

CONSUMER ATTITUDES TOWARDS BEING ANONYMOUS (CABA): SCALE  
DEVELOPMENT AND VALIDATION

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# **CONSUMER ATTITUDES TOWARDS BEING ANONYMOUS (CABA): SCALE DEVELOPMENT AND VALIDATION**

## **Abstract**

Anonymity is an intriguing construct; while it is prevalent in the online world and pervades communication research, a thorough understanding of how consumers experience and react to anonymity is absent in the consumer behaviour domain. In this paper, we develop a scale which measures consumer attitudes towards being anonymous, adding to extant literature and positioning anonymity more properly in consumer research. Conceptually motivated by the Theory of Planned Behaviour, our scale delineates consumers as the agents of anonymous behaviour. Through six studies, we propose and validate that consumer evaluations of anonymity include both internally focused (freedom and independence subscales) and externally focused (ease and norm subscales) dimensions. Our research offers a more refined conceptualization of consumer anonymity, emphasises the distinction between anonymity and privacy, and explicates the significant implications of anonymity across online and offline contexts, paving the way for future studies in consumer behaviour.

*Keywords: anonymity, attitudes, scale development*

*Track: Consumer Behaviour*

## 1. Introduction

Anonymity is pervasive in daily encounters as in anonymous letters to media, tips to law enforcement, various support groups, and anonymous gift-giving services. It is the degree to which a source or an actor is unidentifiable (Anonymous, 1999). Contrary to the days when everyone in a neighbourhood knew one another, people in the contemporary world can now remain fairly “unidentifiable” in the crowd. Moreover, given the proliferation of online media and digital platforms, anonymity is increasingly achieved with ease as part of technology-mediated interactions. To examine the significant influences of anonymity on individuals and groups, literature on anonymous communication abounds (Marx, 1999; Spears & Lea, 1994).

In stark contrast, research addressing anonymity is scant in the consumer behaviour domain. Extant literature may not readily answer how people appraise and respond to anonymity in their consumption experiences. We define anonymity as “*the extent to which a consumer’s consumption behaviour is unlinkable or untraceable back to his or her identity*”. While some previous work has attempted to examine the reasons for and consequences of anonymity (e.g., Chen & Gao, 2021), it is vague as to how consumers, as the agents of their own anonymous behaviour, think and feel about anonymity. To shed a clearer light on this issue, we propose a scale about consumer attitudes towards being anonymous (CABA). Doing so, we make several contributions.

First, we draw timely attention to this commonly heard, yet understudied, construct of anonymity in consumer research. Anonymity stretches across domains such as communication (e.g., anonymous reviews), social psychology (e.g., anonymous support groups), criminology (e.g., anonymous witnesses), and politics (e.g., whistleblowing). Investigating anonymity in consumer behaviour not only improves the understanding of its multidisciplinary impact, but also illuminates how the construct is distinct under consumers’ perspective, creating potential grounds for future research.

Second, the limited previous work on consumer anonymity has mostly focused on instances of purchasing sensitive products (Blair & Roese, 2013), online dating (Zhou, Lu, & Ding, 2020), and donation behaviour (Chen & Gao, 2021). Examining CABA, we endeavour to evaluate consumers’ beliefs about and assessments of anonymity. As such, we conceptually distinguish between anonymity and privacy. That is, while the former refers to the unidentifiability of the source (Anonymous, 1998), the latter is about the control of information (Smith, Milberg, & Burke, 1996). Empirically, we differentiate between CABA and the need

for privacy, demonstrating that anonymity is not merely a subcategory of privacy but a construct of its own.

Third, using the Theory of Planned Behaviour (TPB; Ajzen, 2011) as a foundation for our scale development, we demonstrate that evaluations of anonymity incorporate both personal tendencies and contextual considerations. The scale helps to capture these inclinations across online and offline consumption contexts and highlights the significance of understanding and tracking CABA, providing better consumer insight for managerial applications.

