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Journal of Services Mar

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Journal:	*Journal of Services Marketing*
Manuscript ID	JSM-08-2023-0286.R2
Manuscript Type:	Article
Keywords:	artificial intelligence, Well-being, Transformative service research (TSR), Health and well-being (SDG 3), Responsible consumption and production (SDG 12)

The Transformative Potential of AI-Enabled Personalization across Cultures

ABSTRACT

Purpose

The widespread integration of AI-enabled personalization has sparked a need for a deeper understanding of its transformative potential. To address this, the present study investigates the mental models held by consumers from diverse cultures regarding the impact and role of AI-enabled personalization in their lives (i.e., individual well-being) and in society (i.e., societal well-being).

Design/methodology/approach

This paper utilizes the theories-in-use approach, collecting qualitative data via the critical incident technique. This data encompasses 487 narratives from 176 consumers in two culturally distinct countries, Belgium and Pakistan. Additionally, it includes insights from a focus group of six experts in the field.

Findings

This research reveals that consumers view AI-enabled personalization as a dual-edged sword: it may both extend and restrict the self, and also contribute to an affluent society as well as an ailing society. The particular aspects of the extended/restricted self and the affluent/ailing society that emerge differ across respondents from different cultural contexts.

Originality/Value

This cross-cultural research contributes to the personalization and well-being literature by providing detailed insight into the transformative potential of AI-enabled personalization while also having important managerial and policy implications for developing transformative services.

Keywords: personalization, artificial intelligence (AI), Transformative Service Research (TSR), well-being, responsible consumption and production, UN SDG 3.

1. INTRODUCTION

Personalization has been in practice well before the emergence of AI-based technologies (Koch & Benlian, 2015; Montgomery & Smith, 2009). However, recent advancements in AI, notably through deep learning algorithms and the newfound availability of extensive consumer data have surged managerial interest in the topic (Burns *et al*., 2023) and enables marketers to predict consumer behavior more accurately than ever before (Gupta *et al*., 2020; Tong *et al*., 2020). Specifically, AI-enabled personalization entails a dynamic and real-time process that employs advanced AI algorithms to learn about consumers and tailor offerings accordingly. Interestingly, popular press often highlights various concerns with AI-enabled personalization. These include issues related to people's (physical) integrity (cf. Amazon's Alexa giving a personalized challenge to 10-year-old girl to touch a live plug with a penny - BBC News) and their inclusion in society (cf. gender and racial biases in algorithms of high-tech companies like Spotify, Facebook, and Amazon - Chadwick, 2021; Hao, 2019).

Academically, there is growing evidence to suggest that AI's pervasive integration into various facets of life has a significant impact on human experience and well-being (Kabadayi & Tsiotsou, 2022). For instance, AI-enabled personalization may enrich experiences (Lieberman, 2021), yet it also raises privacy concerns and feelings of intrusiveness (Aguirre *et al*., 2015; Smink *et al*., 2020). However, the well-being implications of AI-enabled personalization are – as acknowledged by recent studies – not thoroughly explored (e.g., Henkens, Verleye, & Larivière, 2021; Riegger *et al*., 2021). In fact, most attention has been dedicated to AI-personalization's impact on consumers' transactions and relationships with organizations (e.g., consumer satisfaction and loyalty) rather than exploring its transformative impact, namely its contribution to well-being (Mehmood *et al*., 2022).

Meanwhile, consumers themselves may hold their own unique assumptions and beliefs about how AI-enabled personalization impacts well-being (Blocker & Barrios, 2015). These

assumptions and beliefs – labeled as mental models – are critical as they guide consumers' deliberate behaviors (Argyris & Schon, 1992; Vink *et al*., 2019). Many organizations using AI-enabled personalization are actively experimenting with and looking for novel ways to promote well-being (cf. TikTok's screen time dashboard and other digital well-being tools offered by firms – TikTok, 2022). This trend is partly motivated and supported by new (academically-driven) policy frameworks (Field *et al*., 2021; Mende & Scott, 2021) and aligns with the United Nations' broader goals of enhancing individual and societal well-being (cf. UN SDG 3 – Hammedi, Parkinson, & Patrício, 2023). Nevertheless, for organizations to effectively harness AI-enabled personalization in support of well-being, it is crucial for them to comprehend the mental models that consumers hold about impact and role in their lives (i.e., individual well-being) and in society (i.e., societal well-being). To date, there is a notable gap in research specifically addressing these consumer mental models, making it a critical area for future exploration (Zeithaml, Jaworski, *et al*., 2020).

