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The personal paradox matrix: understanding and mitigating customer tensions in phygital marketing

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The Personal Paradox Matrix: Understanding and Mitigating Customer Tensions in Phygital Marketing

Abstract

Although customers value personalization, they often experience complex and conflicting dualities with personalized market offerings, particularly within phygital marketing environments. Adopting an interpretive qualitative method and based on 36 in-depth interviews with customers from three countries, we uncover that customer responses to personalization can be categorized into three dimensions: content, privacy, and influence, aligned with psychological dissonance, privacy paradox, and psychological reactance theories. Furthermore, the findings reveal innovative customer responses, demonstrating how different customer cohorts mitigate tensions arising from personalization across these three dimensions. We propose a novel concept termed the “*Personal Paradox Matrix*” that offers four innovative strategies—Avoidance, Acceptance, Synthesis, and Neutral—on how firms can effectively navigate and mitigate the tensions arising from personalization. These strategies enable marketers to develop tailored approaches by profiling and segmenting customers effectively.

Keywords: Customer tensions, dualities, personalization, Personal Paradox Matrix, phygital marketing

1. Introduction

The upsurge in digital behaviour in modern markets has influenced customers to prioritize personalized products, services, content, or interactions (*personalization*) when making purchase decisions (Babatunde et al., 2024; Chandra et al., 2022; Kassemeier et al., 2023). Personalization acknowledges the uniqueness of each customer by designing and providing market offerings that resonate with their preferences (Rafiei & Yoganarasimhan, 2023). It often requires continuous customer engagement to gather each customer's personal and behavioural data to co-create a tailored experience (Chandra et al., 2022; Jayaswal et al., 2023).

With divided omnichannel consumer behaviour, personalization has been elevated to a new height, leading to "*phygital*" experiences (Banik & Gao, 2023; Batat, 2023). "*Phygital*" is a term coined by merging "*physical*," which represents the offline realm, with "*digital*," which denotes the online sphere (Mele & Russo-Spena, 2022). Phygital recognizes that while physical stores continue to play a crucial role in the customer journey, they no longer represent the entirety of the experience (Batat, 2023). Instead, a customer's interaction with a company may span multiple touchpoints—from social media and in-store digital kiosks to digital marketing campaigns and mobile apps. By seamlessly integrating these touchpoints, companies can offer a unified experience, ensuring consistency in their brand perception, whether customers engage online or in-store. Popular phygital experiences include using self-service digital kiosks to place orders at fast-food restaurants, leveraging augmented reality (AR) mobile apps to visualize products in-store at retail outlets, or receiving personalized promotions on smartphones while shopping. These smooth blends and seamless integrations of digital and physical environments allow companies to forge more immersive, substantial, and enduring

relationships with all customer groups by acknowledging their unique needs and preferences (Yao et al., 2024). For instance, younger consumers may lean toward digital interactions, while older shoppers tend to prefer in-store experiences. The phygital model caters to both, providing flexible options that appeal to all demographic cohorts (Banik & Gao, 2023; Yao et al., 2024). With these notable market dynamics, personalization plays a vital role today, contributing to a 5%–15% boost in revenue and a 10%–30% enhancement in marketing efficiency (Chandra et al., 2022; Otterbring et al., 2023).

Although customers value personalization, simultaneously, they may often experience complex and conflicting dynamics with personalized market offerings (e.g., Batat, 2022; Chandra et al., 2022; Pangarkar et al., 2022), creating tensions. For instance, despite customers feeling that personalization is appealing, they may simultaneously be concerned about how their data is collected and used to personalize such offers (Cloarec, 2020; Hoang et al., 2023). Customers' responses to these tensions create a paradox. Paradox is defined as “*contradictory yet interrelated elements that exist simultaneously and persist over time*” (Smith & Lewis, 2011, p. 382).

Prior research has extensively explored personalization in online contexts (Chandra et al., 2022; Johnson & Barlow, 2023), primarily focusing on the personalization process and types. Recently, some scholars (e.g., Bandara et al., 2021; Hoang et al., 2023; Singh & Söderlund, 2020) started probing customer tensions between a firm's need for customer information to personalize and a customer's desire for privacy, known as the personalization-privacy paradox. However, there is still a dearth of literature comprehensively delving into how customers approach different types of tensions in personalization and how they respond to these tensions by handling the dilemma of choosing between conflicting poles of these tensions (Lambillotte & Poncin, 2023).

Further, given the relatively nascent state of phygital marketing literature, we still have minimal knowledge of customer tensions related to personalization within phygital marketing and how customers would respond to these tensions, creating paradoxes (Batat, 2023; Johnson & Barlow, 2023). Understanding this is essential, as phygital marketing is now evolving (Mele & Russo-Spena, 2022; Del Vecchio et al., 2023), and paradoxical tensions can cause customers to feel irritated, resulting in exhibiting reactance behaviours towards it.

Adopting a paradox perspective, this qualitative exploratory study addresses these voids in prior literature. Through 36 in-depth interviews, the study provides exploratory insights into the complex and often conflicting dualities that customers experience with their response to personalization, particularly within phygital marketing environments. By doing so, our study makes three vital contributions.

First, adopting a paradox perspective (Smith & Lewis, 2011), we introduce the “*Personal Paradox Matrix*” to explain customers’ simultaneous positive and negative responses toward personalization efforts, particularly within phygital marketing environments. The matrix categorizes the dualities in customer responses to personalization into three main dimensions (cognitive vs. affective, freedom vs. control, and privacy vs. benefit) and highlights how these dualities interact and influence one another.

Second, based on three dimensions identified in the matrix, we uncover three distinctive personalization paradoxes within phygital marketing: the content-dissonance paradox, the personalization-privacy paradox, and the influence-reactance paradox. While previous literature predominately examines the personalization paradoxes from the privacy viewpoint (e.g., Cloarec, 2020; Zeng et al., 2021; Hoang et al., 2023), this study enabled us to uncover two new personalization paradoxes that have received scant scholarly attention. Grounded on psychological dissonance theory (Festinger, 1964), we argue that the content-dissonance paradox reflects how customers experience psychological discomfort due to a mismatch

between their expectations of personalized content and the reality of receiving overloaded, repetitive content. Further, the influence-reactance paradox reflects the tension between customers feeling guided to relevant information and coerced by personalized recommendations, leading to a perceived loss of autonomy depicting psychological reactance theory (Brehm, 1966).

Third, building on the “*Personal Paradox Matrix*,” we introduce a novel approach to plot customer reactions to personalization across the three dimensions, identifying areas where paradoxical tensions are most pronounced for different customer segments. The study presents unique customer responses to personalization, enabling marketers to effectively identify, understand, and manage these paradoxical tensions. Notably, it further aids in developing targeted strategies to address and mitigate these tensions.

The remainder of the paper is structured as follows. The following section discusses the theoretical underpinning of the study. Next, we explain the research methodology and discuss the findings in detail. Then, we offer theoretical and managerial implications stemming from the findings. Finally, limitations and future research directions are presented.

2. Literature Review

2.1 Personalization

Personalization is recognized as a vital marketing strategy that offers tailored products, services, content, or interactions based on customer data and learning to meet customers’ needs (Chandra et al., 2022). It benefits firms and customers by delivering the most suitable market offerings at the optimal time and in the best place to please customers (Babatunde et al., 2024).

Personalization is a three-step process that includes learning, matching, and evaluation (Murthi & Sarkar, 2003; Vesänen & Raulas, 2006). In the learning step, firms collect amassed data to learn more about their customers and infer their preferences through explicit and

implicit data collection (Murthi & Sarkar, 2003; Kaptein et al., 2015). Explicit data collection implies that customers provide data deliberately (Kaptein et al., 2015), for example, by filling out online forms voluntarily. By tracking customers' online search and purchase patterns, firms further implicitly collect data for targeted advertising and personalized recommendations (Kaptein et al., 2015). In the matching step, firms use explicit and implicit data to build sound customer profiles to provide seamless, personalized customer experience (Murthi & Sarkar, 2003). Finally, in the evaluation step, firms assess how personalization efforts contribute to creating an enriched customer experience (Murthi & Sarkar, 2003).

Although firms always expect positive customer responses to personalization, prior literature found that customers experience dualities and thus may respond negatively simultaneously, creating tensions (Babatunde et al., 2024; Chandra et al., 2022; Lambillotte & Poncin, 2023). For instance, although customers crave personalization offers as relevant and valuable, they may also worry about how their data is collected and used (Hoang et al., 2023). Customers' contrasting responses to these tensions create paradoxes (Lambillotte & Poncin, 2023). Thus, we framed this study theoretically based on the paradox theory to understand the complex and often conflicting dualities that customers experience when responding to personalization.

