchases that a consumer may want to adopt anonymity and briefly explain why for each purchase.

After each example, participants read the definition of material (/hedonic) and experiential (/utilitarian) purchases, and indicated the extent to which they thought that their given example was material (/hedonic) or experiential (/utilitarian) on 9-point Likert scale (1 = Primarily material (/hedonic), 5 = Equally material (/hedonic) and experiential (/utilitarian), 9 = Primarily experiential (/utilitarian); Dai, Chan, & Mogilner, 2019; see Appendix for further details). After that, participants filled the demographics items and were thanked for their participation.

3.3.1.2. Results

We identified a variety of products that participants thought consumers would use anonymity for. Some sensitive products were condom, undergarments, and sex toys, with reason that these were sexual and private. Some health-related products were medication (personal use, vulnerability), sanitary napkin (embarrassment), and menstrual cup (taboo). Products which involved in legality were also mentioned (e.g., gun and drug). However, there were other seemingly "neutral" products such as car (price), house (security), ring and shoes (private/personal use). Interestingly, there were products that appeared unrelated to the need for anonymity (if without a reasonable motivation) such as flower (to surprise someone) or book (being judged by what you read). Furthermore, not only anonymity adoption served the purpose of prevention and protection (e.g., avoid social judgment, security for identity), it also promoted accomplishment and pleasure (e.g., actualize uncommon hobbies, buying second-hand products).

Some participants failed to provide the full five examples. Hence, the total indicated purchases were 1083. Many purchases overlapped and since a purchase can be on a continuum from material (/hedonic) to experiential (/utilitarian), it is reasonable to treat 1083 purchases as separate. Thus, we conducted one-sample t test for all of these examples. We found that on average, the purchases for which participants thought consumers may adopt anonymity were more material than experiential (M = 4.44, SD = 2.91, $t(1082) = -6.31$, $p < .001$), and those purchases were not statistically different in terms of hedonic and utilitarian attribute (M = 5.05, SD = 2.99, $t(1082) = .53$, $p > .05$).

3.3.1.3. Discussion

Applying the regulatory focus theory (Higgins, 1997), we discovered that although most reasons of using anonymity were to reach avoidance goals (avoid negative outcomes), the

consumers did also use it to fulfil approach goals (maximize positive outcomes). Nonetheless, a more interesting observation is that some instances of using anonymity could serve dual purposes. Take buying flowers for someone as an example. A consumer wants to buy a gift flower for his girlfriend. If she knows that the flower is from him, the gift value might seem to "diminish" because it is common for a girlfriend to expect such a gift from her boyfriend. To avoid this "displeasure", the consumer may want to send the flower anonymously (avoidance goal). However, if the consumer does not care about the value of the gift (e.g., he may buy any gift), but focuses on the happy feeling when his girlfriend receives it and when she later discovers that the gift is from him (e.g., a surprise for their anniversary and the fact that he remembers it), the consumer will actively seek anonymity to ensure the desired effects.

Conceptually, the distinction between the two goal approaches matters. Specifically, if there is a fit between the way in which consumers engage in an activity and their motivation to sustain that activity, they will involve themselves more in what they are doing and "feel right" about it (Higgins, 2005). For the flower example above, to increase the pleasure of surprise, the boyfriend may go to great lengths by using an anonymous gift service. He may feel that all the preparations are worth it even though the service can be expensive. In contrast, if the purpose is simply to not reveal the name, a trip to the post-office is a convenient solution.

Concerning the product type, the significance of the material and experiential classification and the insignificance of hedonic and utilitarian category support that the two purchase types are distinctive. However, even though our large sample size showed that consumers may adopt anonymity more for material than experiential purchases, we would interpret this result with care based on the following considerations.

First, except for some rare cases such as a purchase to fulfil "fantasy" (where the material/experiential rating was nine), most examples in our study appeared to be material in nature. In fact, when we referred to common experiential purchases in the literature (Dai, Chan,

& Mogilner, 2019, Web appendix A: pilot study), we found that the purchases in our study were difficult to be classified as experiential. Second, in the survey, the concept of anonymity in the introduction did not clarify what anonymity exactly meant. Hence, one may argue that the given examples were not unique for anonymity but could also be applied to secret or private consumption. Indeed, a perusal of the justifications that participants provided for their purchases may confirm this suspicion. Last, the survey questions asked what participants thought consumers in general would do. The responses may be more precise if we include participants themselves as agents for anonymous behaviour. The next study will resolve these issues.

3.3.2. Study 2: Individual characteristics and anonymous consumption behaviour

When a consumer is anonymous, her consumption behaviour cannot be linked to her identity. At that time, we expect that the behaviour should reflect more of what she truly wants or at least, what she normally would do if she were free of others' influence. Accordingly, a direct consequence of being anonymous is feeling autonomous. To put it differently, the anonymous behaviour of a consumer, to a large extent, should be congruent with her own values and interests, the definition of autonomy (Weinstein, Przybylski, & Ryan, 2012). In our anonymity scale, the independence factor portrays this notion.

By the same reasoning, it is expected that those who are high in trait autonomy should favour anonymity more. In particular, be it strategically or situationally motivated, anonymity helps consumers to regulate their behaviour which represents their desired values and feelings. The more a consumer is autonomous, the more she may find that anonymity is beneficial, resulting in positive attitudes towards it.

As a result, in the first part of the current study, we examine the relationship between trait autonomy and the four subscales of anonymity. In the second part, considering the

limitations in Study 1, we investigate the behavioural indicators of anonymous consumption and when anonymity is not appropriate for consumers.

3.3.2.1. Participants and procedure

Two hundred and twenty-two students joined the survey for course credits. Four participants failed the attention check. The final sample size for further analyses was 218 (57.8% female). In the first part of the survey, participants indicated the four subscales of consumer attitudes towards anonymity. Then, they indicated the 5-item self-congruence subscale of trait autonomy because of its conceptual relevance (Weinstein, Przybylski, & Ryan, 2012). Next, participants were told to think about anonymity in their own consumption behaviour in the past few months and filled in the three items of anonymity sensitivity (e.g., "*You care about anonymity in your purchasing decision*" (1 = I do not care at all, 7 = I care very much).

Anonymity sensitivity is an important construct because in our context, it can serve as a boundary condition since consumer attitudes towards anonymity are valid only if anonymity is related to the consumption process. When attitudes towards anonymity are the DVs, anonymity sensitivity becomes a significant predictor, meaning controlling for this construct may lead to insignificant effects. Hence, it is advisable to treat anonymity sensitivity in the current study as a moderator. Conceptually, a moderator can play the role of an IV (and anonymity sensitivity itself is an IV). Practically, examining different levels of anonymity sensitivity (i.e., high vs. low) can provide meaningful results. As such, we use anonymity sensitivity as a moderator in the current study.

In the second part, participants were asked two open-ended questions. In the first question, they were introduced to our definition of anonymity and asked to explain how they or other consumers make the consumption behaviour unlinkable/untraceable back to the identity. The second question asked when anonymity is not appropriate for consumers to adopt.

For both questions, participants were asked to be specific in their example (for details of instructions and items, see Appendix). After that, they indicated demographic items and were thanked for their participation.

3.3.2.2. Results

Using Model 1 PROCESS (Hayes, 2017) with 95% confidence interval and 5,000 bootstrap samples, we regressed trait autonomy and anonymity sensitivity on each anonymity subscale. There was neither main effect of trait autonomy (α = .810) nor its interaction with anonymity sensitivity (α = .907) on freedom (α = .899, CI_{main} [-.37, .66], $CI_{interact}$ [-.07, .18], *ps* > .05), ease (α = .731, CI_{main} [-.55, .78], $CI_{interact}$ [-.16, .17], *ps* > .05), and independence (α = .684, CI_{main} [-.63, .32], $CI_{interact}$ [-.02, .21], *ps* > .05); all CIs included zero.