In response, this research investigates what mental models consumer hold concerning the implications of AI-enabled personalization on individual well-being (RQ1) and societal well-being (RQ2). To this end, we employ the theories-in-use approach, specifically tailored for such analysis (Zeithaml, Jaworski, *et al*., 2020). Notably, we implement this approach in a multi-country context. This decision aligns with findings by Mehmood *et al*. (2023) that highlight a significant skew in personalization studies towards single-country research, predominantly in cultures characterized as **WEIRD (Western, Educated, Industrialized, Rich, Democratic)**. Given emerging evidence that mental models about well-being can differ substantially across cultural contexts (Krys, Uchida, *et al*., 2019; Akkawanitcha *et al*., 2015), our study explores these mental models among consumers in countries with differing cultural characteristics, namely Belgium and Pakistan. Specifically, this research aims to understand the impact of AI-enabled personalization on well-being outcomes at the individual and

societal level (i.e., under-researched to date) through the mental models of consumers across two different cultures. This approach facilitates the creation of a more inclusive and comprehensive framework on AI-enabled personalization's impact on well-being from a consumer perspective. Moreover, this framework is instrumental for advancing transformative service research, an area prioritizing such inclusive perspectives (Russell-Bennett *et al*., 2019).

The remainder of the paper is organized as follows: we start by discussing personalization, its well-being implications and advocate for adopting a broad perspective on well-being. Next, we introduce our qualitative multi-country study and elaborate upon our findings. The paper concludes with a discussion on the theoretical, managerial, and policy implications of our research and identifies future research avenues.

2. THEORETICAL BACKGROUND

2.1 AI-Enabled Personalization

Personalization, in general, involves understanding individual consumer needs and tailoring market offerings accordingly (Fan & Poole, 2006; Libai *et al*., 2020; Montgomery & Smith, 2009), with learning and tailoring as its key building blocks (Mehmood *et al*. 2023). Recent advancement in AI technologies, such as natural language processing/generation, image recognition/generation, speech recognition/generation, and machine learning (Kumar, Ramachandran, & Kumar, 2021) have again put personalization high on the agenda. AI, defined as the ability of machines to display human-like intelligence and learn from data to achieve specific goals (Huang & Rust, 2021; Haenlein & Kaplan, 2019), now allows firms to glean finer contextual insights at an individual level. This leads to a more effective personalization process, enabling firms to better understand and target consumers (Mogaji, Soetan, & Kieu, 2020). AI's capacity for real-time adaptation and independent self-improvement sets AI-enabled personalization apart from traditional personalization methods,

which are typically based on retrospective learning and static tailoring. This evolution in personalization, particularly with the advent of generative AI, has brought it back to the forefront of creating unique consumer experiences (Forbes, 2023). Moreover, it allows to overcome past challenges faced by organizations in implementing effective personalization strategies that even led some organizations to consider abandoning their personalization efforts altogether (Dynamic Yield, 2020; Gartner, 2019).

To date, the existing body of research has mostly devoted attention to the *positive* aspects of AI-enabled personalization. Studies have found that personalization positively affects consumer satisfaction by reducing information overload (Liang, Lai, & Ku, 2006), improving the perceived value of experiences (Akdim & Casaló, 2023), and increasing the perceived accuracy and novelty of information (Choi, Lee, & Kim, 2017). It also aids in decision-making and transaction processes (Kim, Song, & Lee, 2019) and allows service employees to adjust their behaviors more effectively (Leischnig, Kasper-Brauer, & Thornton, 2018). Furthermore, AI-enabled personalization contributes to a higher sense of interactional justice (Decock *et al*., 2020) and meeting consumers' desire for personalization (Torrico & Frank, 2017). The literature also suggests that AI-enabled personalization stimulates self-efficacy and reduces technology anxiety (Henkens et al., 2021), improves service inclusiveness (Mende et al., 2024), fosters participation and engagement (Blasco-Arcas, Hernandez-Ortega, & Jimenez-Martinez, 2014), purchase intentions, adoption, and usage of firm offerings (Brinson, Eastin, & Bright, 2019; Kang & Namkung, 2019; Kim et al., 2019; Salem, Baidoun, & Walsh, 2019), brand engagement (Tran, van Solt, & Zemanek Jr, 2020), and both attitudinal and brand loyalty (Shanahan, Tran, & Taylor, 2019).

On the *negative* side, AI-enabled personalization practices are found to result in negative consumer outcomes like feelings of intrusiveness (Pfiffelmann, Dens, & Soulez, 2020; Smink et al., 2020), privacy concerns (Guo, Zhang, & Sun, 2016; Yu, 2020), irritation

(Aydin, 2018; Baek & Morimoto, 2012), embarrassment due to publicly displayed personalized ads (Hess *et al*., 2020), and reactance (Bartsch & Kloß, 2019; White *et al*., 2008).