2.2 Paradox Theory

The paradox theory stems from dualities (Smith & Lewis 2011), which is inherently a common trait observed across different domains of business (i.e., innovation vs. tradition, autonomy vs. control, or short-term profits vs. long-term sustainability), where opposing requirements and responses give rise to these paradoxes (Keller & Sadler-Smith, 2019). Paradoxes are inherent in firms and individuals and remain latent until external stimuli trigger the dualities, creating tensions (Keller & Sadler-Smith, 2019). Previous literature emphasizes that customers shifting

from physical to phygital stores will likely trigger tensions (Danneels & Viaene, 2022; Del Vecchio et al., 2023).

Customers' responses to tensions can be categorised into four categories: choose one or the other conflicting pole (accept either pole of the tension and suppress the other), compromise (accept the two conflicting poles as extremes of the tension), take a contingency approach (accept either pole of the tension depending on the situation) and leverage the paradox to capture both poles (paradox perspective) (Lewis, 2000).

Selecting one pole of the tension and suppressing the other is only a short-term defensive solution. Such an approach will re-emerge the tensions (Lewis, 2000). Moreover, there are instances where taking such an approach to resolve tensions is challenging, as both poles are unavoidable and intricately interconnected, leaving no room for a clear-cut choice. Further, choosing one pole of the tension while suppressing the other may sometimes intensify the underlying tension, a phenomenon referred to as a "*vicious cycle*" in previous literature. (Lewis, 2000, p. 763). Lewis and Dehler (2000) view compromise as a defensive strategy that relies on a lacklustre midpoint to resolve tensions temporarily. In contrast, the contingency perspective would focus on what circumstances one pole or the other is more appropriate (Lewis & Dehler, 2000). The paradox perspective posits that long-term sustainability, what Lewis (2000, p. 763) terms "*virtuous cycles*," necessitates a creative approach to addressing multiple divergent poles. It suggests that customers recognize the conflicting demands of opposing poles and strive to find synergy between them, fostering receptive, innovative strategies for managing tensions. Tensions represent opportunities to devise integrative solutions for those embracing a paradoxical mindset (Lewis & Dehler, 2000).

While there is a growing discussion of customers' simultaneous positive and negative responses toward personalization, which creates paradoxes, a comprehensive exploration of how this phenomenon unfolds remains lacking (Lambillotte & Poncin, 2023). Although some

scholars (e.g., Cloarec, 2020; Hoang et al., 2023; Zeng et al., 2021) have delved into the personalization-privacy paradox within digital markets, there remains a gap in fully understanding how the dualities in customer responses to personalized marketing evoke a wide array of paradoxes (Lambillotte & Poncin, 2023). Further, researchers have yet to investigate this process within the phygital marketing realm (Del Vecchio et al., 2023). Therefore, leveraging paradox theory (Smith & Lewis 2011), our study explores how the tensions inherent in the shift from physical stores to phygital stores trigger paradoxes, asserting three theories—psychological dissonance, psychological reactance, and privacy paradox.

2.2.1 Psychological Dissonance Theory

Cognitive dissonance is a psychological phenomenon widely discussed in marketing and consumer behavior literature (Bolia et al., 2016). Building on the notion of cognitive dissonance, the cognitive dissonance theory advocates how individuals experience psychological discomfort when their cognitions (e.g., beliefs, attitudes, or behaviours) conflict when making purchase decisions (Festinger, 1964). The cognitive dissonance theory has been widely used in marketing literature to explain how consumers respond when confronted with incongruence between their pre-purchase expectations and the actual performance of a product (Chatterjee et al., 2023).

In the context of personalization, customers feel cognitive dissonance when their expectations of receiving timely and relevant personalized content contradict the reality of receiving irrelevant and overloaded content. For instance, Barta et al. (2023) highlight how customers experience cognitive dissonance in online environments when they face a disparity between the desire to receive relevant, personalized content and an influx of overloaded digital information. Additionally, research by Wienrich et al. (2024) emphasizes the dilemma about exact content and information overflow leading to psychological dissonance in digital environments. These findings underscore the need to explore the complex interplay between

consumer expectations, content relevance, and psychological dissonance in personalized content experiences, which has not received adequate attention in phygital marketing.

2.2.2 Psychological Reactance Theory

Psychological reactance theory, proposed by Brehm in 1966, illustrates how individuals respond to perceived threats to their autonomy and freedom. When individuals face such threats, they enter a state of reactance, compelling them to resist and reclaim their freedom actively. They may also respond with anger and counteraction to restore their sense of autonomy (Lambillotte et al., 2022).

Although personalization offers numerous benefits (Kaptein et al., 2015; Lambillotte & Poncin, 2023), the marketing literature advocates that personalization efforts were shown to produce psychological reactions among customers (Brinson et al., 2018). For instance, some customers do not perceive personalized offers, promotions, or recommendations as helpful. Instead, they perceive them as limiting their freedom and autonomy in purchasing decisions, resulting in reactance behaviour (Brinson et al., 2018; Lambillotte et al., 2022).

The psychological reactance theory has found extensive application in marketing literature, particularly in analyzing customers' reactance behaviour, primarily focused on using personalized recommendation systems (Chen et al., 2022; Lee & Lee, 2009), personalized advertising and marketing promotions (Brinson et al., 2018; Chen et al., 2019). However, the potential of this theory in exploring customers' reactance behaviour during their transition from physical to phygital stores, particularly in the context of personalization efforts, remains untapped.

2.2.3 Privacy Paradox Theory

Privacy concerns significantly influence consumer behaviour associated with information disclosure and other behavioural intentions within digital environments (Bandara et al., 2021; Del Vecchio et al., 2023; Liyanaarachchi et al., 2024). Prior literature has examined customers' attitudes and behaviours related to privacy from the privacy paradox theory perspective, which entails that customers engage in a rational cognitive assessment by weighing the advantages and disadvantages of disclosing information when navigating online markets (Liyanaarachchi et al., 2024).

Building on the privacy paradox theory, personalization literature has identified critical privacy issues induced by the trade-off between personalization benefits and privacy risks, known as the “*personalization–privacy paradox*” (Barnes, 2006; Norberg et al., 2007). This paradox poses a significant challenge due to the disconnect between the intentions to safeguard privacy and the tendency to disclose information (Acquisti et al., 2023). As customer data persist online indefinitely, even after their initial use, customers face a dilemma in assessing privacy risks (Liyanaarachchi et al., 2024). Moreover, with phygital marketing, the lack of ownership or control over data after collection heightens privacy concerns (Del Vecchio et al., 2023) as firms use personal data beyond the intended purpose, which customers perceive as invasive (Wan et al., 2024).

Incorporating these theories alongside the paradox theory enriches our understanding of the complexities and nuances of the transition to phygital marketing environments and provides a novel theoretical paradigm. Considering the interplay between these theories, our study offers valuable insights into how firms can effectively navigate and mitigate the tensions arising from personalization efforts within phygital marketing.

3. Methodology

3.1 Research Approach

Given the scarcity of studies on understanding and navigating the complexities arising from personalization efforts in phygital marketing (Del Vecchio et al., 2023; Johnson & Barlow, 2023), we adopted an interpretive qualitative approach and conducted 36 in-depth interviews with customers from three countries: Sri Lanka, Australia, and the United Kingdom.

In sample selection, we determined to maximize variation to capture customer perceptions fully and generate solid findings (cf. Suri, 2011). Thus, we selected retail customers who reported having previously been exposed to phygital marketing with differing backgrounds. These customers differed in age, gender, education level, and phygital marketing experience. Further, selecting respondents from different countries with varying levels of phygital marketing implementation also allowed us to capture the diversity of customer responses to phygital marketing. As a developed country, most of the United Kingdom's customers are shifting towards digital interactions, even in physical stores (Silva & Cachinho, 2021). In contrast, despite technological advancement in Australia, most consumers still prefer in-store shopping with physical interactions more than in any other developed country, resulting in a relatively slower shift toward digital interactions (Dharmesti et al., 2021). Phygital marketing is still in its early stages in Sri Lanka, with most retail outlets experiencing digital transformation (Perera & Galdolage, 2021). Therefore, these three countries offer compelling opportunities to capture the diversity in customers' phygital experiences. Table I presents a detailed description of the study participants.