However, there was a significant interaction on norm (α = .791; $\beta_{interact}$ =.17, $SE_{interact}$ = .05, *p* = .001, $CI_{interact}$ [.07, .27]). Particularly, when participants were not sensitive to anonymity (1SD below the mean), the effect of trait autonomy on norm was not significant (β =.03, SE = .11, *p* > .05, CI [-.20, .25]). Yet, the more participants were sensitive to anonymity (1SD above the mean), the more trait autonomy positively influenced norm (β =.54, SE = .12, *p* < .001, CI [.31, .78]). The results were sensible because if anonymity did not matter in the consumption process, there should be no difference in attitudes towards it between high (vs. low) autonomous consumers. When anonymity was important, high autonomous individuals thought that anonymity was more necessary and that other consumers were more likely to prefer it (note that when anonymity sensitivity was high, both high and low autonomy displayed higher norm of anonymity, but the increase in norm for high autonomy was more than that for low autonomy). Theoretically, the findings imply that when individuals who care more about doing things that are congruent with their values have the chance to become anonymous, they tend to agree that other people should also be anonymous (i.e., norm), even if they may have

no predetermined attitudes towards anonymity or regardless of whether anonymity is easy to adopt. Figure 3.1 shows the interaction between trait autonomy (self-congruence) and anonymity sensitivity on norm:

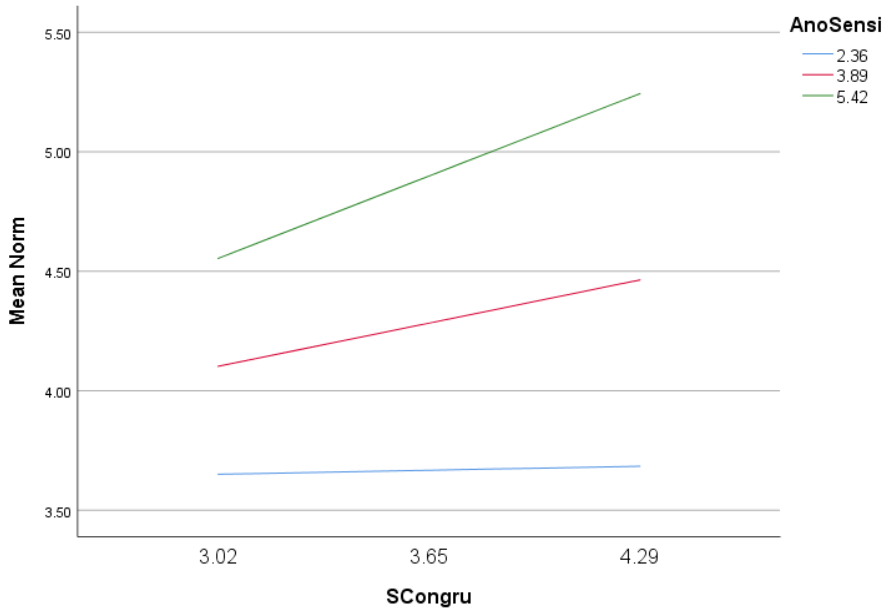


Figure 3.1: Interaction effect between trait autonomy (self-congruence) and anonymity sensitivity on norm of anonymity.

For the second part of the survey, we classified the responses into online and offline contexts. Examples of online anonymous behaviour were buying products with virtual currency, not revealing personal information, using VPN and proxy for security protection, and using virtual credit card. Examples of offline anonymous behaviour were using cash, buying products in person/alone, shopping at a distant store from home, and using a friend's payment card. Below are the categorized responses from the participants:

Table 3.2: Examples of how consumers adopt anonymity in consumption contexts.

Offline (physical) shopping	Online (virtual) shopping
Cash	Buy products with virtual/(e-)currency (cryptocurrency, bitcoins) Use blockchain system or virtual credit card
Purchase in-person/ Shop alone	Use fake (/Do not) use personal information (name, nickname, email) Do not reveal name on review
Shop at a new store/ at a distant store from home/ at different stores	Use VPN. Browse in private mode. Use proxy to fake IP address Turn off cookies, delete search history
Use anonymous package (no brand/shop/ product name on the package). Use non-transparent bag	Do not create/register shopping account (i.e., "purchasing without having account")
Either pay on delivery but do not specify home/private address (use nearby/public address), or do not choose “home delivery” (use "come and take” option)	Do not purchase something that requires too much personal info
Dispose the receipt/invoice	Use a friend's payment card
Ask someone else to buy their product for them	
Using intermediary party (e.g., iyzico)	

Circumstances when anonymity is not appropriate for consumers to adopt were health-related consumption (e.g., prescribed medicine), purchases that involve high public safety (e.g., gun, flight tickets), high-involvement purchase (e.g., car, house), consumption process that demands face-to-face interaction (e.g., professional consultation), customized/ user-specific products (e.g., private clothing), purchases which involve as legal proof, luxury goods (i.e., to display high status image), participation in promotion campaigns, insurance, reselling (high-priced) products, and renting (e.g., car, housing).

3.3.2.3. Discussion

A question arises as to why the other subscales of anonymity failed to have any effect (i.e., there was only an effect on norm of anonymity). One possible reason is that since freedom and independence reflect the conscious choice of using anonymity for its benefits, higher autonomy does not necessarily lead to higher agreement that using anonymity will provide *those* benefits, but should simply motivate people to utilize anonymity. For example, consider the item of freedom ("*If I am anonymous, I think I can purchase a wider variety of products and services*") and that of independence ("*Anonymous consumption helps me to separate my private life from my public life*"). A person who is high in autonomy does not necessarily agree that she can purchase a wider variety of products if she is anonymous, or that even if she consumes her products anonymously, it does not mean that she does so because anonymity helps to separate her private and public life.

In contrast, the significant effect on norm was more understandable since higher autonomy should increase favourable attitudes towards anonymity, reflected firstly in the way how the consumer thinks that others (including herself) should use anonymity. Also, it is sensible that ease of anonymity, albeit a situational factor, should not have any effect because there is no compelling reason to expect that just because a consumer has higher autonomy means that she will find anonymity easier to adopt. Thus, these findings lend more credibility to our scale in that the same individual characteristic can lead to different attitudes towards anonymity, which may in turn lead to different actual anonymous behaviour.

For the open-ended questions, with a clear definition, the responses appeared to be more anonymity-related. Besides, from both Study 1 and 2, it is inferable that to examine anonymity, whether it is applicable to consumption or not, we should try to understand the reasons behind the anonymous behaviour rather than the behaviour itself. For instance, in the case of a high-involvement purchase such as a car. If the purpose is to display wealth status, anonymity is

clearly avoided. However, if the purpose is not about impression management but about personal security (e.g., the owner may not want others to know that the car belongs to her because they may think she is rich and have bad intentions), anonymity becomes more advantageous. In the next study, to broaden the nomological network of the anonymity scale, we evaluate how cultural factors impact consumer attitudes towards anonymity.

3.3.3. Study 3: Cultural factors and anonymity adoption

There is some evidence of cultural influence on anonymity in the literature. For instance, Morio and Buchholz (2007) found that people in Western cultures (e.g., America) favoured online communities which offered lower level of anonymity, whereas those in Eastern cultures (e.g., Japan) leant towards online communities which offered higher level of anonymity. The reason is that Western individuals are independent and prefer uniqueness. They want to stand out and be identified. In contrast, Eastern individuals are community-driven. They want to affiliate with others, making personal identity less salient to enhance the unity of their social groups. Indeed, Kang et al. (2013) also found that the relational benefits of anonymity mattered more for Eastern members (i.e., 92% of the interviewees who considered anonymity as a way to protect real-life relationships were from Eastern countries). These findings may suggest that those who see themselves as part of a community (i.e., Easterners) may have a more favourable attitude towards anonymity than those who see themselves as independent (i.e., Westerners)

In this study, we use the construct self-construal to capture the cultural effect on anonymity. Independent self-construals view themselves as autonomous and separate from social contexts, whereas interdependent self-construals view themselves as intricately connected and integrated with others in their social groups (Markus & Kitayama, 1991). Although the construct was originally developed in cross-cultural contexts (i.e., individualistic consumers are independent self-construal and collectivistic ones are interdependent self-

construal), research has extended this construct to examine differences between people within each culture (Cross & Madson, 1997; Lalwani, & Shavitt, 2013). As a result, self-construal is a reliable proxy to capture the cultural influence on anonymity.

3.3.3.1. Participants and procedure

Two hundred students joined the study for course credits (56.19% female). Four students failed the attention check, and two students failed the longstring screening technique (i.e., the first student indicated the middle option for 47 consecutive items and the second student indicated the high extreme point for 18 consecutive items; Meade, & Craig, 2012; Desimone & Harms, 2017). The sample size of 194 was used for further analyses. The procedure of the current study was exactly the same as that in Study 2, except that we replaced the construct trait autonomy with the 30-item self-construal scale (Singelis, 1994).

3.3.3.2. Results

Using Model 1 PROCESS (Hayes, 2017) with 95% confidence interval and 5,000 bootstrap samples, we regressed self-construal and anonymity sensitivity on the four subscales of anonymity.