## **2. Conceptual Development**

### ***2.1 Anonymity in extant literature***

Anonymity is not a new phenomenon; the anonymous writing of letters and essays dates back centuries (Anonymous, 1998). At its core, anonymity is about identity, or more precisely, identifiability, and its implications across disciplines are vast. For instance, anonymity has been the topic of legal debates in relation to anonymous testimony, which was often regarded as “too readily admissible” (Doak & Huxley-Binns, 2009). Psychologists have long examined the outcomes of anonymity, and perhaps one of the most influential works is Zimbardo’s (1969) deindividuation theory. The deindividuated state is a state in which people within a group are not seen or paid attention to as individuals, and the theory proposes that those people will have weakened internalised controls (e.g., guilt) and possess greater expression of inhibited behaviour. Regarding the social implications of anonymity, Marx (1999) suggested seven types of identity knowledge which indicate the degree of individual identifiability, raising an intriguing and profound question: “What’s in a name?” Indeed, in the contemporary world where personal identity is fuzzy, anonymous behaviour might pose significant consequences which in turn rely on assessments of anonymity. Consequently, a sensible question is what anonymity means to consumers, or more specifically, how attitudes towards being anonymous drive consumer behaviour.

### ***2.2 Consumer attitudes towards being anonymous (CABA)***

Anonymity has been extensively studied in the communication literature in relation to the delivery of a message between a sender and a receiver. Different types of and definitions for anonymity have been provided as part of this work, such as technical and social anonymity, process and content anonymity, and self- and other-anonymity (Hayne & Rice, 1997; Spears & Lea, 1994). A commonality across these diverse definitions of anonymity is the unidentifiability of the source (Anonymous, 1998).

The significance of identifiability extends beyond individuals into products and experiences in consumption contexts (Jones et al., 2018), and implications of anonymity are ubiquitous in consumer experiences of sensitive products, online dating, and donation behaviour (Blair & Roese, 2013; Zhou et al., 2020; Chen & Gao, 2021). Deviating from previous research which concentrated on consequences of anonymity (e.g., Marx, 1999), we investigate CABA when consumers are the anonymous sources themselves.

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). Hence, attitudes towards being anonymous portray consumers' beliefs about and assessments of anonymity. Since such attitudes should develop when consumers use anonymity in their consumption contexts, a CABA scale will reflect the evaluations of consumers towards their *own* anonymous behaviour. The TPB is useful to examine these attitudes.

The theory proposes that planned behaviour can be reliably predicted by three components: attitude towards the behaviour, subjective norm, and perceived behavioural control (Ajzen, 2011). Applying this framework to anonymous consumption contexts, attitude reflects consumers' belief and assessment regarding the outcomes of their anonymous behaviour; subjective norm reflects the perceived social pressure to use anonymity in a consumption context; and perceived behavioural control is consumer perception towards the ease of engaging in anonymous behaviour in that context.

Accordingly, we propose that a scale measuring CABA should incorporate both internal and external considerations. Particularly, the internal dimension refers to the general personal predispositions towards anonymity because of its perceived benefits and limitations, and the external dimension further shapes these personal evaluations in relation to a specific consumption context. The internal dimension reflects the attitude component of the TPB. Based on extant literature (Pedersen 1997; Marx, 1999), we propose that this dimension involves three factors: freedom, independence, and security. Freedom indicates that when anonymous, consumers may no longer restrict their consumption choices (e.g., consumers can freely try new products). Independence refers to the absence of influence imposed by social ties and presence (e.g., when anonymous, consumers feel less responsible for their behaviour in the eyes of their significant others). Finally, security refers to the perceived emotional consequences of adopting anonymous behaviour (e.g., consumers feel safe and comfortable when anonymous).

The external dimension incorporates the perceived ease of anonymous behaviour and norm-based considerations in relation to specific consumption contexts. More explicitly, some

consumers may not have an overall predisposition to strive for anonymity in general, but may still prefer to be anonymous if anonymity is convenient in a particular context (e.g., providing online anonymous reviews). This reflects the ease factor which relates to the perceived behavioural control component of TPB. Meanwhile, in contemporary society where there is a growing expectation of protecting one’s identity and personal information, anonymity is often regarded as a right in human interactions (Woo, 2006). As a result, consumers may be more prone to using anonymity when there is a salient norm encouraging them to do so, constituting the (subjective) norm factor, in alignment with TPB.