We recruited respondents using purposive sampling, deliberately selecting participants based on their relevance and potential to provide valuable insights, thereby maximizing the exploratory nature of the findings. The purposive sampling inclusion criterion required all respondents to have at least once a month of experience using phygital marketing practices for the last three months before the day of the interview. This heterogeneous sample required 32 respondents to achieve data saturation, which aligns with Hennink and Kaiser's (2022)

observation that in most qualitative studies, 9 and 17 interviews are generally required to reach saturation. However, following Lambillotte and Poncin (2023), we conducted four additional interviews for greater accuracy, totalling 36.

Table I: Respondent profile

Code	Country	Generational cohort	Gender	Highest educational qualification	Exposed to phygital marketing since ...
B1	Sri Lanka	Baby Boomers	Female	Master's degree	2020
B2	Sri Lanka	Baby Boomers	Male	Postgraduate diploma	2022
B3	Sri Lanka	Baby Boomers	Male	Bachelor's degree	2020
B4	Australia	Baby Boomers	Male	Master's degree	2022
B5	Australia	Baby Boomers	Male	Bachelor's degree	2018
B6	Australia	Baby Boomers	Female	Bachelor's degree	2020
B7	United Kingdom	Baby Boomers	Male	Postgraduate diploma	2020
B8	United Kingdom	Baby Boomers	Male	Bachelor's degree	2017
B9	United Kingdom	Baby Boomers	Female	Master's degree	2018
X1	Sri Lanka	Generation X	Female	Master's degree	2020
X2	Sri Lanka	Generation X	Male	Bachelor's degree	2022
X3	Sri Lanka	Generation X	Male	Bachelor's degree	2019
X4	Australia	Generation X	Male	Master's degree	2018
X5	Australia	Generation X	Male	Bachelor's degree	2020
X6	Australia	Generation X	Female	Master's degree	2020
X7	United Kingdom	Generation X	Male	Bachelor's degree	2016
X8	United Kingdom	Generation X	Female	Bachelor's degree	2019
X9	United Kingdom	Generation X	Male	Master's degree	2020
Y1	Sri Lanka	Generation Y	Male	Bachelor's degree	2018
Y2	Sri Lanka	Generation Y	Female	Postgraduate diploma	2020
Y3	Sri Lanka	Generation Y	Female	Bachelor's degree	2020
Y4	Australia	Generation Y	Female	Postgraduate diploma	2016
Y5	Australia	Generation Y	Male	Master's degree	2018
Y6	Australia	Generation Y	Male	Bachelor's degree	2020
Y7	United Kingdom	Generation Y	Female	Bachelor's degree	2016
Y8	United Kingdom	Generation Y	Female	Master's degree	2018

Y9	United Kingdom	Generation Y	Male	Bachelor's degree	2020
Z1	Sri Lanka	Generation Z	Male	Bachelor's degree	2020
Z2	Sri Lanka	Generation Z	Female	Postgraduate diploma	2020
Z3	Sri Lanka	Generation Z	Female	Bachelor's degree	2021
Z4	Australia	Generation Z	Female	Postgraduate diploma	2016
Z5	Australia	Generation Z	Male	Master's degree	2018
Z6	Australia	Generation Z	Male	Bachelor's degree	2020
Z7	United Kingdom	Generation Z	Female	Bachelor's degree	2016
Z8	United Kingdom	Generation Z	Female	Master's degree	2018
Z9	United Kingdom	Generation Z	Male	Bachelor's degree	2018

Based on reviewing prior literature, an interview protocol was developed to elicit respondents' simultaneous positive and negative responses toward personalization efforts and how such dualities trigger tensions in them. The interview protocol was pilot-tested with five potential respondents before the formal interviews began. The pilot test revealed that some respondents had difficulty understanding the intent behind specific questions, as the concept of phygital is still evolving. As a result, several questions were reworded until the pilot interviewees no longer required significant clarification. Additionally, the pilot interviews highlighted the importance of visual aids. As Sekaran and Bougie (2016) note, visual aids are particularly effective in eliciting specific ideas and concepts that may be difficult to express verbally. Therefore, a presentation incorporating images of various phygital experiences was prepared to help participants better understand the context and purpose of the questions. (Sekaran & Bougie, 2016). At the start of each interview, participants were shown the same presentation. To give a clearer sense of the visual aids used, we have included several screenshots from the presentation in Appendix A.

Although the protocol provided some direction to the interview, we conducted interviews in-depth, allowing the respondents to discuss additional topics outside the protocol. First, broad questions were posed to help respondents become familiar with the topic, such as:

“Do you use both physical and digital interactions when purchasing retail products?” “Have you ever used digital tools like kiosks, QR codes, digital signage, or interactive displays in retail stores?” and “Have you used AR mobile apps to visualize products in-store or received personalized promotions on your smartphone while shopping?” These questions were designed to encourage respondents to recall their phygital experiences and share their initial thoughts and opinions. Then, we asked the respondents to describe their recent phygital marketing experience. The objective was to allow them to express their views freely about the experience and how they perceive and respond to it. As anticipated, the visual aids helped guide respondents in the right direction, making it easier for them to understand and answer the questions effectively. However, since the primary purpose of using these questions was to introduce the concept and assist respondents in recalling their previous phygital experiences, the quotes from these questions were not heavily integrated into the manuscript.

Next, they were asked to describe how they would experience dualities when responding to personalization efforts in phygital marketing environments and their perceptions of how these dualities trigger tensions. They were further invited to share their views on mitigating these tensions to control possible paradoxical effects. Some of the typical questions include, *“How would you explain your recent personalization experiences in phygital marketing environments?” “Can you describe how you responded to such personalization experiences?” “Have you noticed any conflicting responses or dualities in your reactions?” “What are the potential reasons for such conflicting responses?” “How do you think conflicting responses might create tension, and could you explain the potential sources of such tension?” and “What are your concerns about possible customer tensions resulting from personalization in phygital marketing?”* Additionally, follow-up questions were used to clarify and further explore respondents' responses, often probing the reasoning behind their thoughts or opinions. For example, questions like *“Why do you think that?”* helped deepen the

conversation. This approach provided a more comprehensive and detailed understanding of respondents' perspectives and experiences.

All interviews were conducted in English across all countries, including Sri Lanka, as most Sri Lankans are fluent in English due to the country's history as a former British colony until 76 years ago (Liyanage, 2021). Like many other postcolonial nations, Sri Lanka has a strong literary tradition in English, and the language is widely spoken across all generational cohorts, particularly in urban and semi-urban areas (Mendis & Rambukwella, 2020). The interviews were conducted online, took 52 to 94 minutes on average, and were conducted over four months from December 2023. The interviews were recorded with the respondents' consent, transcribed verbatim soon after each, and supplemented by field notes. Each interview transcript produced an average of twenty-five typed pages.

3.2 Data Analysis

Drawing from Magnani and Gioia (2023), the data analysis process follows three key stages: (i) creating in-vivo codes and categories, organizing them into a data structure including 1st-order codes (informant-centred), 2nd-order themes (theory-centred), and aggregate dimensions; (ii) developing a grounded theoretical model through continuous comparison of data across informants; (iii) presenting findings using data-driven narratives, incorporating 2nd-order themes and aggregated dimensions, and iteratively using 1st-order in-vivo codes. (see Table II).

Following Lincoln and Guba (1985), we used multiple strategies to ensure trustworthiness. Credibility is enhanced through an extensive literature search and peer debriefing to guarantee the internal validity of results (Lincoln & Guba, 1985). Peer debriefing is carried out by consulting three peers who are well-experienced in the research domain but have no personal interest in the project to enhance the validity of the findings (Spall, 1998). Transferability was assured through the diversity of the sample selected and thick descriptions of the data to contextualize the findings (Lincoln & Guba,

1985). This enabled the reader to interpret the interview data independently, thus enhancing the transferability of the findings. Before data analysis, we used member checking to ensure confirmability of the findings (Birt et al., 2016).

The interview transcripts were forwarded to the respondents through e-mail, requesting to confirm whether we appropriately interpreted the viewpoints based on what they said during the interviews. Further, all four researchers manually validated the coding, employing a percentage agreement method to assess levels of agreement. Intercoder agreement demonstrated an 82% overlap, while the remaining 18% of data was deliberated among four researchers until a consensus was reached (Landis & Koch, 1977). Finally, three researchers from different fields were invited to examine the whole research process for its rigorousness as external auditors, thus affirming the conformability and dependability of the findings.

In constructing first-order concepts, polarized responses revealed that despite the benefits personalization offers, customer expectations about content, privacy concerns, and desire for autonomy are the main reasons customers experience conflicting dualities when responding to personalization, particularly within phygital marketing environments. This led to the development of second-order categories of cognitive vs. affective responses, privacy vs. benefit, and freedom vs. control. The themes of content overload, relevance mismatch, and expectation vs. reality gap emerged with cognitive vs. affective responses, while privacy vs. benefit themes included data vulnerability, surveillance anxiety, and transparency. The freedom vs. control theme encompassed loss of autonomy, coercive personalization, and resistance to influence (see Table II for data structure).