There was neither main effect of self-construal ($\alpha_{independent}$ = .757, $\alpha_{interdependent}$ = .753) nor its interaction with anonymity sensitivity (α = .884) on freedom (α = .911, CI_{main} [-.99, .07], $CI_{interact}$ [-.07, .21], *ps* > .05) and ease (α = .686, CI_{main} [-.78, .42], $CI_{interact}$ [-.13, .19], *ps* > .05). Even though there was no interaction on independence either (α = .705, $CI_{interact}$ [-.03, .19], $p_{interact}$ > .05), self-construal did have a significantly negative effect on independence (β = -.49, SE = .22, p_{main} = .026, CI [-.91, -.06]).

For norm, there was a significant interaction effect (α = .817; $\beta_{interact}$ =.13, $SE_{interact}$ = .06, $p_{interact}$ = .029, $CI_{interact}$ [.01, .24]). Particularly, when participants were not sensitive to

anonymity (1SD below the mean), the effect of self-construal on norm was not significant (β = -.13, SE = .10, p > .05, CI [-.34, .08]). Still, the more participants sensitive to anonymity (1SD above the mean), the more self-construal positively influenced norm, albeit marginally (β =.25, SE = .13, p = .059, CI [-.01, .52]). This meant that individuals who were more independent self-construal had more positive attitudes towards anonymity compared to those who were more interdependent self-construal (self-construal score = independent – interdependent). Figure 3.2 displays the interaction effect between variables.

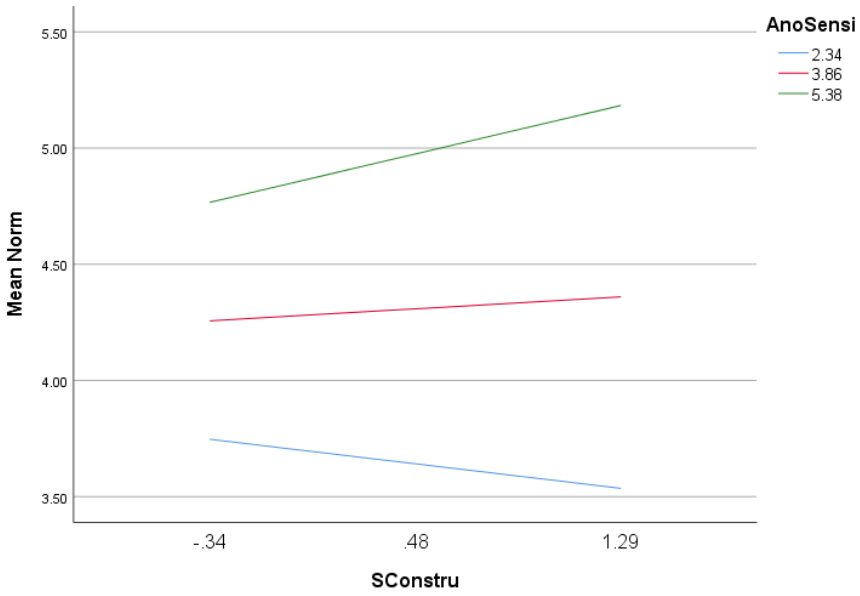


Figure 3.2: Interaction effect between self-construal and anonymity sensitivity on norm of anonymity.

3.3.3.3. Discussion

With the same survey design, the similar interaction effect for self-construal in Study 3 and that for trait autonomy in Study 2 were enlightening. Conceptually, autonomy and independence (as in self-reliance) are distinct because "an individual can be willingly or autonomously dependent, or sometimes forced or controlled to rely or depend on others (Weinstein, Przybylski, & Ryan, 2012, p. 397). Nevertheless, whether individuals are more

autonomous or more independent self-construal, they are more likely to agree that anonymity should be expected by others. Similar to Study 2, a regression with anonymity sensitivity as the IV and self-construal as a moderator revealed that when anonymity sensitivity was high (vs. low), both high and low self-construal (i.e., both more independent and more interdependent self-construal) displayed higher norm of anonymity, and the increase in norm for independent self-construal was more than that for interdependent self-construal.

Besides, in this study, self-construal had a negative main effect on independence subscale. This means that those who have lower (vs. higher) self-construal (i.e., more interdependent (vs. independent)) are more likely to agree that anonymity helps to detach their consumption choice from the influence of others. This is possible since only when consumers are closely connected to their groups will they understand better how a separation from the group may influence the nature of their decision (and in this case, positively). Because self-construal can be interpreted in both ways (i.e., independent self-construals agree with norm of anonymity - interaction effect, and interdependent self-construals agree with the absence of social influence when using anonymity – main effect), experimental studies are preferred to make the results more conclusive. However, it also means that to examine cultural effects on anonymity, laboratory research may be not the optimal choice. Instead, studies that directly compare participants across countries may be more beneficial. Next, we investigate what type of behaviour can be driven by attitudes towards anonymity in a different population.

3.3.4. Study 4: Online donation

In this study, we introduced participants to a crowdfunding website. As freedom and independence belong to individual-centric dimension, they should manifest stronger in contexts where consumers actively seek anonymity for its benefits. In contrast, as factors of situation-centric dimension, ease and norm refer to the motivation induced by specific contexts where individuals may not initially think of adopting anonymity. Accordingly, introducing

participants to an imaginary online scenario may appear to be more about situation- than individual-centric dimension.

3.4.4.1. Participants and procedure

Our survey was conducted on Prolific Academic, a UK-based crowdsourcing platform for scientific research. One hundred and forty Prolific participants joined the survey and received compensation for their participation. Seven participants failed the attention check. The final sample size was 133 (M_{age} = 41.37, SD_{age} = 13.184, range = 19-69 years; 66.2% female).

Participants read the introduction of the study: *"You are going to read a few demo webpages of a crowdfunding project. We would like you to read the information carefully. Then, we would ask your evaluation about this project and the webpages."* The purpose was to provide some information of the project to motivate participants to donate. The webpages were pictures created by PowerPoint slides (see Appendix for a full description). After that, participants indicated three items of the DV anonymous donation (e.g., "*How likely are you to donate anonymously to the Water Purification Project*?", 1 = Not at all, 7 = Very likely).

Then, participants filled in some filter items about website evaluation (e.g., "*The font sizes are easy to read*") and one item showing their attitude towards the website design ("*Overall, the design of the website is good*"). All items were on a 7-point Likert scale (1 = Not at all, 7 = very much). To increase the ecological validity of the study, participants were asked to provide one suggestion to help the website attract more donators. Next, participants indicated the four subscales of anonymity and three items of anonymity sensitivity. Since anonymity subscales are the IVs in this study, we treat anonymity sensitivity as a covariate to examine whether the effect of attitudes towards anonymity on behaviour is above and beyond the importance of anonymity in consumption process. If controlling for anonymity sensitivity leads to insignificant effects, it means that attitudes towards anonymity are already captured by

anonymity sensitivity (i.e., they are highly correlated). At that time, attitudes only influence behaviour if anonymity is relevant to consumer decision-making, a boundary condition. Last, participants indicated demographic items and were thanked for their participation.

3.4.4.2. Results

We regressed each anonymity subscale on the DV. Without the covariate anonymity sensitivity (α = .931), all four factors (α_{free} = .890, α_{ease} = .830, α_{norm} = .866, and α_{indep} = .786) positively influenced anonymous donation (α = .955) with the factor ease of anonymity having a marginal effect (b_{free} = .28, $t_{free}(131)$ = 2.43, p_{free} = .017; b_{ease} = .22, $t_{ease}(131)$ = 1.95, p_{ease} = .053; b_{norm} = .38, $t_{norm}(131)$ = 3.40, p_{norm} = .001; b_{indep} = .31, $t_{indep}(131)$ = 2.78, p_{indep} = .006). With the covariate, all factors became insignificant while the covariate was still significant (ps_{cov} =< .05). The correlations between anonymity sensitivity and other factors were: anonymous donation (r = .31, p < .001), freedom (r = .56, p < .001), independence (r = .68, p < .001), ease (r = .17, p = .056), and norm (r = .65, p < .001). Further, when we used the item of attitude towards the website design as a covariate, the three subscales freedom, independence, and norm still had the effect while ease no longer did (b_{free} = .26, $t_{free}(130)$ = 2.50, p_{free} = .014; b_{ease} = .09, $t_{ease}(130)$ = .87, p_{ease} = 0.39; b_{norm} = .35, $t_{norm}(130)$ = 3.42, p_{norm} = .001; b_{indep} = .28, $t_{indep}(130)$ = 2.68, p_{indep} = .008).