Even though norm and ease are more about perceptions and behaviour rather than attitudes per se, it is rational to include them in the CABA scale because they are contextual incentives on which consumers’ attitudes towards their behaviour are based, subsumed under the external dimension. Moreover, the differential effects of the two internal and external dimensions may bear important implications. For example, individual tendency drives anonymous behaviour, but external considerations may discourage it, making anonymity unobtainable. Vice versa, even if a context is conducive to being anonymous, consumers may ignore anonymity simply because they find it unnecessary or they are against the negative impression of being anonymous (i.e., “if you are decent, why don’t you reveal yourself?”)

In the next part, we conducted six studies to generate, refine, and validate the measurement items for our proposed CABA scale with these hypothesised underlying factors.

### 3. Methodology

The purpose, participants, and procedure of each study are summarised in Table 1.

Purpose	Participants	Procedure and Analysis
<b>Study 1: Item generation</b>		
Aims to probe consumer understanding and evaluations of anonymity to generate an initial pool of items.	Survey conducted on Prolific Academic, a UK-based crowdsourcing platform for scientific research, with 23 participants ( $M_{age} = 35.17$ , $SD_{age} = 13.442$ , range = 21-73 years; 60.9% female).	Participants responded to six open-ended questions where they were asked to <i>describe and share three examples of when and where consumers may prefer anonymity; explain why they think consumers may want to be anonymous; describe a context in which they, as consumers, preferred to be anonymous; state the reasons for this preference; share how they felt when they were anonymous; indicate whether they thought anonymity did help them in the context they described</i> . Participants completed the study by indicating their demographic information. An initial list of items was generated based on consolidated responses. <i>Face and content validity:</i> Five marketing specialists (four PhD candidates and one PhD student) were presented with the definitions of our proposed five factors along with the list of items we generated. Based on their evaluations, we eliminated and changed the wording of some items.

<b>Study 2: Item purification and factor analysis</b>		
Uses exploratory factor analysis to extract the items and confirmatory factor analysis to validate and compare different models.	Survey conducted on Prolific with 240 participants, with a final sample size of 231 following attention checks and longstring screening (Meade, & Craig, 2012). ( $M_{age} = 42.49$ , $SD_{age} = 13.304$ , range = 18-83; 63.2% female). Ratio of the number of questionnaires per item = 10:1.	Survey was described as a study about anonymity in consumption contexts. Participants indicated their level of agreement with a set of 22 items on a seven-point Likert scale (1= “Strongly Disagree”, 7 = “Strongly Agree”), along with demographics items. <i>EFA</i> : We employed SPSS v.26 with Principal Component Analysis and Varimax Rotation to extract factors that have Eigenvalues of at least one with at least three items. Retention criteria used was for each item to (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. <i>CFA</i> : We used Mplus v. 7.4 to conduct CFA for the extracted 17 items. The main model had two second-order factors which each comprised two first-order factors. We then compared our model with the competing model consisting of four correlated factors.
<b>Study 3: Test-retest reliability</b>		
Aims to attenuate the concern that attitude is often fleeting and not replicable for the same population, through test-rest reliability.	Original survey sent to the same 231 participants in Study 2. Final sample was 145 (62.77% of the original) ( $M_{age} = 44.52$ , $SD_{age} = 13.118$ , range = 20-83; 60% female).	Participants followed the same procedure as in Study 2. We used bi-variate Pearson correlations to check for each factor between before and after retest.
<b>Study 4: Relationship with Need for Privacy</b>		
Tests the claim that the proposed CABA scale is distinct from need for privacy.	Survey conducted on Prolific with 300 participants ( $M_{age} = 41.95$ , $SD_{age} = 12.730$ , range = 18-76; 57% female). Ratio of the number of questionnaires per item = 10:1.	The study was introduced as a survey about anonymity and privacy. Participants indicated their level of agreement with 17 items of CABA from Study 2 and 12 items of need for privacy (Trepte & Masur, 2017), with three subscales: informational, physical, and interactional privacy. Half of the participants answered the anonymity scale first and the other half responded to the privacy scale first. Last, they answered demographic items. For analysis, we checked the bi-variate correlations between all constructs.
<b>Study 5: A nomological network with other consumer constructs</b>		
<b>Study 5A:</b> Investigates the relationship of CABA with social anxiety and privacy concern.	Survey conducted with 254 students for course credits with a final sample of 247 after screening. (58.7% female) Ratio of number of questionnaires per item = 5:1.	Participants indicated their level of agreement with 17 items of CABA, 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), along with demographics items. All factors within each construct were randomised. For analysis, we checked the bi-variate correlations between all constructs.
<b>Study 5B:</b> Explores the relationship of CABA with need for influence, consumer susceptibility to interpersonal influence, and consumer need for uniqueness.	Survey conducted with 281 Prolific participants, with a final sample of 277 after screening. ( $M_{age} = 39.81$ , $SD_{age} = 12.597$ , range = 18-67; 57.8% female) Ratio of the number of questionnaires per item = 5:1.	Participants indicated their level of agreement with 17 items of CABA, nine items of need for influence (NFI; Bennett, 1988), 12 items of consumer susceptibility to interpersonal influence (CSII; Bearden et al., 1989), 12-item short version of consumer need for uniqueness (CNFU; Ruvio et al., 2008), the same social desirability scale, and demographics items. All factors within each construct were randomised. For analysis, we checked the bi-variate correlations between all constructs.