These themes are grounded in psychological dissonance, psychological reactance, and privacy paradox theories (Gioia, 2021). Consequently, aggregate dimensions of content-dissonance paradox, personalization-privacy paradox, and influence-reactance paradox were derived, reflecting dynamic data analysis facilitated by grounded theory (Gioia et al., 2013). A

substantive conceptual outcome was synthesized into a novel concept termed the “*Personal Paradox Matrix*.” This novel concept reflects an innovative outcome in line with Gioia’s emphasis on qualitative studies to contribute to new conceptual or theoretical advancements (Magnani & Gioia, 2023).

The conceptual model, illustrated in Figure I, is meticulously developed and firmly grounded in the data structure. It provides a robust framework for future investigations and also acts as a springboard for formulating propositions and converting them into hypotheses that can be empirically tested.

3.3 Findings

The analysis revealed a unique paradigm for theory and practice. The ideas of respondents were similar on theoretical grounds, leading to psychological dissonance, psychological reactance, and privacy paradox theories. This provided the foundation for constructing the innovative model, the “*Personal Paradox Matrix*” (see Table II: Data Structure). However, respondents expressed contrasting and distinct perspectives on personalization across the three dimensions, which varied notably across different customer segments. These responses indicate a novel perspective for marketers to effectively identify, understand, and manage these paradoxical tensions (see Table III Selective quotes, customer segments, and strategy).

3.3.1 Content-Dissonance Paradox

We discovered a previously unknown personalization paradox, namely the content-dissonance paradox. This paradox reflects how customers experience psychological discomfort with confusion between their expectations of personalized content and the reality of receiving overloaded content. Almost all the respondents spoke about how they experienced this paradoxical tension while sharing their phygital marketing experiences.

Table II: Data structure

1 st order concepts	2 nd order themes	Theoretical grounding	Aggregate dimensions	Iterative process for theory building	Substantive theory/concept
<p>Repeated exposure to similar content.</p> <p>Saturation with homogeneous recommendations.</p> <p>Lack of new and diverse product suggestions.</p> <p>A mismatch between evolving tastes and static recommendations.</p> <p>Perception of irrelevant advertisements.</p> <p>Content fatigue from repetitive promotions.</p> <p>Frustration with algorithmic assumptions.</p> <p>Confusion between personalized and general content.</p>	<p>Content overload</p> <p>Relevance Mismatch</p> <p>Expectation vs. reality gap</p>	Psychological dissonance	Content-Dissonance Paradox	<p>Practical tool for understanding customer responses in phygital environment.</p> <p>Categorizes responses into cognitive, emotional, and behavioural dimensions.</p> <p>Balances desire for tailored experiences and privacy concerns.</p>	Personal Paradox Matrix
<p>The feeling of being manipulated by personalization.</p> <p>Resistance to targeted advertisements.</p> <p>Perception of forced product recommendations.</p> <p>Annoyance with persistent personalized pop-ups and advertisements.</p> <p>Sense of losing control over purchase decisions.</p> <p>Distrust in personalization motives.</p> <p>Irritation from unsolicited personalized emails.</p> <p>Pushback against automated decision aids.</p>	<p>Data vulnerability</p> <p>Surveillance Anxiety</p> <p>Transparency</p>	Privacy paradox	Personalization-Privacy Paradox	<p>Highlights interplay between conflicting customer preferences.</p> <p>Maps customer reactions to identify areas for improvement.</p> <p>Enhances understanding of simultaneous positive and negative responses.</p>	

<p>Anxiety over data misuse.</p> <p>Reluctance to share personal information.</p> <p>Fear of identity theft.</p> <p>Concern about constant surveillance.</p> <p>Worry about data permanence and tracking.</p> <p>Doubts about data security.</p> <p>Discomfort with personalized content based on implicit data.</p> <p>Perception of privacy invasion from data collection.</p>	<p>Loss of autonomy</p> <p>Coercive personalization</p> <p>Resistance to influence</p>	<p>Psychological reactance</p>	<p>Influence-Reactance Paradox</p>	<p>Guides development of targeted mitigation strategies.</p> <p>Facilitates continuous improvement in personalization approaches.</p>	
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On the one hand, from a cognitive perspective, most respondents considered personalization offers them tailored content and recommendations based on their preferences, search patterns, purchase behaviour, and location (e.g., “*tailored offers*” and “*filtering through the noise*”). Thus, they do not want to waste time finding information from different sources. However, from an affective perspective, some participants noted that personalization may simultaneously overload them with particular content related to their previous purchases (“*lack of new and interesting content*” “*this is boring*”). Over time, such personalization efforts force them to become saturated with the same homogenous content, resulting in content fatigue and irritation. As respondents B7, X2, Y5, and Z3 explained:

“I am irritated with the tailor-made promotions of this retail store. All I see are cosmetics and furniture. Yes, I like cosmetics and furniture very much, and this store has certainly taken note. It creates a “filter bubble,” where I am only presented with content that aligns with my previous purchases and searches. I feel like I have become saturated with the same homogenous content.” (B7)

“I feel like downloading this app is a curse to me now. It’s pretty much the same old content being posted repeatedly related to some things I looked up months ago. It really disturbs me as my tastes have changed now.” (X2)

“For me, it is good to use digital technology, but however it is not necessarily useful. I feel stuck in a loop of repetitive content that no longer aligns with my evolving interests.” (Y5)

“Personalized content is boring and unhelpful. Time for a refreshing change!” (Z3)

These evidences echo the concept of cognitive dissonance (Festinger, 1964), highlighting that customers experience cognitive dissonance when their expectations of personalized content contradict the reality of receiving overloaded, irrelevant content. Since customers are often multifaceted and change over time (Batat, 2022; Banik & Gao, 2023), such

non-aroused content leads them to miss out on attractive, diverse market offerings and thus feel psychological discomfort.

3.3.2 Personalization-Privacy Paradox

The personalization-privacy paradox, widely discussed in recent literature (Cloarec, 2020; Hoang et al., 2023), also emerges as a personalization paradox within phygital marketing. The personalization-privacy paradox occurs when customers are faced with a dilemma between sharing their personal information to improve the accuracy and relevance of personalization on the one hand and their concerns about how their data will be used and whether they are vulnerable to manipulation, nuisance, or fraud on the other hand (Zeng et al., 2021).

On seeing personalized offers that matched the content they searched before, some respondents mentioned that they felt it was an infringement of privacy that gave firms access to threatening amounts of information about them. Respondents perceived this as a form of domination because they thought that they had lost their autonomy and control (*“perpetuates autonomy harms”*), which led them to feel tracked (*“track previous purchases”*), trapped (*“you are being targeted”*), and annoyed (*“bothers me”*). Respondents Y7, X8, and Z1 described this as follows:

“I’ve been using this store’s mobile app and online ordering system for a while now, but lately, I’ve been bombarded with promotional emails. While some have been useful, providing information about new arrivals and offers, I can’t shake the feeling that my privacy is being compromised. It seems like my search history and email are being used in ways that feel intrusive. I am feeling confused.” (Y7)

“Personalized customer experiences are important.....but not at the cost of data privacy.” (X8)

In line with respondents Y7 and X8, most other respondents also highlighted that although they felt personalization was helpful, simultaneously, they started worrying about how their data was collected and used to target them like this (i.e., *“How do they know so much*

about me? ”). It seems they are unclear whether these personalization offers are generated based on the information they deliberately provided to a firm (i.e., explicit data) or based on the data inferred by the firm’s website or social media profiles (i.e., implicit data). This feeling may lead to privacy cynicism, making them think their data could be shared with other firms without their consent, further invading their privacy.

“Everyone likes to feel special. And who doesn't like a great deal, especially on products that you really want? Our digital footprints are literally everywhere. With our smartphones, we create trails of our presence without even knowing it. But whenever I feel I have become "creped out" by some retailers, I perceive it as an invasion of privacy, so I will quickly spend my wallet elsewhere.” (Z1)

In agreement with respondent Z1, some other respondents also spontaneously stated that their personalization experiences made them seriously consider such tracking and targeting as harassment and whether they needed to continue doing transactions with some firms again. All respondents knew that firms collect and use their data, but some had severe doubts about how firms implicitly collect data, intensifying privacy concerns.