3.4.4.3. Discussion

The findings showed that the more consumers thought about anonymity positively, the more likely they were to make anonymous donations. This supported the theory of planned behaviour (Ajzen, 1991) when, according to this theory, all three components, namely attitudes (freedom and independence), ease (perceived behavioural control), and (subjective) norm, have a significant effect on behavioural intention. When taking anonymity sensitivity into account, the four subscales did not have an effect on the donation intention. This was logical because

consumer attitudes towards anonymity exist based on the assumption that anonymity is relevant to the decision process. In fact, this highlighted one of the limitations of the theory of planned behaviour in that the theory does not consider habit and past experience in predicting behaviour (Ajzen, 2011).

Further, when controlling for attitude towards the website design, ease of anonymity no longer had an impact on the DV. This means that this subscale was part of the manipulated context (i.e., controlling for the effect of the attitude towards the website design was similar to controlling for the effect of ease itself). Therefore, compared to other subscales, the factor ease of anonymity is more susceptible to a particular circumstance. Using the components of the theory of planned behaviour, one might infer that perceived behavioural control is more context-specific than the general attitudes and subjective norms.

In sum, while the results lent more credence to the differential influences of attitudes towards anonymity on consumer behaviour, we suggest that future studies should develop a more comprehensive theory to explicate the anonymity effects. In the next study, we examined anonymity in everyday consumer behaviour, exploring the applications of the construct in daily life.

3.3.5. Study 5: Anonymity in everyday contexts

The study has two purposes. First, it evaluates the relationship between consumer behaviour in daily contexts and consumer attitudes towards anonymity. The rationale is that since anonymous consumption behaviour is diverse, it may be better to simply explore the connection, if any, between what consumers may think about anonymity (i.e., their attitudes) and what they normally do (i.e., their everyday behaviour). Manipulating a specific anonymous context may unnecessarily emphasize the significance of one behaviour while consumers may not do it at all in daily life. For example, consumers do donate and are familiar with the idea of

anonymous donation, but they may rarely donate anonymously because there is simply no need for it even if they understand the value of anonymous donation.

Second, we attempt to statistically evaluate some examples of the anonymous consumption behaviour in Study 1 and 2 on a different population. What matters is the justification for using anonymity rather than the behaviour itself. Accordingly, the same anonymous behaviour can have different meanings for different people. However, if a result is consistent across populations, it means that anonymity is indeed prevalent and important in consumption contexts.

3.3.5.1. Participants and procedure

One hundred and ninety-eight Prolific participants joined the survey for monetary compensation. Four participants failed the attention check. The final sample size of 194 was used for further analyses (M_{age} = 43.31, SD_{age} = 13.405, range = 19-70 years; 66% female). The survey had two parts.

The first part of the survey asked participants about their preference and consumption behaviour. The first question was about their preferred payment method (cash vs. credit card). The second question was about the shopping mode (virtual vs. physical). The third question asked participants about their choice of a package type for a high-valued product (package with a brand name vs. plain package), and the fourth question asked whether they preferred to shop alone or with someone else. These four questions were on 7-point Likert scale and served as the DVs (see Appendix for further details). Then, participants indicated the four subscales of anonymity.

In the second part of the survey, participants were asked for their evaluation about anonymity in general consumption contexts. They were introduced to the definition of anonymity and read the two probing questions. The first question asked participants whether

they thought a consumer may adopt anonymity for a group of consumption contexts (7-point Likert scale; 1= Not at all necessary to adopt anonymity, 7 = Very necessary to adopt anonymity). The second question asked participants to indicate whether they thought that certain behavioural indicators were related to anonymity adoption (7-point Likert scale; 1 = Not at all related to anonymity adoption, 7 = Very related to anonymity adoption). The ten contexts were derived from Study 1 and 2. The four behavioural indicators were part (i.e., one anchor) of the four DVs (see Appendix for a full description). Examining them separately may help to understand the effect on the main DVs better. Last, participants indicated demographic items and were thanked for their participations.

3.3.5.2. Results

We regressed each subscale on each DV. For the question about payment method (pay with credit card vs. pay in cash) and the question about shopping alone (vs. with someone else), there was no effect from any anonymity subscale on the DVs (α_{free} = .913, α_{ease} = .753, α_{norm} = .811, α_{indep} = .782, *ps* > .05). For the question about shopping mode (online vs. offline), independence had a negative effect (b_{indep} = -.29, $t_{indep}(192)$ = -2.27, p_{indep} = .024), whereas freedom, ease and norm (*ps* > .05) did not. For the question about package design, freedom and ease both had a negative effect (b_{free} = -.25, $t_{free}(192)$ = -2.94, p_{free} = .004; b_{ease} = -.21, $t_{ease}(192)$ = -2.06, p_{ease} = .041), while norm and independence did not (*ps* > .05). We are cautious in interpreting these findings. For example, it is possible that for the participants in this study, method payment and shopping alone are not related to anonymity (e.g., it is their shopping habit and irrelevant to the need for anonymity). However, it is strange that those who think that anonymity helps mitigate social influence (i.e., independence) and that it is easy to be anonymous, prefer a package design with brand name (vs. plain package) for their high-valued

product, the opposite to our conjecture. Still, when people want to be free of social influence, they do prefer shopping online.

For the second part of the survey, anonymity adoption was unnecessary in some contexts such as gift giving, purchasing second-hand or luxury products, and necessary in purchasing personal medications or cosmetic surgery. Below are the statistics and the comparisons between the current results and those in Study 1 and 2:

Table 3.3: Situations in which anonymity adoption is necessary.

Type of contexts	**Examples**	**Consistent with Study 1 and 2**
Necessary for anonymity adoption (*ps* =< .001)	Cosmetic surgery (*M* = 4.45, SD = 1.84, *t*(193) = 3.44, *p* = .001)	YES
	Purchasing sexual products (*M* = 5.67, SD = 1.52, *t*(193) = 15.32, *p* < .001)	YES
	Purchasing personal medications (*M* = 4.94, SD = 1.79, *t*(193) = 7.33, *p* < .001)	YES
NOT necessary for anonymity adoption (*ps* < .01)	Gift giving (*M* = 3.63, SD = 1.77, *t*(193) = -2.87, *p* = .005)	NO
	Purchasing second-hand products (*M* = 2.66, SD = 1.53, *t*(193) = -12.20, *p* < .001)	NO
	Making high-involvement purchases (e.g., buying a house or a car) (*M* = 3.31, SD = 1.80, *t*(193) = -5.34, *p* < .001)	YES
	Purchasing luxury products (*M* = 3.03, SD = 1.63, *t*(193) = -8.29, *p* < .001)	YES
	Charity donation (*M* = 3.49, SD = 1.73, *t*(193) = -4.11, *p* < .001)	NO
	Participating in a promotion campaign of a brand (*M* = 3.35, SD = 1.64, *t*(193) = -5.57, *p* < .001)	YES
	Using rental services (e.g., Airbnb) (*M* = 3.13, SD = 1.75, *t*(193) = -6.94, *p* < .001)	YES

For the second probing question, examples of behaviour related to anonymity adoption were: using cash for payment (M = 5.05, SD = 2.06, $t(193) = 7.12$, $p < .001$), using non-transparent package (M = 4.63, SD = 1.87, $t(193) = 4.74$, $p < .001$), and making a purchase with virtual currency (e.g., bitcoins) (M = 4.74, SD = 1.80, $t(193) = 5.69$, $p < .001$). Shopping in person and alone was not related to anonymity adoption (M = 4.22, SD = 1.88, $t(193) = 1.60$, $p > .05$).

We observed that seven out of ten anonymous contexts were congruent across studies and populations, and anonymity manifests in many aspects from package design, payment method, to shopping activities. This implies that anonymity is not limited to specific demographics or contexts. Instead, it is prevalent in everyday consumer behaviour. Further, the incongruence between studies suggests that it is the motivation to use anonymity rather than the anonymous behaviour that matters. As such, qualitative studies are necessary to explore the mindsets of consumers towards anonymity and how consumers use it in their decision process.

3.3.5.3. Discussion

First, attitudes towards anonymity did not have an effect on the preference for payment method even though in the same survey, participants did indicate that using cash for payment was significantly related to anonymity adoption. One explanation is that asking participants directly about anonymity may prime its related implications. Moreover, the negative effect of freedom and ease on package design appeared to be peculiar. That is, we found that individuals who agreed more with the freedom and ease of anonymity preferred the package with brand name for a high-valued product, whereas it would be more sensible if they preferred a plain package (as in Study 2, Table 3.2). Yet, when being asked directly whether using non-transparent package was related to anonymity adoption, participants confirmed so. This may imply that anonymous package design is more about non-transparency (i.e., difficult to perceive) than simplicity (i.e., absence of information).