From the above review, it is clear that literature to date has mostly focused on the transactional (i.e., satisfaction, perceived quality) and relational (i.e., loyalty) outcomes of AI-enabled personalization. And if well-being outcomes like self-efficacy, better mental health, and psychological well-being are considered, the focus is on traditional rather than AI-enabled personalization (see Table 1). Moreover, the few studies that do consider well-being in the context of AI-enabled personalization adopt a limited view of the concept (e.g., Henkens *et al*., 2021; Kraaij *et al*., 2019; Liu & Tao, 2022; Wittkowski *et al*., 2020). This urges the need for more work connecting AI-enabled personalization and well-being.

---- Insert Table 1 around here ---

2.2 Broadening the Well-Being Implications of AI-enabled Personalization – A Mental Models Perspective

Well-being is a multifaceted phenomenon linked to various emotions, cognitions, and behaviors and has been considered at the individual and societal level (Dugan, Ubal, & Scott, 2022). Well-being scholars typically distinguish between individual well-being (e.g., Anderson & Ostrom, 2015; Field et al., 2021; Zeithaml, Verleye, *et al*., 2020) and societal well-being (e.g., Blocker & Barrios, 2015; Field *et al*., 2021; Mende & Scott, 2021). Individual well-being refers to individuals' satisfaction with making choices that will enhance their quality of life as reflected by socioeconomic indicators (i.e., objective well-being) and individuals' psychological well-being which comprises autonomy, control, positive relations, and personal growth (i.e., subjective well-being) (Ryff, 1989). Societal well-being on the other hand, includes factors that promote the good functioning of a society and that may have

a direct or indirect impact on society's and its members' current and future welfare (Moldes & Ku, 2020).

At the individual level, the concept of well-being refers – in line with self-determination theory – to one's optimal psychological condition (Ryan & Deci, 2001), and involves the combination of feeling good (i.e., *hedonic* well-being) and functioning effectively (i.e., *eudaimonic* well-being) (Huppert, 2009). One's positive state of well-being has been shown to impact with personal (e.g., improved creativity), interpersonal (e.g., more positive relationships), and professional success (e.g., more productivity at workplace) (Diener, 2012; Huppert & So, 2013; Oishi, Diener, & Lucas, 2007). In relation to AI-enabled personalization (see Table 1), Henkens *et al*. (2021) suggests that the perceived level of personalization in the context of smart service systems positively impacts both consumer's hedonic and eudaimonic well-being, especially for consumers with a high need for personalization. These positive well-being implications are linked to the observation that personalization perceptions exceed intrusiveness perceptions in the context of smart service systems like smart fridges.

At the societal level, well-being reflects the optimal functioning of a society (Moldes & Ku, 2020). Here, it is important to note that societal well-being is more than the sum of all individuals' well-being (Allin, 2007). It represents the overall functiong of a society's as good or not (Aschauer, 2014). Yet, societal well-being may have a direct and/or indirect impact on the current and future individual well-being of its members (Moldes & Ku, 2020). As is clear from Table 1, current academic work has devoted much less attention to the impact of AI-enabled personalization on societal well-being. However, anecdotal evidence does suggest that AI-enabled personalization helps shape modern societies. Puntoni *et al*., (2021), for instance, suggest that continuous monitoring of individual behaviors – which is an essential building block of personalization (cf. learning) – may give rise to a surveillance society

wherein people no longer have control over their destiny, consequently reducing societal well-being. Other work shows how AI may contribute to expanding inclusion of vulnerable consumers and empathy, but can equally result in an expanded digital divide leading to societal inequalities (Esmaeilzadeh & Vaezi, 2022; Fisk *et al*., 2023; Mogaji *et al*., 2020; Mende *et al*. 2024).

Taken together, there is a need to expand research on the well-being implications of AI-enabled personalization at both the individual and societal level. Moreover, existing research is not only sparse but also predominantly anchored on established theories like self-determination theory and focused on consumers from countries with **WEIRD (Western, Educated, Industrialized, Rich, Democratic)** cultures. Instead, it may be extremely valuable to (1) seek input from study participants – the theory holders – regarding their ideas about AI-enabled personalization and the interconnections among these ideas (Zeithaml, Jaworski, *et al*., 2020), and (2) extending research to include consumers from other cultures. This is particularly pertinent as existing well-being theories may not resonate universally, given that cultural contexts shape consumers' ideas about well-being (Krys, Zelenski, *et al*., 2019; Akkawanitcha *et al*., 2015).