Table 1: Description of the purpose, participants, and procedure of each study

## 4. Findings

The findings of each study are summarised in Table 2.

Study	Findings
<b>Study 1</b> Item generation Face validity check	<ul style="list-style-type: none"> <li>We excluded items related to illicit consumption (e.g., gambling, drug...), and per specialist feedback.</li> <li>The final pool had 22 items (out of total 27 created items).</li> </ul>
<b>Study 2</b> Item purification and factor analysis	<p><i>For EFA:</i> KMO = .836. Bartlett's Test of Sphericity (<math>p &lt; .001</math>). Four factors retained: freedom (<math>\alpha = .891</math>), ease (<math>\alpha = .832</math>), norm (<math>\alpha = .815</math>), and independence (<math>\alpha = .707</math>).</p> <ul style="list-style-type: none"> <li>Discriminant validity was satisfactory for all factors.</li> <li>Convergent validity: factor loadings <math>\geq 0.65</math>, average variance extracted (AVE) <math>\geq 0.5</math>, and construct validity <math>\geq 0.774</math> (except independence factor had AVE = 0.461).</li> </ul> <p><i>For CFA:</i> Main model: <math>\chi^2 = 255.759</math>, <math>df = 115</math>, <math>p &lt; .001</math>, CFI = 0.923, TLI = 0.909, RMSEA = 0.073, SRMR = 0.066.</p> <ul style="list-style-type: none"> <li>Competing model: <math>\chi^2 = 254.127</math>, <math>df = 113</math>, <math>p &lt; .001</math>, CFI = 0.923, TLI = 0.907, RMSEA = 0.074, SRMR = 0.064.</li> </ul>
<b>Study 3</b> Test-retest reliability	<ul style="list-style-type: none"> <li>The correlation before and after retest for freedom: <math>r = .727</math>, ease: <math>r = .665</math>, norm: <math>r = .628</math>, and independence: <math>r = .696</math>; all <math>ps &lt; .001</math>.</li> <li>Also, <math>\alpha_{\text{Freedom}} = .903</math>, <math>\alpha_{\text{Ease}} = .821</math>, <math>\alpha_{\text{Norm}} = .840</math>, <math>\alpha_{\text{Independence}} = .776</math>.</li> </ul>
<b>Study 4</b> Relationship with Need for Privacy	<ul style="list-style-type: none"> <li>Freedom (<math>\alpha = .899</math>) and independence (<math>\alpha = .792</math>) significantly correlated with informational (<math>\alpha = .732</math>), physical (<math>\alpha = .727</math>), and interactional privacy (<math>\alpha = .757</math>; <math>ps &lt; .001</math>). Correlations ranged from low (<math>r = .190</math>) to moderate (<math>r = .407</math>).</li> <li>Ease (<math>\alpha = .808</math>) had no significant relationship. Norm (<math>\alpha = .875</math>) was positively related to informational and interactional privacy (<math>r = .280</math> and <math>r = .221</math>, <math>ps &lt; .001</math>).</li> </ul>
<b>Study 5</b> A nomological network with other consumer constructs	<p><b>Study 5A:</b> Freedom (<math>\alpha = .904</math>) was positively related to social anxiety (<math>\alpha = .904</math>, <math>r = .152</math>, <math>p = .017</math>) and privacy concern (<math>\alpha = .883</math>, <math>r = .232</math>, <math>p &lt; .001</math>). Independence (<math>\alpha = .697</math>) also correlated with the same constructs (<math>r = .180</math> and <math>r = .264</math>, <math>ps &lt; .001</math>).</p> <ul style="list-style-type: none"> <li>There was no significant relationship between ease (<math>\alpha = .708</math>) and anxiety or privacy concern, whereas privacy concern was positively related to norm (<math>\alpha = .821</math>, <math>r = .240</math>, <math>p &lt; .001</math>). There was no social desirability response bias in the study (all <math>ps &gt; .05</math>).</li> </ul> <p><b>Study 5B:</b> The relationships between freedom and independence with NFI, CSII, and CNFU were significantly positive, ranging from <math>r = .218</math> to <math>r = .373</math> (all <math>ps &lt; .001</math>). The same relationships were observed for norm (all <math>ps &lt; .05</math>).</p> <ul style="list-style-type: none"> <li>Ease was not correlated with CNFU, but had a positive relationship with NFI and CSII (<math>r = .119</math> and <math>r = .153</math>, <math>ps &lt; .05</math>). Social desirability was negatively related with freedom, independence, and CNFU (<math>r = -.177</math>, <math>r = -.136</math>, <math>r = -.198</math>, <math>ps &lt; .001</math>).</li> </ul>