Second, contrary to previous studies, shopping alone is not relevant to anonymity (compared to the results in Table 3.2). Also, some circumstances which may be regarded as typical of anonymity turned out to be impertinent (i.e., charity donation and purchasing second-hand products). These examples call into question the representativeness of a specific anonymous consumption behaviour. In fact, if perception towards anonymity of a subject varies between individuals (Hite, Voelker, & Robertson, 2014), then the act of regarding a particular behaviour as anonymity-related is also subjective. To this extent, our research suggests that future conceptual studies may need to explore and unite the different understanding of anonymity from both experts and lay consumers. This is especially relevant when the reasons to adopt anonymity are innumerable.

Third, concerning the consistent findings, we found that independence subscale had an effect on the medium of shopping (online vs. offline). This indicates that online context seems to be more lucrative for those who agree that anonymity frees them from social influence. Indeed, in her review paper of the positive and negative implications of online anonymity, Christopherson (2007) rightly asserted: "*On the Internet, Nobody Knows You're a Dog*". The more consumers want to enjoy being themselves and make decisions that reflect their own desires, the more they may prefer online shopping.

3.4. General discussion

Little is known about the concrete manifestations of anonymity in consumer behaviour. Guided by practical research questions, we examined anonymous consumption across contexts and populations. Displays of anonymous behaviour are as diverse as the reasons behind them, and this situation poses more questions than answers. However, certain consistent findings between studies and the differential effects of attitudes towards anonymity provide meaningful conceptual and practical implications.

First, we found that consumers adopted anonymity more for material than experiential purchases, and those purchases were not different on the utilitarian-hedonic dichotomy. Yet, without a clear definition in the survey (in Study 1), anonymity in this sense may be more about secret (i.e., hiding) or private consumption. Notably, based on the common examples in extant literature (Dai, Chan, & Mogilner, 2019), the purchases that the participants provided are difficult to be considered as experiential. Thus, to attenuate this concern, future research may extensively examine the relationship between product types on a website and anonymity indicators such as the anonymity of the reviewers. Nevertheless, anonymity in this suggestion is rather limited to an online context.

Second, by examining individual characteristics and cultural factors (antecedents) as well as anonymous behaviour (consequence), the current research extends the nomological network of the anonymity scale. For example, we found that those who have higher self-construal and autonomy think that anonymity is necessary and should be used by other people (assuming anonymity matters to their decision process). Also, ease of anonymity appears to be susceptible to specific circumstances, to the extent that what people think about anonymity in general is determined by what they are currently experiencing. This may provide some insight for website design in which the focal activity is integrated with anonymity (e.g., donation, virtual payment).

Third, the differential effects of the subscales offer both opportunities and challenges. In particular, when we examined the influence of individual characteristics and culture on anonymity, one may argue that the insignificant effects on freedom and independence may suggest that these subscales do not reflect a broader attitude towards anonymity, but rather narrow on specific anonymous benefits. However, a counter-argument is that if what truly matters is the underlying reason for an anonymous behaviour rather than the behaviour itself, the scale's reliability and validity still hold because freedom reflects the breadth of consumer

choice and independence reflects the depth of it. In other words, the two subscales show the change in the nature of consumer decision, both quantitatively (freedom) and qualitatively (independence). Briefly, they may cover comprehensively general aspects of consumer attitudes towards anonymity.

A worthy consideration is that there is no theory of anonymity in consumer research. Even though our studies employed the two theoretical frameworks (regulatory focus theory and theory of planned behaviour) to explain the findings, they were disparate and rather limited in their explanatory power. For example, using regulatory focus theory will assume anonymity as a strategic choice (with specific attitudes towards anonymity), whereas theory of planned behaviour (and our scale) portrays that perceived behavioural control (ease) and norm also have significant impacts on the behavioural intention. As general as the theory of planned behaviour is, it does not explicate why one factor has an effect on the focal behaviour when others simultaneously do not. Beyond serving as the foundation of our scale, a theory of anonymity should help to explain the multifarious incentives for anonymity adoption across contexts. Above all, our findings imply that online and offline anonymity might be conceptually different, and that the concept of perceived anonymous behaviour is worth investigating.

At the same time, the rich discrepancy between online and offline anonymous behaviour emphasizes that anonymity is a distinct construct. Far from a mere online tool for privacy protection, anonymity penetrates into various aspects of consumer behaviour. Moreover, the disparity between anonymity and secrecy paves the way for future research in consumption contexts. In fact, our studies implicate that to capture the anonymous effect per se, it may be helpful to show the participants the exact definition because in general, behaviour which is meant to obscure one's identity also seems to be private and secret.

Marketing managers may obtain good insights from the findings. For instance, both students and Prolific participants thought that non-transparent package is relevant for

anonymity adoption. In extant research on product package, cool (vs. warm) colours and boxed (vs. unboxed) products are perceived as more anonymous (Jones, Barney, & Farmer, 2018). Our results contribute to this literature and offer to practitioners some meaningful product designs. In particular, it may be beneficial to examine whether sales are driven by a particular type of product package, and in cases of anonymity, an opaque one. Our numerous contexts in which consumers adopt anonymity and the underlying reasons for such action may help marketing managers to develop a better product strategy.

Besides, while some circumstances are favourable for anonymity, others are irrelevant. An inappropriate application of anonymity may lead to undesirable outcomes. Studies in online anonymity have discussed the trade-off between being anonymous versus being identifiable (Marx, 1999; Kang et al., 2013). For offline consumption contexts, little is known about the disadvantages of employing anonymity. In brief, while this issue calls for more research, marketing managers should understand where and when they can obtain the benefits of anonymity or avoid it altogether.

3.5. Limitations and suggestions for future research

There are some limitations which may help to inspire future research. First, since the surveys are exploratory in nature, experimental methods may be used to establish the causality between the antecedents and consequences of consumer attitudes towards anonymity. Second, examples of anonymous behaviour seem disparate. Future studies may develop an overarching framework to understand why consumers adopt anonymity so that other factors (e.g., consumer characteristics, product types) can be mapped accordingly. Third, our findings show that the same context can be anonymity-related to some individuals but not to others. That is, what matters more may be the motivation to use anonymity rather than the anonymous behaviour per se. Therefore, in-depth interviews are necessary to enrich our understanding of anonymity

usage in everyday contexts. Finally, we used self-construal as a proxy to examine cultural effects. A better approach is to directly compare how consumers in different countries (e.g., Western vs. Eastern) react towards anonymity. Given the scant evidence from the literature, much can be learned since anonymity is a construct varying with technology, culture, politics, and society (Berg, 2016).

4. CONCLUDING REMARKS

In digital worlds where identities become fuzzy, anonymity has its own advantages and disadvantages. In the offline world, anonymity is under-researched. Among the first studies to investigate anonymity in consumption contexts, both essays deliver a unifying message: anonymity is not a mere online tool. Instead, it is a neglected construct with important psychological implications, meriting more research.

In the first essay, we develop an anonymity scale with high validity and reliability. The scale is an important step to approach the construct before we examine the anonymous consumption. Indeed, as attitude is one of the three significant predictors of behavioural intention which in turn explains a large variance of actual behaviour (Ajzen, 1991), it is vital to capture consumer attitudes towards anonymity. Also, by demonstrating the low correlations between anonymity and the need for privacy subscales, we support the notion that anonymity and privacy are distinct constructs in that a higher need for privacy is not necessarily synonymous to more positive attitudes towards anonymity.

We contribute to extant literature by introducing an anonymity scale which is applicable to both online and offline contexts. While individual-centric anonymity should be robust across situations in which consumers actively seek anonymity, situation-centric anonymity suggests that consumers may not think about anonymity in the first place. Instead, being externally motivated, consumers can develop favourable perceptions towards anonymity. To enhance the applications of the scale and shed clearer light on what an anonymous consumption is, we use our scale to explore the manifestations of anonymity in everyday behaviour in Essay 2.

The second essay is guided by practical research questions. Particularly, it is crucial to understand what type of products that consumers use anonymity for and with what reasons. Study 1 explores this question. Then, we investigate the type of consumers (Study 2) and cultural factors (Study 3) that lead to higher attitudes towards anonymity. In Study 4, we

examine the anonymous behavioural intention, and Study 5 helps to generalize previous findings to a different population. Even though the results are exploratory in nature, we obtain meaningful insights for subsequent research.