To better understand the consumers' mental models linked to well-being implications of AI-enabled personalization at the individual level (RQ1) and the societal level (RQ2), this research centers on consumers' mental models across countries with divergent cultures (i.e., Belgium versus Pakistan). Mental models refer to the assumptions and beliefs held by consumers regarding the functioning of something and the actions to be taken based on that comprehension (Vink *et al*., 2019). These models aid consumers from diverse cultural backgrounds in navigating uncertainty, acting as heuristics informed by past experience (Prahalad & Bettis, 1986), and can be as simple as a metaphor (e.g., seeing AI as a personal chef who learns your tast preferences over time and tailors your meals accordingly) that

encapsulates the connection between elements within a system (Collins & Gentner, 1987). These mental models that can be effectively elicited through the the theories-in-use approach designed for this purpose, as theories-in-use reflect people's "mental models of how things work in a particular context" (Zeithaml, Jaworski, *et al*., 2020, p.32). Accordingly, this paper adopts a theories-in-use approach to uncover mental models pertaining about the individual and societal well-being implications of AI-enabled personalization among consumers from different cultures, thereby contributing to consumer-oriented transformative service research (Russell-Bennett *et al*., 2019).

3. METHODOLOGY

To explore mental models about the implications of AI-enabled personalization on individual and societal well-being, this research relies upon the critical incident technique (CIT). CIT, originally developed by Flanagan (1954), is an exploratory research method that allows researchers to gather and evaluate experiences, incidents, or occurrences of interest in relation to a phenomenon like personalization (Gremler, 2004) – and, as such, fitting with a theories-in-isue approach (Zeithaml, Jaworski, *et al*. 2020). By emphasizing discovery over confirmation (Deshpande, 1983), CIT is a valuable method when the research objective is to develop better understanding of an obscure phenomenon in marketing and consumer research like the transformative potential of AI-enabled personalization (Deshpande, 1983; Shen, 2014). Although the general public is typically less knowledgeable than experts and professionals, asking their opinion about societal implications of AI is crucial as this may affect not only the development and acceptance of AI-based offerings but also regulations governing them (Gao *et al*., 2020; Kelley *et al*., 2021).

The general procedure entails gathering qualitative data by asking questions about past experiences, incidents, or occurrences of interest in relation to the focal phenomenon, which represent the critical incidents (Ro & Wong, 2012). The critical incidents for this research

were gathered by means of an online survey. For respondents to equally understand the phenomenon under investigation and to increase the validity of their responses, the introductory section of the survey explained AI-enabled personalization with examples (the detailed survey may be found in Web Appendix 1). After outlining the research purpose and obtaining the respondents' informed consent, the online survey started by inviting respondents to describe their best or worst experience in relation to this phenomenon. After describing this critical incident, respondents were asked to indicate the valence of their personalization experience (here, best/worst), what brand/company was involved, and what was being personalized. Subsequently, we explicitly asked respondents to elaborate upon the way in which this critical incident affected their own well-being (cf. individual well-being) and how this type of personalization may affect the society in which they are embedded (cf. societal well-being). All these questions were formulated in a non-directive, open-ended, unobtrusive manner to limit bias and fulfill quality requirements for survey. The survey ended with questions about respondents' gender and age. Unlike survey questionnaires that often restrict respondents within predetermined choices, the open-ended survey provides participants with the liberty to express their thoughts, emotions, and concerns in an unrestricted and multifaceted manner (Geer, 1988; Mossholder et al., 1995).

To achieve a broad spectrum of perspectives, the study's participants were selected based on the research team's access to diverse cultural contexts. This included Belgium, a Western-European country typifying WEIRD cultures (Gorgun & Kilmen, 2023), and Pakistan, a South-Asian country representing non-WEIRD cultures (e.g., Hasan, Wooliscroft, & Ganglmair-Wooliscroft, 2023). Specifically, respondents in these countries were approached through direct messages and the link to the online survey was also posted on social media with a request to spread the message, thereby creating a snowball convenience sample (e.g., Lefebvre & Cowart, 2022; Menidjel *et al*., 2023). This sampling procedure

implies that potential respondents were located around these channels, which is not seen as a limitation given the focus on AI-enabled personalization. The final sample – which involved 101 Belgian and 75 Pakistani respondents – included 59% males, 61% working, 55% single, and had an average age of 28.9 years (a detailed demographic profile of the respondent can be found in Table 2). The resulting data consisted of 487 narratives (229 at the individual level and 154 at the societal level), some of which are illustrated in Table 4 and Table 5. This number is in line with recent work using a CIT approach – e.g., Zhang, Lu, Torres, and Chen (2018, 350 narratives), Shen (2014, 426 narratives), and Zhang, Beatty, and Mothersbaugh (2010, 142 narratives). In addition, and in line with Summers et al. (2018), an online expert focus group comprising six (service) marketing experts (participants' details can be found in Table 3) was employed to deepen our understanding of the phenomenon, validate the study findings, and validate the proposed framework. The group's composition was balanced for gender and cultural background, consisting of two Belgians (a man and a woman), two Pakistanis (a man and a woman), and two individuals (a man and a womon) of Pakistani origin who had been residing in Belgium for a minimum of five years. In the introductory section of the focus group, one of the researchers explained AI-enabled personalization with examples (the slide deck may be found in Web Appendix 2) and asked for experts' opinion about the phenomenon. Later, in two subsequent parts, experts were shown parts of the proposed model on individual and societal well-being and were asked their opinions. Each focus group participant brought prior experience with AI-enabled personalization. They engaged in discussions, sharing their beliefs and viewpoints on how AI-enabled personalization impacts individuals and society. They also reflected on the CIT-study's findings and our proposed framework. The discussions were conducted in English, video recorded with the consent of the participants, and then transcribed, yielding 31 pages of text.