Table 2: Study results

## 5. General discussion

Anonymity has been a common topic in the communication literature but received little attention in consumer research. Our work is among the first to fill this gap by examining how individuals, as agents of anonymous behaviour, evaluate their anonymity in consumption contexts. Across six studies, we show that consumers perceive anonymity as a way to broaden their choice (i.e., freedom), a tactic for breaking free from social influence (i.e., independence), an expected standard (i.e., norm), and a by-product of technology advancement (i.e., ease). A total sample of more than 1300 participants lent credence to our findings.

Our results have important implications. First, we show that anonymity, rather than being a component of privacy, is a construct of its own and has traversed research in different

domains. Our scale captures the nature of anonymity from extant literature and positions the construct more properly in consumer research. Doing so, we highlight the multidisciplinary impact of anonymity, paving the way for subsequent studies.

Second, the directions of the relationships between CABA and other constructs are intriguing. For example, individuals with high need for influence evaluate anonymity more positively. This is counter-intuitive because power often comes from name and title. To influence others, one should be identified. Yet, when an identity holds little or negative influence, persuasion may be more likely when the person is anonymous. Since our studies were correlational in nature, further research is needed to reach decisive conclusions.

Third, our attitude scale shows that when consumers are the anonymous sources, anonymity might be an important tool to achieve consumption goals. Anonymity can manifest in product packages (Jones et al., 2018) or implied in instances of purchasing embarrassing products (Blair & Roese, 2013). This means that anonymity is not necessarily restricted to individuals and their personal identity. Rather, it can either be a consequence (e.g., a solution to overcome embarrassment with an anonymous package), or an antecedent in consumer decision process (e.g., being anonymous, consumers feel freer to make a choice).