Specifically, using regulatory focus theory, we find that consumers use anonymity not just to avoid negative consequences (avoidance goal), but also to promote accomplishment and increase pleasure (approach goal). This implies that anonymity should no longer be considered as a pure hiding tool. Rather, it is a coping mechanism which facilitates different goal pursuits. Per theory of planned behaviour, we find that all our anonymity subscales have an effect on anonymous behavioural intention, assuming anonymity is relevant to the decision-making. These findings reinforce that anonymity, be it a strategic goal or not, is an important factor in the consumption process.

Further, we position the anonymity construct more properly in consumer research by differentiating it from closely related constructs such as secrecy and privacy. In particular, we find that while online anonymous behaviour bears some resemblance to privacy in terms of information protection, offline anonymous consumption appears to be distinct. Moreover, anonymous consumption is different from secret consumption and inconspicuous consumption. In our research, anonymous consumption is consumption of a product where the identity of the consumer cannot be linked or traced through the consumption. That is, anonymous consumption is when the source of the consumption is unidentifiable, while secret consumption is when the consumption itself is hidden and inconspicuous consumption is when the consumption is meant to avoid social competition and status signalling. These nuances deserve further research.

In terms of practical implications, marketing managers witness a variety of anonymity applications in consumer behaviour from product type (e.g., material vs. experiential), package design (e.g., non-transparent), method payment (e.g., cash), to shopping mode (e.g., online vs.

offline) and other contexts (e.g., cosmetic surgery, buying sexual products). From the two dimensions of our scale, benefits of anonymity can be realized when marketing managers integrate anonymity into the consumption process because consumers may not initially think about it. Also, in the contemporary world where information protection boils down to identity security, we speculate that anonymous consumption will become popular. Indeed, one does not need to consume a product alone (private), or hide his consumption (secret), or make sure that the consumption is not meant for social competition (inconspicuous), to engage in an anonymous consumption where his identity is untraceable.

In sum, I hope that the dissertation has provided readers with meaningful and interesting understanding of anonymity. Above all, considering the rapid growth of technology and the high adaptability of consumers to market changes, it is timely to treat anonymity as a construct of its own, calling for more research on this topic in the consumer behaviour domain.

BIBLIOGRAPHY

Aaker, J. L., & Lee, A. Y. (2001). "I" Seek Pleasures and "We" Avoid Pains: The Role of Self-Regulatory Goals in Information Processing and Persuasion. *Journal of Consumer Research*, 28(1), 33–49.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.

Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. *Psychology & Health*, 26, 1113–1127

Anonymous (1998). To Reveal or Not to Reveal: A Theoretical Model of Anonymous Communication. *Communication Theory*, *8*(4), pp.381-407.

Ballard, R., Crino, M. D., & Rubenfeld, S. (1988). Social Desirability Response Bias and the Marlowe-Crowne Social Desirability Scale. *Psychological Reports*, *63*(1), 227–237.

Bardhi, F., & Eckhardt, G. M. (2012). Access-Based Consumption: The Case of Car Sharing. *Journal of Consumer Research*, *39*(4), 881–898.

Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1989). Measurement of Consumer Susceptibility to Interpersonal Influence. *Journal of Consumer Research*, *15*(4), 473–481.

Bennett, J. B. (1988). Power and influence as distinct personality traits: Development and validation of a psychometric measure. *Journal of Research in Personality*, *22*(3), 361–394.

Berg, J. (2016). The impact of anonymity and issue controversiality on the quality of online discussion. *Journal of Information Technology & Politics*, *13*(1), 37–51.

Christopherson, K. M. (2007). The positive and negative implications of anonymity in Internet social interactions: "On the Internet, Nobody Knows You're a Dog". *Computers in Human Behavior, 23*(6), 3038-3056.

Churchill, G. A. (1979). A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research, 16*(1), 64–73.

Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment, 7*(3), 309–319.

Cohen, J., & Reed II, A. (2006). A Multiple Pathway Anchoring and Adjustment (MPAA) Model of Attitude Generation and Recruitment. *Journal of Consumer Research, 33*(1), 1–15.

Cross, S. E., & Madson, L. (1997). Models of the self: self-construals and gender. *Psychological Bulletin,* 122, 5–37.

Dai, H., Chan, C., & Mogilner, C. (2019). People Rely Less on Consumer Reviews for Experiential than Material Purchases. *Journal of Consumer Research,* 46(6), 1052–1075.

Desimone, J. A., & Harms, P. D. (2017). Dirty Data: The Effects of Screening Respondents Who Provide Low-Quality Data in Survey Research. *Journal of Business and Psychology, 33*(5), 559-577.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Gerhart, N., & Koohikamali, M. (2019). Social network migration and anonymity expectations: What anonymous social network apps offer. *Computers in Human Behavior, 95*, 101-113.

Gilovich, T., Kumar, A., & Jampol, L. (2015). A wonderful life: experiential consumption and the pursuit of happiness. *Journal of Consumer Psychology*, 25(1), 152–165.

Goodwin, C. (1991). Privacy: Recognition of a Consumer Right. *Journal of Public Policy & Marketing, 10*(1), 149-166.

Hair, J. F., Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis* (7th ed.). Upper Saddle River, New Jersey, NJ: Pearson Prentice Hall.

Hayes, A. F. (2017). *Introduction to Mediation, Moderation, and Conditional Process Analysis, Second Edition: A Regression-Based Approach (Methodology in the Social Sciences)* (Second ed.). The Guilford Press.

Hayne, S., & Rice, R. (1997). Attribution accuracy when using anonymity in group support systems. *International Journal of Human-Computer Studies, 47*(3), 429-452.

Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist,* 52(12), 1280–1300.

Higgins, E. T. (2005). Value From Regulatory Fit. *Current Directions in Psychological Science*, *14*(4), 209–213.

Hite, D., Voelker, T., & Robertson, A. (2014). Measuring Perceived Anonymity: The Development of a Context Independent Instrument. *Journal Of Methods And Measurement In The Social Sciences,* 5(1), 22.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55.

Jones, C. L., Barney, C., & Farmer, A. (2018). Appreciating Anonymity: An Exploration of Embarrassing Products and the Power of Blending In. *Journal of Retailing, 94*(2), 186-202.

Kaiser, H. F. (1960). The Application of Electronic Computers to Factor Analysis. *Educational and Psychological Measurement, 20*(1), 141–151.

Kang, R., Brown, S., & Kiesler, S. (2013). Why do people seek anonymity on the internet? Informing policy and design. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, CHI '13, pages 2657–2666, New York, NY, USA. ACM.

Lalwani, A. K., & Shavitt, S. (2013). You Get What You Pay For? Self-Construal Influences Price-Quality Judgments. *Journal of Consumer Research*, *40*(2), 255–267.

Lapidot-Lefler, N., & Barak, A. (2012). Effects of anonymity, invisibility, and lack of eye-contact on toxic online disinhibition. *Computers in Human Behavior*, 28, 434–443.

Mandel, N., Rucker, D. D., Levav, J., & Galinsky, A. D. (2017). The Compensatory Consumer Behavior Model: How self-discrepancies drive consumer behavior. *Journal of Consumer Psychology*, *27*(1), 133-146.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: implications for cognition, emotion, and motivation. *Psychological Bulletin*, 98, 224–253.

Marx G.T. (1999). What's in a Name? Some Reflections on the Sociology of Anonymity, *The Information Society*, *15*(2), 99-112,

Matthews, S. (2010). ANONYMITY AND THE SOCIAL SELF. *American Philosophical Quarterly*, *47*(4), 351-363.

Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods*, *17*(3), 437–455.

Morio, H., & Buchholz, C. (2007). How anonymous are you online? Examining online social behaviors from a cross-cultural perspective. *AI & SOCIETY*, *23*(2), 297–307.

Ordabayeva, N., & Chandon, P. (2011). Getting Ahead of the Joneses: When Equality Increases Conspicuous Consumption among Bottom-Tier Consumers. *Journal of Consumer Research*, *38*(1), 27–41.

Pedersen, D. M. (1997). Psychological Functions Of Privacy. *Journal of Environmental Psychology*, *17*(2), 147-156.

Peters, L., Sunderland, M., Andrews, G., Rapee, R. M., & Mattick, R. P. (2012). Development of a short form Social Interaction Anxiety (SIAS) and Social Phobia Scale (SPS) using

nonparametric item response theory: The SIAS-6 and the SPS-6. *Psychological Assessment*, *24*(1), 66–76.