---- Insert Table 2 and 3 around here ---

To gain insight into the transformative potential of AI-enabled personalization, all data were imported in NVivo, a qualitative data analysis software package. Two researchers independently applied in-vivo coding (denoted as zero-order codes in Table 4 and Table 5) to the data and compared their codes to ensure that each in-vivo code represented a unique thought or idea. Next, two researchers independently grouped these zero-order codes into first-order and second-order categories and presented their categorizations to a third researcher from the team uninvolved in the coding, thereby identifying a number of third-order categories linked to individual and societal well-being. Based upon this discussion, the two researchers went back to the zero-order codes and independently engaged in re-categorizing these codes in first-order, second-order, and third-order codes linked to individual and societal well-being. After this coding step, the inter-rater reliability was 87% - well above the recommended cut-off value (Koo & Li, 2016). All inconsistencies were resolved through discussion with the whole research team, resulting in six themes linked to individual well-being and six themes linked to societal well-being. In a final step, we grouped these themes into two overarching categories at the individual level and two categories at the societal level. Moreover, we linked the themes that emerged from the analysis to the culture in which respondents were embedded by means of matrices (see Table 4 and Table 5).

---- Insert Table 4 and 5 around here ---

4. FINDINGS

4.1 Mental models about individual well-being implications across cultures

When it relates to mental models about the well-being implications of AI-enabled personalization at the individual level (RQ1), our data suggest – as shown in Figure 1 – that consumers associate AI-enabled personalization with positive and negative implications for the self. On the positive side, AI-enabled personalization is seen as adding to one's *extended self* by eliciting the (1) the utilitarian self, (2) the happy self, and (3) the connected self. On

the negative side, it is linked with one's *restricted self* when prompting (1) the exploited self, (2) the unhappy self, and (3) the limited self. In what follows, we elaborate upon each of these possible individual well-being facets – which can be classified under the *eudaimonic*, *hedonic* and a novel *relational* well-being categories. Note that quotes stemming from Belgian respondents will be indicated with a "W(eird)", while "n(on)W(eird)" will be used for respondents from Pakistan.

4.1.1 Utilitarian self. The first potential benefit of AI-enabled personalization is – according to consumers' mental models – its ability to evoke the utilitarian self, which encompasses creating a sense of efficiency and effectiveness in satisfying consumers' wishes and needs through tailored interactions and services. This aspect of the utilitarian self, as shown in Table 4, is consistently observed in the mental models of participants from the different cultures. It becomes apparent when respondents express experiencing increased usefulness, a reduced information overload, and an overall enhancement in their user experiences. One respondent, for instance, argues: "*If personalization is done well, there are many benefits (tailored experiences, recommendations, ...). But must have real added value, not just the letterhead on communication that has been adapted"* – respondent #23-W; *"I like it when Spotify suggests me songs like what I have previously heard"* – respondent #4-nW-FG). Additionally, respondents' utilitarian self is also prompted through perceptions of time savings, reduced efforts, and a general sense of ease associated with AI-enabled personalization (e.g., "*It can make things easier like Netflix recommendations, as long as it stays within certain limits"* – respondent #177-W; *"It reduces efforts*" – respondent #26-nW). It is important to note that the aforementioned quotes also imply personalization effectively evokes the utilitarian self only when it meets consumers' standards of execution (cf. "*if personalization is done well"*, "*as long as it stays within certain limits*" and *"have to be responsible"*).

--- Insert Figure 1 around here ---

4.1.2 Happy self. Our qualitative analysis reveals a second positive facet of AI-enabled personalization: its potential to cultivate the *happy self*, characterized by experiencing positive emotions through pleasure and personal growth. Belgian respondents put particular emphasis on the fun, surprise and curiosity outcomes that arise from personalization (e.g., "*Pleasant to discover new things that match what I like to watch*" – respondent # 5-W; *"I think people will find it more fun to shop in this way."* Respondent # 160-W). On the other hand, respondents from Pakistan focus more on personal growth, linking AI-enabled personalization to enhanced confidence, empowerment and personal development (e.g., *"personalization allows more freedom to individuals"* – respondent #16-nW; *"... but on the other hand it has also the potential of discovering things which you may miss and I think that can add to your personal development"* respondent # 3-nW-focus group). This evidence suggests the happiness that is associated with AI-enabled personalization manifests itself through amusement in Belgium and through personal growth in Pakistan.