Fourth, the differential effects of the two internal and external dimensions provide meaningful insights. As subscales of internal considerations, freedom and independence have significant relationships with all other constructs. This is sensible because freedom and independence reflect the conscious pursuit of anonymity when consumers have predispositions towards it. These individual predilections should be more robust than the external considerations such as ease and norm. Nonetheless, this equally means that whether anonymity is employed may highly depend on the cultures and specific norms of the contexts. Briefly, many people may prefer anonymity but not all of them actually use it, simply because it is not just about what they want but also about how much the situations allow them to.

We acknowledge that our work has certain limitations, which might stimulate further research. First, per our scope, our scale may not be readily applied to illicit consumption contexts. Although individual tendencies should be pertinent across situations, contextual items may not be relevant in the case of illicit behaviour. Second, because we use the survey method, the findings are exploratory in nature. The valence of the correlations should be interpreted with care. Experimental manipulation is a good alternative method. However, based on our past research, anonymity is a highly contextual construct. Researchers who pursue causal explanations should first decide on the situations where consumers do want to use anonymity

in their purchase. Lastly, in our scale, consumers are the anonymous sources themselves. There is much yet to learn about how consumers perceive anonymous others (Spears, & Lea, 1994).

## 6. References

- 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.
- 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.
- Blair, S., & Roese, N. J. (2013). Balancing the Basket: The Role of Shopping Basket Composition in Embarrassment. *Journal of Consumer Research, 40*(4), 676–691.
- Chen, Y., & Gao, L. (2021). The Identified Donor Effect: Disclosure of the Donor's Name Shapes the Recipient's Behavior. *Journal of Consumer Psychology, 1–19*.
- 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.
- Doak, J., & Huxley-Binns, R. (2009). Anonymous Witnesses in England and Wales: Charting a Course from Strasbourg? *The Journal of Criminal Law, 73*(6), 508–529.
- Hayne, S., & Rice, R. (1997). Attribution accuracy when using anonymity in group support systems. *International Journal of Human-Computer Studies, 47*(3), 429-452.
- 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.
- Marx G.T. (1999). What's in a Name? Some Reflections on the Sociology of Anonymity, *The Information Society, 15*(2), 99-112,
- Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods, 17*(3), 437–455.
- 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.
- 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.
- 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.
- Trepte, S., & Masur, P. K. (2017). *Need for privacy*. In Zeigler-Hill, V., Shakelford, T. K. (Ed.), *Encyclopedia of personality and individual differences*. Springer.
- Woo, J. (2006). The right not to be identified: privacy and anonymity in the interactive media environment. *New Media & Society, 8*(6), 949–967.
- Zhou, Y., Lu, S., & Ding, M. (2020). Contour-as-Face Framework: A Method to Preserve Privacy and Perception. *Journal of Marketing Research, 57*(4), 617–639.
- Zimbardo, P. G. (1969). The human choice: Individuation, reason, and order vs. deindividuation, impulse, and chaos. In W. J. Arnold & D. Levine (Eds.). *Nebraska symposium on motivation* (Vol. 17, pp. 237–307). Lincoln: University of Nebraska Press.

## 7. Appendix – Consumer Attitudes Towards Being Anonymous (CABA) Scale

Factor	Item
Freedom	If people around me do not know who I am, I feel free to purchase whatever I want.
	As a consumer, I feel like I have more options when I am anonymous.
	Anonymity gives me more courage to try new products.
	If I am anonymous, I think I can purchase a wider variety of products and services.
	I can freely purchase and consume sensitive products when I am anonymous.
Independence	When I do not want my friends and my family to know what I buy, I buy it anonymously.
	People might judge me when I do not buy my products anonymously.
	Anonymous consumption helps me to separate my private life from my public life.
	I feel anxious if someone can link my purchases to my identity.
Norm	When purchasing products, consumers generally do not want to reveal their identity.
	Anonymity is necessary when consumers are purchasing something.
	I think every consumer prefers anonymity.
	Consumers expect to be anonymous when they make their purchases.
Ease	It is easy to be anonymous as a consumer.
	Companies help consumers to easily conceal their identity.
	I can easily purchase something without disclosing my identity.
	Technology makes it easier for consumers to be anonymous.