3.3.3 Influence-Reactance Paradox

We also uncover another personalization paradox, the influence-reactance paradox. The influence-reactance paradox reflects the tension between customers feeling guided to relevant information and coerced by personalized recommendations, leading to a perceived loss of autonomy. This resonates with the principles of psychological reactance, as individuals resist external influences that limit their freedom of choice (Brinson et al., 2018; Lambillotte et al., 2022). The respondents argue that shifting to a phygital environment contributes to a lack of freedom for consumer choice, leading to psychological reactance.

From a cognitive viewpoint, most respondents expressed that personalization guides them to the relevant information they need without wanting to look for other data sources,

wasting time (*“recommend”* and *“direct you to what you want”*). In contrast, from an affective viewpoint, some felt personalization simultaneously made them influenced. Some respondents revealed that they thought some firms forced them to purchase certain products, disregarding their preferences (*“forced to purchase”*). Recounting their phygital marketing experiences, respondents Y2 and Z7 described this as follows:

“Some retailers guide you so you can quickly access information you might be interested in without the need to visit the store, and lets you place orders at your convenience. However, I do not see this with most others; they simply push their offers to us. It is almost like we lost our autonomy and have to rely on their recommendations.” (B8)

“Although personalization enables me to find what I’m looking for in phygital stores, in some cases, firms influence me to view certain offers and content I am no longer interested in, which gives me a feeling that I lost control over finding what I really want.” (Y2)

“I feel like personalization, whether online or offline, is a forced multiplier. It definitely limits my choices and disturbs my freedom to make purchases. It always directs me to the offers that I have purchased recently. Seriously, I don’t like this, and now I don’t react to such personalization efforts at all.” (Z7)

These findings corroborate the concept of psychological reactance (Brehm, 1966), representing how customers feel restricted in their ability to act when exposed to personalization efforts (Lambillotte & Poncin, 2023). As the above excerpt implies, most respondents felt that phygital marketing efforts are externally controlled and influence their purchase decisions; thus, they *“lost their self-control and freedom in purchasing.”* Since this is a strong, negative feeling that may have negative consequences (Jain et al., 2017), we emphasized that firms should understand that although personalization guides customers to find what they want, it should not be explicitly viewed as a control when they make purchases.

3.3.4 *Personal Paradox Matrix*

This study introduces the “*Personal Paradox Matrix*,” visualizing customers’ simultaneous positive and negative responses toward personalization efforts, particularly within the phygital marketing environments. It includes three core components.

1. *Paradox Theory, Personalization, and Duality Dimensions*: The matrix categorizes the dualities in customer responses to personalization within phygital marketing environments into three main dimensions:
 - Cognitive vs. affective responses: This approach builds on psychological dissonance theory and captures how personalized offers and content impact customers’ thinking and emotions.
 - Freedom vs. control: Based on psychological reactance theory, balancing customers’ desire for autonomy with the perception of being controlled by personalized offers and content.
 - Privacy vs. benefit: Grounded on privacy paradox, managing the trade-off between privacy concerns and the advantages of tailored experiences.
2. *Interaction and Interdependence*: The matrix highlights how these dualities interact and influence one another. For instance, increased privacy concerns can exacerbate cognitive dissonance, leading to stronger psychological reactance.
3. *Mapping Reactions*: Marketers can use the matrix to plot customer reactions across these dimensions, identifying areas where paradoxical tensions are most pronounced. This mapping aids in developing targeted strategies to address and mitigate these tensions by profiling the customers based on age.

The “*Personal Paradox Matrix*” offers a structured approach to understanding and managing customers’ paradoxical responses to personalization. By categorizing, interacting with, and mapping these responses, marketers can craft more effective strategies that are more attuned to

their customers' nuanced needs and preferences. This understanding aids in creating a more effective and customer-centric strategy, balancing personalized experiences with respecting customer autonomy and privacy, ultimately leading to greater customer satisfaction and loyalty. Marketers can use the matrix to plot customer reactions across the three dimensions, visually representing where paradoxical tensions are most pronounced.

This process involves profiling customers based on demographic factors such as age, gender, and cultural background to identify specific groups that may experience higher tension levels in certain dimensions. With a clear map of customer responses, marketers can develop targeted strategies to address and mitigate these tensions. For example, if younger customers exhibit high levels of reactance due to perceived control, marketers might focus on enhancing the sense of autonomy in their campaigns for this demographic. By navigating the complexities of personalization through the “*Personal Paradox Matrix*,” marketers can create more effective and customer-centric strategies. This involves striking the right balance between personalized experiences and respecting customer autonomy and privacy, leading to greater customer satisfaction and loyalty. Additionally, it allows for proactive management by anticipating and addressing potential sources of cognitive dissonance and psychological reactance before they become significant issues. Through enhanced customer insights, marketers can gain deeper insights into customer preferences and behaviours, enabling more precise and impactful marketing interventions.

Figure I visually presents the “*Personal Paradox Matrix*. ”

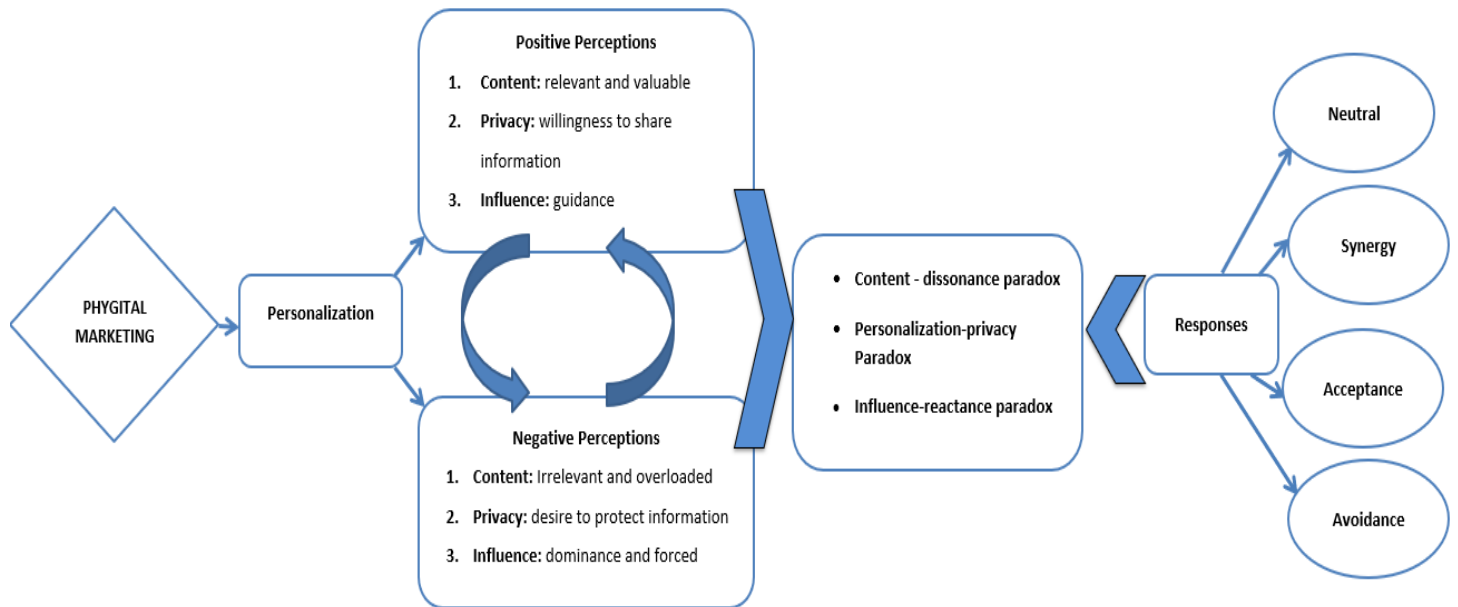


Figure I: Personal Paradox Matrix

3.3.5 Customer Segments and Mitigation Strategies

During our analysis, we uncovered four different customer segments known as “*Information Filter*,” “*Reviewer*,” “*Deal-seeker*,” and “*Technophobe*” and the types of mitigation strategies they adopt to manage tensions that arise from personalization efforts in phygital marketing: avoidance, acceptance, synthesis, and neglect.

Figure II shows the levels of desire for personalization by each segment and the mitigation strategies adopted by each segment.