Pinsonneault, A., & Heppel, N. (1997). Anonymity in Group Support Systems Research: A New Conceptualization, Measure, and Contingency Framework. *Journal of Management Information Systems*, *14*(3), 89–108.

Postmes, T., Spears, R., Sakhel, K., & Groot, D. D. (2001). Social Influence in Computer-Mediated Communication: The Effects of Anonymity on Group Behavior. *Personality and Social Psychology Bulletin*, *27*(10), 1243–1254.

Reich, B. J., Beck, J. T., & Price, J. (2018). Food as Ideology: Measurement and Validation of Locavorism. *Journal of Consumer Research*, *45*, 849–868.

Rodas, M. A., & John, D. R. (2019). The Secrecy Effect: Secret Consumption Increases Women's Product Evaluations and Choice. *Journal of Consumer Research*, 46(6), 1093–1109.

Rucker, D. D., & Galinsky, A. D. (2009). Conspicuous consumption versus utilitarian ideals: How different levels of power shape consumer behavior. *Journal of Experimental Social Psychology*, *45*(3), 549–555.

Ruvio, A., Shoham, A., & Makovec Brenčič, M. (2008). Consumers' need for uniqueness: short-form scale development and cross-cultural validation. *International Marketing Review*, *25*(1), 33–53.

Schwarz, N. & Bohner, G. (2001). The Construction of Attitudes. *in Blackwell Handbook of Social Psychology: Intraindividual Processes*, Vol. 1, ed. Abraham Tesser and Norbert Schwarz, Oxford: Blackwell, 436–457.

Sia, C., Tan, B., & Wei, K. (2002). Group Polarization and Computer-Mediated Communication: Effects of Communication Cues, Social Presence, and Anonymity. *Information Systems Research*, *13*(1), 70-90.

Singelis, T. M. (1994). The Measurement of Independent and Interdependent Self-Construals. *Personality and Social Psychology Bulletin*, 20(5), 580–591.

Smith, Dinev, & Xu. (2011). Information Privacy Research: An Interdisciplinary Review. *MIS Quarterly, 35*(4), 989-1015.

Smith, H. J., Milberg, S. J., & Burke, S. J. (1996). Information Privacy: Measuring Individuals' Concerns about Organizational Practices. *MIS Quarterly, 20*(2), 167-196.

Spears, R., & Lea, M. (1994). Panacea or panopticon? The hidden power in computer-mediated communication. *Communication Research, 21*, 427-459.

Tian, K. T., Bearden, W. O., & Hunter, G. L. (2001). Consumers' Need for Uniqueness: Scale Development and Validation. *Journal of Consumer Research, 28*(1), 50–66.

Trepte, S., & Masur, P. K. (2017). *Need for privacy*. In Zeigler-Hill, V., Shakelford, T. K. (Ed.), Encyclopedia of personality and individual differences. Springer.

Van Boven, L., & Gilovich, T. (2003). To do or to have? That is the question. *Journal of Personality and Social Psychology*, 85(6), 1193–1202.

Wallace, K.A. (1999). Anonymity. *Ethics and Information Technology, 1*(1), 21-31.

Wegner, D. M., Lane, J. D., & Dimitri, S. (1994). The allure of secret relationships. *Journal of Personality and Social Psychology*, 66(2), 287–300.

Weinstein, N., Przybylski, A. K., & Ryan, R. M. (2012). The index of autonomous functioning: Development of a scale of human autonomy. *Journal of Research in Personality*, 46(4), 397–413.

Woo, J. (2006). The right not to be identified: privacy and anonymity in the interactive media environment. *New Media & Society, 8*(6), 949–967.

Zwick, D., & Dholakia, N. (2004). Whose Identity Is It Anyway? Consumer Representation in the Age of Database Marketing. *Journal of Macromarketing*, 24(1), 31–43.

APPENDIX

Consumer Attitudes towards Anonymity - Complete Measurement Items

Factor	No.	Item
Freedom	1	If people around me do not know who I am, I feel free to purchase whatever I want.
	2	As a consumer, I feel like I have more options when I am anonymous.
	3	Anonymity gives me more courage to try new products.
	4	If I am anonymous, I think I can purchase a wider variety of products and services.
	5	I can freely purchase and consume sensitive products when I am anonymous.
	6*	I think I can buy anything as long as I do not reveal my identity.
Independence	7*	I want people to associate what I buy with who I am. (R)
	8	When I do not want my friends and my family to know what I buy, I buy it anonymously.
	9	People might judge me when I am not anonymous as a consumer.
	10**	When I consume something anonymously, I do not think much about what other people think.
	11	Anonymous consumption helps me to separate my private life from my public life.
Security	12**	I feel secure when I purchase something anonymously.
	13**	As a consumer, I feel more comfortable when I am anonymous.
	14	I feel anxious if someone can link my purchases to my identity.
	15**	When I purchase a product anonymously, I am not embarrassed.
	16**	When my purchase is anonymous, my identity is protected.
Norm	17	When purchasing products, consumers generally do not want to reveal their identity.
	18	Anonymity is necessary when consumers are purchasing something.
	19*	Most companies do not want consumers to remain anonymous while shopping. (R)
	20	I think every consumer prefers anonymity.
	21	Consumers expect to be anonymous when they make their purchases.
Ease	22	It is easy to be anonymous as a consumer.
	23	Companies help consumers to easily conceal their identity.
	24	I can easily purchase something without disclosing my identity.
	25*	When I make a purchase, it is tough to hide my identity. (R)
	26	Technology makes it easier for consumers to be anonymous.
	27*	I find it difficult to stay anonymous and receive loyalty benefits at the same time. (R)

*: Items removed before EFA
**: Items removed after EFA

Initially, there were 27 items. Based on the feedback of five marketing specialists, five items were removed (item 6, 7, 19, 25, and 27), resulting in 22 items used for EFA. After factor analysis, five more items were removed (item 10, 12, 13, 15, and 16), resulting in the final 17 items which were used in CFA.

Study 1: Types of purchase and reasons for anonymity adoption

- Definition of material and experiential purchases: "*Material purchases provide something that a person can keep in his/her possession, and experiential purchases provide something that a person can do*."
- Definition of hedonic and utilitarian purchases: "*Hedonic purchases are something that a person buys primarily for pleasure and fun, and utilitarian purchases are something that a person buys primarily out of necessity and for practical functions*."

9-point Likert scale; 1 = Primarily material (/hedonic), 5 = Equally material (/hedonic) and experiential (/utilitarian), 9 = Primarily experiential (/utilitarian); Dai, Chan, & Mogilner (2019).

Study 2: Individual characteristics and anonymous consumption behaviour

- Question and items of Anonymity sensitivity:

We would like you to think about anonymity in your own consumption behaviour in the past few months. On average, please indicate the extent to which you think:

- Anonymity is relevant to your purchasing decision. (1 = not at all relevant, 7 = very relevant)
- Anonymity is necessary in your purchasing decision. (1 = not at all necessary, 7 = very necessary)
- You care about anonymity in your purchasing decision. (1 = I do not care at all, 7 = I care very much)

- For the two open-ended questions:

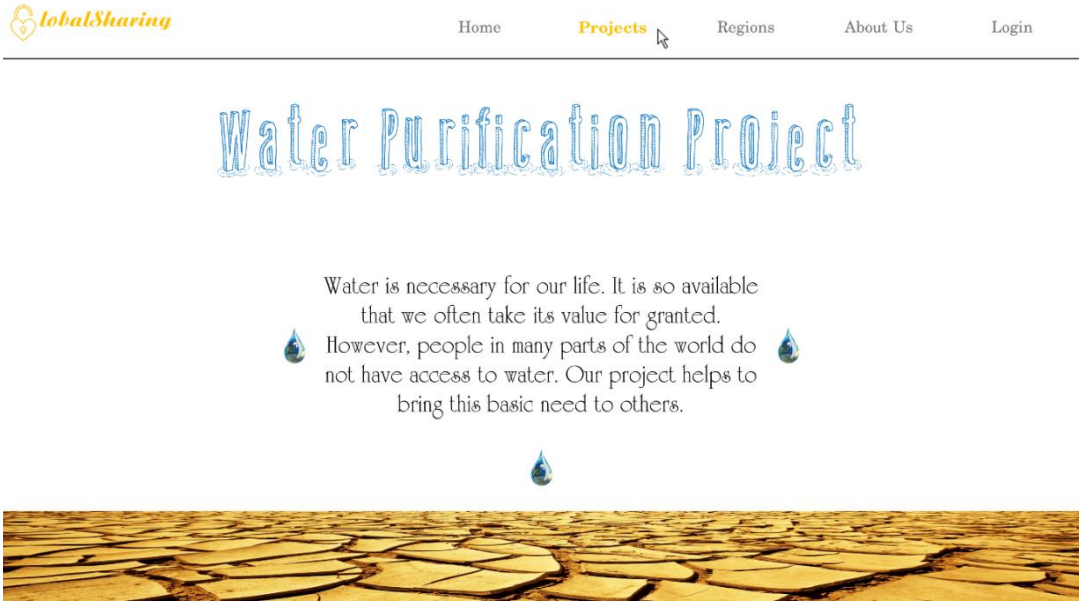
- In the first question, participants read the definition of anonymity as "*the extent to which a consumer's consumption behaviour is unlinkable or untraceable back to his or her identity"*. The instruction was: "*Based on your real-life observations about the*

behaviour of yourself or others, what exactly did you or other consumers do to make the consumption behaviour unlinkable/untraceable back to the identity?"