4.1.3 Connected self. A final positive impact of AI-enabled personalization on well-being relates to the *connected self*, which boils down to the feeling of being valued and embraced by others. As shown in Table 4, respondents from both cultures point out that personalization leads to feeling personally valued: "*the company was interested in me and I wasn't just another potential candidate they appeal to*" – respondent #18-W; *"consumers associate it [personalization] with positive experiences of being made to feel special. They respond positively when brands demonstrate their investment in the relationship, not just the transaction."* Respondent # 52-nW. According to the mental models held by Pakistani respondents, this feeling of connection is further manifested in the recognition and attachment that comes from owning personalized offerings from a specific brand or firm, or feeling a bond with the brand or firm itself (e.g., *"It creates a bond that helps to create a good relationship between the customer and company"* – respondent #36-nW). Overall, we find a

universal trend in both cultural contexts: AI-enabled personalization enhances a sense of personal value. However, this is especially pronounced among respondents from Pakistan, where it goes beyond feeling valued to include a unique sense of recognition and emotional connection tied to brand affiliation and ownership.

4.1.4 Exploited self. A first negative impact of AI-enabled personalization on individual well-being is the emergence of the exploited self. This is characterized by mental models that involve feelings of manipulation and unfair treatment and is observed among respondents from both cultures (see Table 4). The exploited self surfaces when respondents feel coerced into buying, as illustrated by the following quote: "*I also have the feeling that people are more likely to buy something, as Zalando already uses personalization in their emails and you are so triggered to click through, to shop...*" – respondent #160-W; *"these things [personalization]are creating not a blessing, but a curse. What I mean to say is it is exploitative because it forces consumers to buy the product."* Respondent # 6-nW-focus group. Additionally, the exploited self also manifests through privacy concerns and feelings of intrusion, and stood out much more among respondents from Belgium: "*it still feels a bit suspicious when you notice that you are clearly not aware of the degree to which your activity and information on the internet is picked up, stored and used. I would like to be a little more informed or have it anyway I'd rather have a little more in hand"* – respondent #173-W.

4.1.5 Unhappy self. As shown in Table 4, respondents from Belgium refer to a wide range of negative emotions connected to the unhappy self, encompassing feeling weird, irritated, annoyed, and/or frightened – an aspect we did not see coming back in respondents from Pakistan. A common expression of this is a sense of unease or fear, particularly when privacy appears compromised (e.g., "*I was a little scared to see that I was immediately advertised about an article I looked up on the internet*" – respondent #265-W). Additionally, our research reveals varied emotional reactions with individuals feeling upset by AI-enabled

personalization that they find intrusive or misaligned with their preferences (e.g., "*I found this rather annoying because on the one hand when I visit a website I have already decided whether I want their product or not, such advertising will not convince me. On the other hand worried that they just had access to my browsing history*" – respondent #199-W.) Frustration also arises when personalization fails to meet needs or wants (e.g., *"I looked up a booking with which there were problems that they ignored, and then you get promos, just what you don't want, this causes frustrations"* – respondent #133-W), shedding light on the importance of finely-tuned personalization strategies to meet consumer expectations in cultures that value personalized experiences.

4.1.6 Limited self. A third negative dimension – as shown in Table 4 – is one of a limited self, characterized by a sense of constraint imposed by external factors. Respondents, especially from Belgium, express concerns about the growing influence of algorithms on their preferences, feeling their freedom of choice is restricted. One respondent, for instance, argues: *"We are increasingly guided by a computer program that stores and evaluates our preferences, this can be positive but also very frightening at times as we have less freedom of choice ourselves"* (respondent #153-W). This underscores the worry that personalization, while convenient, may erode personal autonomy and decision-making freedom.

This limitation is not just about freedom of choice; it also pertains to exposure to new experiences. Respondents from both cultures note that personalization often leads them to familiar products, potentially overlooking their evolving needs and desires. This reinforces a sense of a limited self, where personal preferences are overshadowed by historical data-driven algorithmic suggestions: "*It limits the mind of a user to choose only what he already watched, but sometime may be showing them a new concept will be also appealing to him*" – respondent #14-nW; *"the biggest problem with personalization is that you go down the rabbit hole"* – respondent # 1-W-focus group.