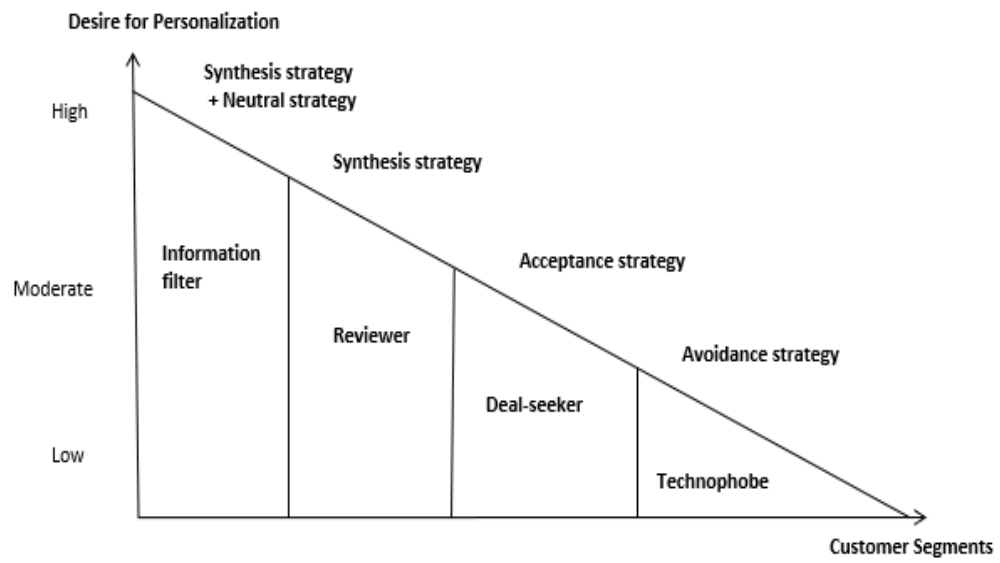


Figure II: Customer segments and mitigation strategies

Table III: Selective quotes, customer segments, and strategy

Customer segments	Selective quotes from respondents				Strategy
Information Filter	<i>“No matter what, whether it is online or offline, I am usually neutral to personalized offers, content, or even interactions. I don’t get excited about them and react. I react only if the offer or the content is relevant to me. If not, I simply omit them.”</i>	<i>“Making slight adjustments to a static, one-size-fits-all offer and calling it personalization will not be appealing, and I will not respond to such offers. I respond only to offers that I feel are deeply personalized and match my expectations.</i>	<i>“Since we are immersed in a world full of ultra-curated content and offers, I constantly filter and respond only to personalized content and offers that intuitively align with my motives and interests, prioritizing those anticipating my needs.”</i>	<i>“Despite whether physical or phygital, I always filter personalized content and only trust concise, clear, and authentic content....mostly peer reviews.”</i>	<p>Neutral Strategy: Filter out irrelevant personalized offers, content, and interactions. Focus only on deeply personalized, concise, transparent, and authentic information and offers.</p> <p>+</p> <p>Synthesis Strategy: Seek a balance between personalization benefits and drawbacks, relying on peer reviews and ratings, gives the sense of self-recognition and care.</p>

Reviewer	<p><i>“Although there are negative consequences associated with personalized offers, content, and interactions, I still feel they are appealing. At least they are something curated to my needs. It gives me the feeling that they still care for me.”</i></p>	<p><i>“As with everything else, personalization has both positive and negative sides. On the positive side, it allows me to find the information I need faster and more efficiently. On the negative side, it locks me into the same old offerings. However, I don’t perceive personalization as bad and should not be avoided. Instead, I rely on peer reviews and ratings to ensure that my negative feelings do not exceed the benefits I get from quickly accessing information without wasting time.”</i></p>	<p><i>“With both positive and negative consequences of personalization in phygital marketing, it is not easy to strike a balance; for me, it is 50/50. Although I still care about privacy issues with personalization, personalized offers give me a sense of self-recognition. So still, I tend to react to it in some instances.”</i></p>	<p><i>“Personalization, whether in a physical store or phygital store, has both pros and cons. I trust peer reviews to ensure the benefits outweigh the negatives.”</i></p>	<p>Synthesis Strategy: Seek a balance between personalization benefits and drawbacks, relying on peer reviews and ratings, gives the sense of self-recognition and care.</p>
Deal-seeker	<p><i>“Although I feel I am losing my freedom of choice with personalization, it often allows me to find the best deal. I am not always convinced by personalization. However, I understand that it is pretty natural. Whether online or offline, I accept it whenever it offers me the best price or the benefit.”</i></p>	<p><i>"I think it's very subjective. I sometimes prefer online shopping, but I also sometimes prefer offline shopping. However, the best thing about these shifts is that despite whether online or offline, they allow me to claim the best deal."</i></p>	<p><i>“Personalization has both good and bad sides. No matter what, I accept it whenever it gives me the best deal.”</i></p>	<p><i>“Like everything else in the world, personalization also has both good and bad, whether it is physical or digital. What I think is we should not criticize it; instead, we should be optimistic and find the best deal out of it.”</i></p>	<p>Acceptance Strategy: Accept personalization paradoxes as unavoidable, seeking the best deals across physical and phygital stores.</p>

<p>Technophobe</p>	<p><i>“It’s pretty simple. People like to look at physical items to get the feel of the material and the actual feel of the product. It’s something that phygital marketing won’t be able to replace even by personalizing the offer, content, or even interaction.”</i></p>	<p><i>“I actually want to see what I’m buying. How people buy things without physical seeing it first is beyond my understanding. Secondly, I am really afraid of revealing my credit card details, even for personalized offers. Lately, I have heard a lot about credit card frauds, which I am really scared of. More than enough reasons for me to avoid shifting to phygital stores.”</i></p>	<p><i>“Since we are more loyal to brands and stores, I don't think phygital is a concept that attracts people in our old generation very much. Most of us in our generation still prefer to go to the same old store and purchase the same old brand, although there are attractive promotions from other brands, mostly online.”</i></p>	<p><i>"Honestly, I don't understand how this phygital thing benefits customers. All that I want is to see what I'm buying before purchasing. Also, putting credit card information out is too dangerous. I am still more comfortable with traditional payment methods."</i></p>	<p>Avoidance Strategy: Avoid shifts toward phygital marketing due to a lack of understanding and experience. Vulnerable to privacy issues, prefer in-person interactions.</p>
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3.3.5.1 Avoidance Strategy: Technophobes

The findings reveal that among the sampled respondents, a segment of customers avoids transitioning to phygital marketing (“*No thanks*”) whenever possible, primarily due to a lack of understanding and experience with phygital marketing practices. We identified them as “*technophobes*.” As we uncovered, for these technophobes, it is hard to believe that a customer could choose a product using a digital kiosk instead of physically seeing or touching it. Further, they are particularly vulnerable to privacy concerns due to their limited understanding of phygital marketing and its potential benefits. They also hold the misnomer belief that engaging in phygital marketing activities will compromise their ability to safeguard their private and confidential information. As respondents B2 and B9 emphasized:

“Honestly, I don't see how the phygital experience benefits customers. While it's nice to have, it's not essential for me, as I tend to focus more on the product and creativity rather than the technological aspects. I'm still more comfortable with traditional stores.” (B2)

“It's pretty simple. People like to look at physical items to get the feel of the material and the actual feel of the product. It's something that a mobile app won't be able to replace even by personalizing the offer, content, or even interaction. And with my age, I don't claim to be so busy that I can't make a trip to the mall and wait in the queue.” (B9)

As implied in the above excerpts, it was clear that most customers in this segment are fond of visiting physical stores for purchases and appreciate in-person customer service more than automated personalized content or recommendation systems in AR-driven mobile apps or self-checkout kiosks. Further, it was uncovered that brand loyalty is the key for this segment of customers when purchasing. In other words, despite the allure of exciting mobile apps, online promotions, and digital kiosks, customers in this segment remain deeply attached to the brands and stores that have been part of their upbringing. As respondents, B4 and B7 went on to explain:

“Since we are more loyal to brands and stores, I don't think phygital is a concept that attracts people in our old generation very much. Most of us in our generation still prefer shopping at the same old store and purchasing the same old brand in the same traditional way, despite the appealing digital tools available, such as digital kiosks, mobile apps, and online promotions.”
(B4)

“When I'm using an app that constantly crashes or a self-checkout system that's confusing, I feel frustrated and annoyed.” (B7)

The findings suggest that enhancing the in-store experience remains crucial in phygital marketing, especially when targeting this customer segment, who highly value personalized interactions. Further, providing clear guidance for digital interactions is also needed as this segment tends to be less tech-savvy and more apprehensive about technology than other segments.