- The second question was: "*When is anonymity NOT appropriate for a consumer to adopt? Why?*"

Study 4: Online donation

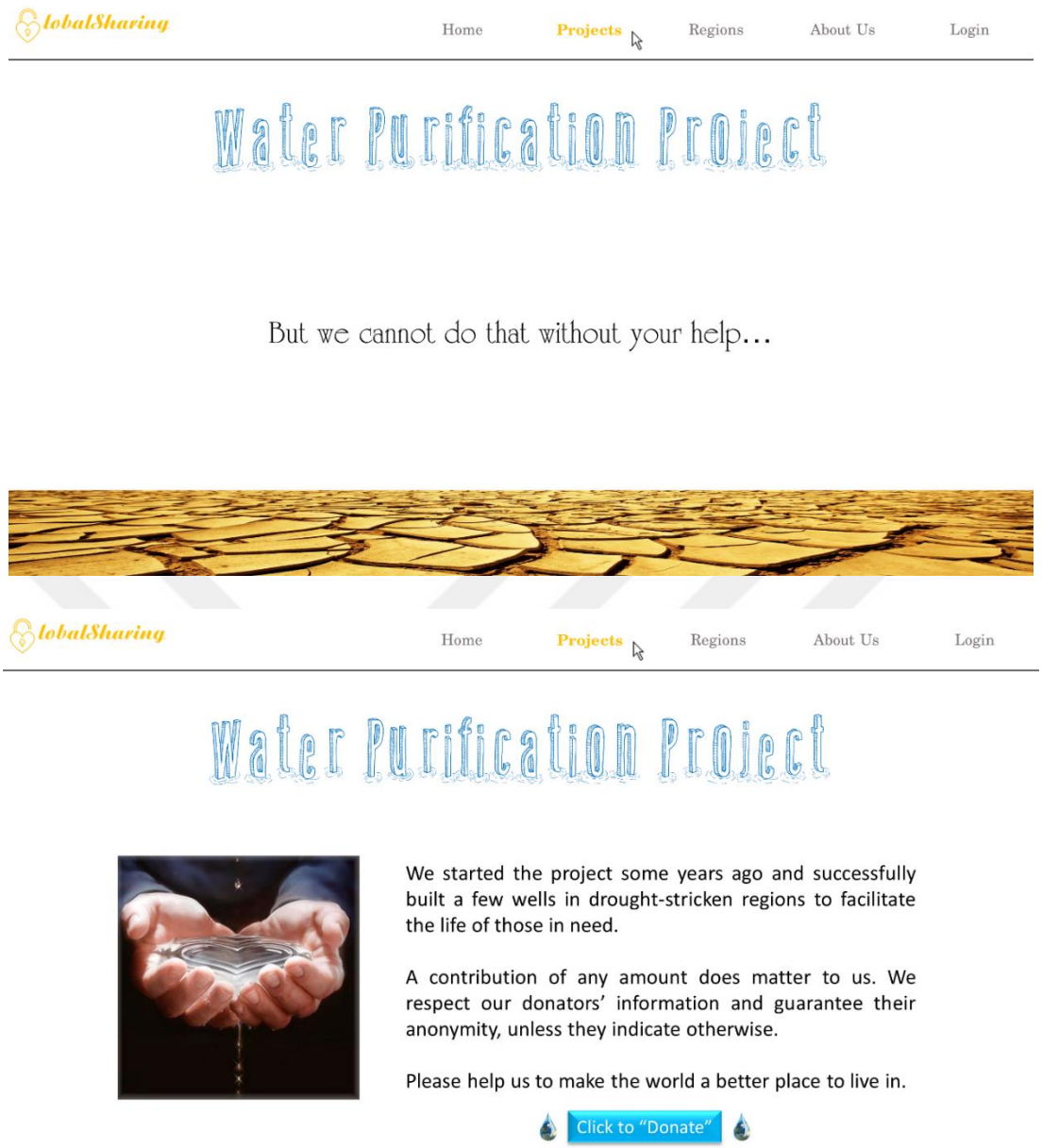
Below are the four webpages of the Water Purification Project that participants saw (in order):



First, we locate the sources of water and build wells.

Then, we build a purification system to cleanse the water.

Finally, we have the clean water ready to use.



➢ Anonymous donation (three items, 7-point Likert scale):

- How likely are you to donate anonymously to the Water Purification Project? (1 = Not at all, 7 = Very likely)
- What is the likelihood that you will consider donating anonymously to the Water Purification Project? (1 = Not at all, 7 = Very likely)
- How much interested are you in donating anonymously to the Water Purification Project? (1 = Not at all, 7 = Very much).

- Filter question 1: Please indicate your opinion about the webpages (7-point Likert Scale, 1 = not at all, 7 = very much):
  - The font sizes are easy to read.
  - The information is understandable.
  - The pictures are relevant.
  - The project's purpose is clearly conveyed.
  - Overall, the design of the website is good.
- Filter question 2: Please kindly provide a suggestion in one (1) sentence to help the website attracts more donators.

Study 5: Anonymity in everyday contexts

- Instruction and the four DVs in the first part of the survey:

We would like to ask some questions about your daily consumption behaviour. Please select the option that describes your preference best.

- **DV1**: In general, which of the following payment methods do you prefer? (1 = I prefer to pay with credit card, 7 = I prefer to pay in cash).
- **DV2**: In general, between online (i.e., virtual) shopping and offline (i.e., physical) shopping, which one do you prefer? (1 = I prefer to shop virtually, 7 = I prefer to shop physically).
- **DV3**: When you buy a high-valued product, do you prefer to use a package which shows the product's brand name or use a plain package (1 = I prefer to use a package which shows the product's brand name, 7 = I prefer to use a plain package).
- **DV4**: In general, for offline shopping, do you prefer to shop with someone else (e.g., a friend, a colleague, a family member) or shop alone (1 = I prefer to shop with someone else, 7 = I prefer to shop alone).

➢ Instruction and two probing questions in the second part of the survey:

- Question of the contexts for anonymity adoption:

In consumer research, anonymity is defined as "*the extent to which a consumer's consumption behaviour is unlinkable or untraceable back to his or her identity"*.

Based on the definition of anonymity above and in your own opinion, please indicate the extent to which you think that a consumer may adopt anonymity in the following consumption contexts (1= *Not at all necessary to adopt anonymity*; 7 = *Very necessary to adopt anonymity*):

1. Cosmetic surgery
2. Purchasing sexual products
3. Gift giving
4. Purchasing second-hand products
5. Making high-involvement purchases (e.g., buying a house or a car)
6. Purchasing luxury products
7. Charity donation
8. Purchasing personal medications
9. Participating in a promotion campaign of a brand
10. Using rental services (e.g., Airbnb)

- The four behavioural indicators of anonymity:

Again, anonymity is defined as "*the extent to which a consumer's consumption behaviour is unlinkable or untraceable back to his or her identity"*.

Based on the definition of anonymity above and in your own opinion, please indicate the extent to which you think the following consumer behaviours are related to anonymity adoption (1 = *Not at all related to anonymity adoption*, 7 = *Very related to anonymity adoption*):

1. Using cash for payment
2. Shopping in person and alone
3. Using non-transparent package
4. Making a purchase with virtual currency (e.g., bitcoins)
5. Shopping at a distant store from home
6. Asking someone to purchase something for you