4.2 Mental models about societal well-being implications across cultures

For mental models about the well-being implications of AI-enabled personalization at the societal level (RQ2), we equally identify positive and negative facets (see Figure 1). On the positive side, AI-enabled personalization contributes – through consumers' mental models – to societal well-being by fostering (1) a prosperous society, (2) a convenience society, and (3) an inclusive society. Conversely, on the negative spectrum, it potentially steers towards (1) a surveillance society, (2) an enslaved society, and (3) an abrasive society. These contrasting mental models highlight the complex role of AI personalization in shaping societal dynamics. In the next paragraphs, we will delve deeper into each of these facets of the mental models.

4.2.1 Convenience society. Building on our data, we find that consumers have mental models that associate AI-enabled personalization to a convenience society, where members experience ease and comfort in consumption with minimal resource investment. (e.g., *"Consumer convenience, waiting for everything to be personalized so that they don't have to search for themselves"* – respondent #4-W). However, Table 5 indicates a divergence in how this convenience is perceived across both countries. Pakistani respondents focus on time and money savings (e.g., "*It helps to save precious time and have services in minimum time for a better user experience*" – R#36-nW and *"They can find different deals to save money and time"* – R#73-nW). In contrast, Belgian respondents appear to focus strongly on instant gratification (e.g., *"There are good consequences such as finding what you are looking for faster even if it is a movie or a new mobile phone"* – respondent #199-W). This emphasis on immediacy from Belgian consumers aligns with the individualistic values of autonomy and personal satisfaction which characterize most WEIRD cultures. The desire for instantaneous access to personalized services reflects a cultural inclination toward personalization that caters to immediate individual needs and preferences.

4.2.2 Prosperous society. Respondents from Belgium and Pakistan believe that AI enabled personalization can contribute to a prosperous society – a society marked by the feeling that members in society are elevated. They perceive AI-enabled personalization may do so by creating a feeling that society is learning about its members' wishes and needs (*"Good! Better adjusting the offer at a social level can help raise awareness"* – R#119-W), makes its members happy by satisfying their needs ("*... offer a variety of personalization features, enabling them to tailor their offerings ever more accurately to the needs and tastes of individual users*" – respondent #33-nW), and stimulates economic welfare for its members (*"I think this can help with buying behavior and the economy"* – respondent #191-W). We find these perceptions equally expressed by respondents from Belgium and Pakistan. This highlights a broader belief of the good AI-driven personalization may do to stimulate societal advancement.

4.2.3 Inclusive Society. Respondents from both countries suggest that AI-enabled personalization may lead to a more inclusive society – a society marked by the feeling that members with different needs are acknowledged, valued and included. Interestingly, respondents from Belgium associate inclusivity with a sense of usefulness within society (e.g., "*Can be positive to feel useful as an individual within our society*" – R#234-W), and a mechanism to bring people together and fostering social cohesion (e.g., "*Nice way to bring up when you see a friend's name. Can bring people together a little more*" – R#157-W). They also view AI-enabled personalization as a means to celebrate cultural diversity and move beyond individuals being mere numbers within society (e.g., "*Not only in RAS habits and ideology, but 'even further' and 'closer' than that. We are not a NUMBER, we are a part of the whole, a diverse whole*" – R#122-W).

Respondents from Pakistan focus on AI-enabled personalization making people feel special within society (e.g., *"It makes them feel special"* – respondent #144-nW), establishing

better relationships (e.g., *"Personalization increases relationships in society"* – respondent #227-W), and acknowledging and embracing diverse needs, recognizing unique community niches ("*Embraces the diverse consumer needs and acknowledges niches of needs"* – respondent #12-nW).

4.2.4 Enslaved Society. A first negative implication that appears in our data is that some respondents – dominantly from Belgium – believe that AI-enabled personalization may contribute to emergence of an enslaved society, a scenario where people are losing control and consume in a submissive manner. AI-enabled personalization can do so by taking control of decision making which deprives members of the society of their right to decide (e.g., *"All of a sudden you feel that you are living in a society where you no more have a control and someone else is deciding for you"* – respondent # 4-nW-focus group). It may also escalate buying temptations, compelling even those who cannot afford it to make purchases (e.g., *"Temptation, even people who cannot afford it are constantly triggered"* – respondent #29-W), increase impulse and unplanned purchases (e.g., *"I think personalization (in the form of advertisements) increases impulse purchases"* – respondent #6-W), so are unnecessary spending contributing to a larger consumer society (e.g., *"I think it contributes to a larger consumer society, in which too much is thrown away"* – respondent #152-W), and encourage over-consumption (e.g., *"It may well encourage overconsumption, which is not always ideal. Can cause imbalance in goods, availability, ..."* – respondent #12-W). This highlights the potential societal consequences of AI-enabled personalization that drive excessive consumption.

Furthermore, respondents from both Belgium and Pakistan accuse AI-enabled personalization for raising expectations (e.g., *"but at the same time raise expectations for future purchases"* – respondent #233-W; *"in overall society its impact may be negative ... because customer wants are never ending"* – respondent # 49-nW). This concern revolves

around the idea that AI-enabled personalization may contribute to an environment where heightened expectations for continuous personalized experiences may lead to dissatisfaction or unattainable desires.