3.3.5.2 Acceptance Strategy: Deal-Seekers

While we learned that one segment of customers in our sample employs an avoidance strategy, our study highlights that another segment prefers the acceptance strategy when facing the paradoxical tensions of personalization. The acceptance strategy involves accepting paradoxical tensions as unavoidable and coping with them. This implies that customers do not strike a balance between dualities but accept that paradoxical tensions are persistent and natural over time. Both cognitive and affective responses are crucial in this strategy, as it requires customers to manage irritation when dealing with the challenges that arise from conflicting tensions (Bustamante & Rubio, 2017; Jain et al., 2017). The acceptance strategy is being used because customers perceive that no other alternative is available (*“this is natural,” “we must live with that”*), and opening to paradoxical tensions and dealing with them encourage more financially viable outcomes. Our sample reveals that most customers struggling with financial issues are no longer loyal to physical or digital stores. Instead, they prefer to shift to a physical

or phygital store, depending on where the best deal is available. Thus, we introduced them as “*deal-seekers*.” As respondents X3 and X6 explained:

“Although I feel I am losing my freedom of choice with personalization, it often allows me to find the best deal. I am not always convinced by personalization. However, I understand that it is pretty natural. Whether online or offline, I accept it whenever it offers me the best price or the benefit.” (X3)

“I think it's very subjective. I sometimes prefer online ordering or self-checkout kiosks, but I also sometimes prefer selecting products in-store by speaking to salespeople. However, the best thing about these shifts is that despite whether online or offline, they allow me to claim the best deal.” (X6)

As emphasized, the acceptance strategy aligns with the “*contingency approach*,” as Lewis and Dehler (2000) view it, which involves accepting either pole of the tension depending on the situation. Since customers in this segment tend to choose physical or phygital options based on the best offers available, marketers should prioritize compelling value propositions and deals while maintaining transparency about data usage.

3.3.5.3 Synthesis Strategy: Reviewers

We discovered that another segment of customers responds to the paradoxical tensions arising from personalization differently, preferring to adopt the synthesis strategy when navigating these tensions in phygital marketing. The synthesis strategy focuses on finding a delicate balance to meet dualities simultaneously rather than eliminating tensions. When customers adopt the synthesis strategy, they reconcile opposing views and seek a compromise between dualities. We uncovered that some participants try to mitigate tensions through synthesis (“*positive and negative*”, “*50/50*”). As revealed, they weigh the costs and benefits of personalization and seek a balance by accommodating the opposites. As respondents Y4 and Y9 emphasized:

“As with everything else, personalization has both positive and negative sides. On the positive side, it allows me to find the information I need faster and more efficiently. On the negative side, it locks me into the same old offerings. However, I don’t perceive personalization as bad and should not be avoided. Instead, I always review the content of personalized offers to determine how I can benefit from either physical or digital options without wasting time.” (Y4)

“With both positive and negative consequences of personalization in phygital marketing, it is not easy to strike a balance; for me, it is 50/50. Although I still care about privacy issues with personalization in the digital context, personalized offers give me a sense of self-recognition and save me time. So still, I tend to react to it in some instances.” (Y9)

As the above quotes emphasize, this customer segment trusts online reviews and ratings when accepting personalized recommendations and offers from phygital stores. Thus, we name this customer segment as “reviewer.” The synthesis strategy adopted by reviewers aligns with the paradox perspective (Smith & Lewis 2011). By adopting the synthesis strategy, this segment resolves personalization paradoxical tensions using reviews and ratings to weigh the benefits and costs of disclosing data. Consequently, marketers should consider including customer reviews and ratings in personalized recommendations when reaching out to this customer segment to keep them believing in the offers and content and ensure they are actively engaged.

3.3.5.4 Neutral Strategy: Information Filters

Our findings reveal that, while adopting the synthesis strategy, another customer segment simultaneously employs a neutral strategy in response to tensions arising from personalization. The neutral strategy does not imply customers avoid exposing themselves to phygital marketing efforts. Instead, they are not convinced of the most personalized content and offers and do not act on that; they neglect irrelevant, outdated content and filter out noise to find the most useful content. Thus, we name them as “information filter.” As respondents Z3 and Z4 emphasized:

“No matter what, whether it is online or offline, I am usually neutral to personalized offers, content, or even interactions. I don’t get excited about them and react. I react only if the offer or the content is relevant to me. If not, I simply omit them.” (Z3)

“Since we are immersed in a world full of ultra-curated content and offers, I constantly filter and respond only to personalized content and offers that intuitively align with my motives and interests, prioritizing those anticipating my needs.” (Z4)

As implied in the above quotes, we uncovered that this customer segment is highly tech-savvy and proficient in filtering through information. At the same time, they crave authenticity and transparency from personalization efforts in phygital marketing. For instance, they desire personalized recommendations that are trustworthy and honest. As respondent Z8 emphasized: *“Making minor tweaks to a generic, one-size-fits-all offer and labelling it as personalization in phygital context isn’t an honest marketing approach and certainly won’t appeal to me. If I encounter such attempts, I simply won’t engage with them. I only respond to offers that feel genuinely personalized and align with my expectations.” (Z8)*

As highlighted by these quotes, it is clear that for this customer segment, the trustworthiness and genuineness of the personalization effort are paramount, whether in a physical or digital context. They do not accept personalized offers in the phygital space at face value. Instead, they filter the content and engage only with what they perceive as trustworthy and authentic. Thus, to appeal to this segment, marketers should use highly relevant, concise, and authentic personalized content and offers that highlight the true value propositions upfront.

Further, during our analysis, we observed that the four customer segments we identified— *“Information Filter,” “Reviewer,” “Deal-seeker,”* and *“Technophobe”*— along with the mitigation strategies they employ, appear to align closely with distinct generational cohorts: Baby Boomers, Generation X, Generation Y, and Generation Z (see Table IV). While there are slight variations in how the time frames for these cohorts are defined, prior literature

generally agrees on the following classifications: Baby Boomers (born between 1946 and 1964), Generation X (born between 1965 and 1980), Generation Y (born between 1981 and 1996), and Generation Z (born between 1997 and 2012) (Childers & Boatwright, 2021; Liyanaarachchi et al., 2021).

Table IV: Mitigation strategies and generational cohorts

Respondent	Mitigation Strategy				Generational Cohort
	Avoidance	Acceptance	Synthesis	Neutral	
B1	√				Baby Boomers (born between 1946 and 1964)
B2	√				
B3		√			
B4	√				
B5	√				
B6	√				
B7	√				
B8	√				
B9	√				
X1		√			Generation X (born between 1965 and 1980)
X2		√			
X3		√			
X4		√			
X5	√				
X6		√			
X7		√			
X8	√				
X9		√			
Y1			√		Generation Y (born between 1981 and 1996)
Y2		√			
Y3			√		
Y4			√		
Y5			√		
Y6			√		
Y7			√		
Y8		√			
Y9			√		
Z1				√	Generation Z (born between 1997 and 2012)
Z2				√	
Z3				√	
Z4				√	
Z5				√	
Z6			√	√	
Z7			√	√	
Z8				√	
Z9			√	√	

Previous research has also suggested that age is critical in identifying customer segments, as it is a vital determinant in studying technology adoption and online consumer

behaviour (Neslin, 2022). For instance, Liyanaarachchi et al. (2021) propose that individuals born within the same period tend to share similar competencies, attitudes, beliefs, and behaviours toward technology use, distinguishing them from other generations. Additionally, customer perceptions, willingness to engage with technology, and their responses to digital marketing vary significantly with age (Neslin, 2022). However, it is premature to link these customer segments to specific generational cohorts definitively based solely on the findings of this study. Further, rigorous research is needed to establish such strong connections.

4. Discussion

4.1 Theoretical Implications

This study offers two distinct theoretical contributions. First, we introduce the “*Personal Paradox Matrix*” concept to explain customers’ simultaneous positive and negative responses toward personalization efforts, particularly within phygital marketing environments. The matrix categorizes the dualities in customer responses to personalization into three main dimensions (cognitive vs. affective, freedom vs. control, and privacy vs. benefit). It highlights how these dualities interact and influence one another, creating customer tensions.

Second, based on three dimensions identified in the matrix, we uncover three distinctive personalization paradoxes in phygital marketing: the content-dissonance paradox, the personalization-privacy paradox, and the influence-reactance paradox. While previous literature predominantly emphasizes the personalization-privacy paradox in the digital context (e.g., Cloarec, 2020; Zeng et al., 2021; Hoang et al., 2023), Lambillotte and Poncin (2023) argue that it overly concentrates on privacy concerns, overlooking the broader range of both positive and negative customer responses to personalization efforts. This study responds to the scholarly call by uncovering two new personalization paradoxes: the content-dissonance

paradox and the influence-reactance paradox. The content-dissonance paradox reflects the concept of cognitive dissonance (Festinger, 1964), where customers feel discomfort due to a mismatch between their expectations of personalized content and the reality of receiving overloaded, repetitive content. The influence-reactance paradox resonates with psychological reactance (Brehm, 1966), reflecting the tension between customers feeling guided to relevant information and coerced by personalized recommendations. Although these three paradoxical tensions are conceptually interconnected at a broad level, no study—whether in phygital or digital contexts—has examined the linkages between all three within a single framework. This study attempts to extend our understanding of the paradoxical tensions created by personalization efforts in the phygital marketing phenomenon by exploring how the dualities in customer responses to personalized marketing in the phygital context evoke these three paradoxical tensions and how customers respond to them. By drawing on the broader discourse on personalization and privacy, this study recognizes the relevance of psychological reactance theory and psychological dissonance theory within the phygital context.

4.2 Managerial Implications

This study offers three actionable implications for practice, grounded in the proposed “*Personal Paradox Matrix*” within phygital marketing environments. First, firms should adopt the “*Personal Paradox Matrix*” as a strategic tool to understand and navigate the complex interplay of personalization and customer experience in phygital contexts. This framework should be considered a core element in designing personalized targeting strategies, as it enables firms to identify and understand distinct customer segments based on their responses to the paradoxical tensions inherent in personalization (Lambillotte & Poncin, 2023). By pinpointing areas where such tensions are most pronounced, marketers can enhance the precision and

effectiveness of targeting efforts, thereby improving the customer experience and increasing the efficacy of personalized marketing initiatives.

Second, insights into customer segment-specific behavioural responses uncovered in this study can inform more nuanced customer profiling and segmentation. This allows firms to mitigate adverse reactions to personalization by aligning marketing strategies with customer preferences and tolerance levels (Banik & Gao, 2023; Batat, 2023). For example, customers who actively resist transitioning to phygital marketing often prioritize tangible, face-to-face interactions. For this segment, enhancing the in-store experience remains a vital component of phygital marketing strategies, as these consumers highly value personalized engagement within physical environments. In contrast, another segment of customers is sceptical of highly personalized content and promotional offers, showing low engagement unless the content is perceived as directly relevant, credible, and valuable. To effectively engage this group, marketers should focus on delivering concise, authentic, and highly relevant personalized content that clearly communicates the core value proposition from the outset. Such profiling is critical in facilitating smooth customer transitions from physical to phygital store experiences, minimizing friction, and enhancing satisfaction. Moreover, recognizing and addressing personalization-related tensions supports the development of trust-based relationships, fostering long-term loyalty by demonstrating sensitivity to customers' perceived trade-offs between convenience and control (Sheth et al., 2020).

Third, applying the “*Personal Paradox Matrix*” in conjunction with segment-specific mitigation strategies allows firms to adopt a more nuanced and balanced personalization approach that carefully navigates the trade-offs between personalization depth, consumer autonomy, privacy, and content relevance. This strategic stance aligns with the organizational-level personalization principles proposed by Lambillotte and Poncin (2023), who argue that effective personalization should provide relevant and valuable content, preserve the

consumer's sense of control, and safeguard their data. By tailoring strategies to distinct consumer segments—such as those resistant to personalization or those sceptical of data-driven personalization—firms can more effectively manage the psychological and behavioural tensions inherent in personalized marketing. Such an approach helps mitigate dualities in customer responses, particularly the tension between perceived benefits and intrusiveness, thereby enhancing trust in the firm's ability to deliver meaningful personalization while respecting individual privacy and autonomy. Ultimately, this reinforces the firm's reputation as a responsible data steward and strengthens long-term customer relationships.

4.3 Limitations and Future Research Directions

As with any other research, this study is not exempt from limitations that pave the way for future research. First, in this study, we introduced *the “Personal Paradox Matrix,”* which explains how the dualities in customer responses to personalization within phygital marketing trigger paradoxical tensions. By doing so, we explored three personalization paradoxes within phygital marketing, out of which the content-dissonance paradox and the influence-reactance paradoxes have not been explicitly identified in prior literature. Although we uncovered these paradoxes and how these paradoxes trigger tensions, we did not quantitatively evaluate the magnitude of the impact these paradoxical tensions create on customers. Therefore, as Magnani and Gioia (2023) specified, future researchers can test the proposed conceptual model through quantitative research to generalize the idea's applications. To do that, they could develop appropriate measurement scales to measure the two new personalization paradoxes that emerged in this study.

Second, a key limitation of our study is the sample size and diversity. With only 36 respondents having prior phygital marketing experiences and representing four generational cohorts across three countries, the scope of insights regarding the four mitigation strategies customers adopt in response to tensions from personalization within phygital marketing may

be constrained. While qualitative interviews provide valuable insights into these strategies, they may also introduce personal interpretation and recollection biases, limiting the depth of understanding of personalization within phygital marketing.

To address this, future research should incorporate more extensive and diverse samples, including customers unfamiliar with phygital marketing experiences. Additionally, using a mixed-method approach would enhance the robustness of the findings. For instance, experimental studies could be conducted with two groups—one comprising individuals with prior phygital experiences and another without exposure—to examine behavioural differences in response to personalization strategies. Longitudinal studies tracking consumer interactions over time could further uncover shifts in perceptions and adaptation strategies.

Moreover, structured focus groups segmented by familiarity with phygital experiences—one consisting of experienced users and another comprising those unfamiliar with such interactions—could facilitate deeper discussions on how consumers navigate tensions related to personalization. Eye-tracking studies and biometric feedback methods, such as facial expression analysis, could also be leveraged to explore subconscious reactions to personalization strategies in phygital settings. Finally, incorporating large-scale surveys with advanced statistical modelling, such as structural equation modelling or cluster analysis, would help reveal broader trends in consumer responses to phygital marketing. By integrating these methodological approaches, future research can offer a more comprehensive understanding of how consumers perceive and respond to personalization within phygital marketing environments.

Third, we did not explore in detail how customers' characteristics and perceptions influence the adoption of these mitigation strategies. Thus, future research should investigate customers' characteristics and perceptions that may influence the adoption of proposed mitigation strategies with a broader sample. Further, future studies should adopt longitudinal

designs to examine how the proposed mitigation strategies relate to various paradoxical tensions arising when customers purchase in phygital environments. These directions will strengthen the theoretical depth and practical applicability of the “*Personal Paradox Matrix*,” addressing the limitations of this study while providing broader and more actionable insights.

4.4 Conclusion

Amidst growing demand for personalization, customers experience complex and often conflicting dualities with their response to personalization, creating tensions. Based on 36 in-depth interviews, we propose the “*Personal Paradox Matrix*” to address how firms can effectively navigate and mitigate customer tensions arising from personalization efforts within phygital marketing. By recognizing and addressing the inherent dualities and nuances in customer responses, marketers can create more effective and satisfying personalized experiences. The “*Personal Paradox Matrix*” not only aids in academic understanding but also provides marketers with a clear and actionable approach to managing personalization paradoxes by understanding the complexities and nuances of the transition to phygital marketing environments. It further lays the foundation for an innovative approach to plot customer reactions to personalization within phygital marketing environments by identifying areas where paradoxical tensions are most pronounced for different customer segments.

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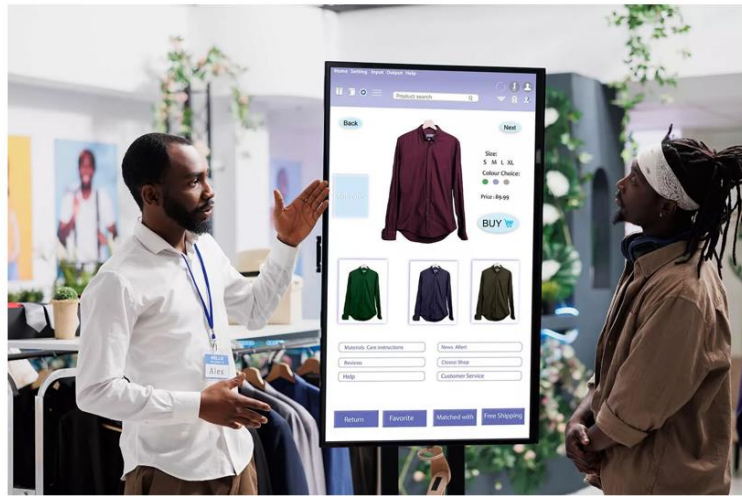
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Appendix A: Screenshots from the presentation

Examples of phygital experiences



Examples of phygital experiences



Examples of phygital experiences



Examples of phygital experiences



Examples of phygital experiences