4.2.5 Surveillance Society. As shown in table 5, respondents from Belgium and Pakistan fear from the potential of AI-enabled personalization to lead to a surveillance society, where people feel they are losing control over their personal information. They fear that AI-enabled personalization could erode privacy due to a loss of secrecy (e.g., *"This can lead to a society in which the boundaries for privacy hang on a thin line"* – respondent #19-W) and by reducing choice (*"Personalization has issues with … and limiting choices based on his/her past history" – respondents* # 14-nW).

A more detailed analysis reveals additional, specific concerns in the WEIRD culture. Specifically, respondents from Belgium worry about the constant tracking of individuals' every move to feed data into personalization engines (e.g., *"… feeling like living in a surveillance society in which they are constantly tracking all of your moves to provide those personalized services"* – respondent # 2-W-focus group), creating privacy issues arising from information misuse (e.g., *"We give a lot of information to the world (unknowingly as well as consciously) that can be abused"* – respondent #148-W), and being steered towards certain preferences, contributing to a more constricted societal landscape (e.g., *"Everything and everyone will perhaps be more straitjacketed and pushed into a certain preference"* – respondent #126-W). These apprehensions reflect a better awareness of the risks associated with the proliferation of personal information in a digitally interconnected society among the respondents embedded in the WEIRD culture.

4.2.6 Abrasive Society. A final negative implication, again surfacing predominantly among respondents from Belgium, is that AI enabled personalization may contribute to an abrasive society. This is a society marked by a lack of concern for others and an atmosphere of

division and exploitation. This may occur through creating polarization (e.g., *"I think it might contribute to polarization in society because individuals get that constant reinforcement of their own views"* – respondent # 1-W-focus group). Additionally, some respondents see AI-enabled personalization jeopardizing individual well-being in pursuit of profit or the fear of losing a potential buyer (e.g., *"individual well-being can be put at risk at the expense of profit or the fear of losing a potential buyer"* – respondent #123-W), thereby creating a hostile environment through repetitive personalization tactics (e.g., *"there can be a kind of apathy in the long run. Currently, this tactic "works" because people feel addressed, but the more often it is used, the less personal it feels"* – respondent #235-W), and potentially concentrating power and influence with big companies being disproportionately promoted (e.g., *"Perhaps the largest, richest companies will also be pushed forward in this way and the smaller companies or self-employed people will disappear here?"* – respondent #173-W). Respondents from both countries also voice concerns about AI personalization pigeonholing consumers, keeping them in a limited sphere and reducing their exposure to new experiences (e.g., *"... it would keep people in their own bubble, just wanting and seeing things they like. ... exploring outside would be limited I guess"* – respondent #207-nW; *"it can be dangerous because only certain parts of reality are displayed (for example, think of personalization for political advertisements)"* – respondent #5-W). This underscores the societal risk of AI-enabled personalization in restricting individuals' exposure to a broader range of perspectives and experiences.

5. DISCUSSION

Our study is one of the first to unravel the mental models held by consumers concerning the well-being implications of AI-enabled personalization. This exploration spans across both the individual and societal level and includes cultures that relate differently to the WEIRD characteristics (i.e., Belgium and Pakistan). The aim is not just to comprehend the

respondents' mental models with respect to transformative potential of AI-enabled personalization but also to articulate the nuances that emerge from these distinct cultural landscapes.

The integrated framework (see Figure 1) illuminates the interplay between AI-enabled personalization and the elicitation of extended and restricted selves, both of which are related to individual well-being. AI-enabled personalization enhances the *extended self* through utilitarian, happy, and connected selves, while concurrently giving rise to a *restricted self* through exploited, unhappy, and restricted selves. Our study also unravels how societal well-being may be impacted positively through an *affluent society* (i.e., prosperous, convenience, inclusive societies), as well as negatively through an *ailing society* (i.e., surveillance, enslaved, abrasive societies).

Through this dual lens (i.e., individual and societal well-being), we shed light on the complex phenomenon of well-being, emphasizing the need for a holistic understanding that transcends cultural boundaries and fosters a more nuanced discussion about how AI technologies play role in our today's interconnected global world.

5.1 Theoretical implications

With the focus on mental models held by consumers from diverse cultures regarding the impact and role of AI-enabled personalization for their well-being, our research offers an examination of the transformative potential of AI-enabled personalization from the consumer perspective. Indeed, extant literature has predominantly focused on privacy-related implications of AI-enabled personalization (e.g., Ameen *et al*., 2021), while only anecdotally highlighting other well-being facets that consumers care about (Mehmood *et al*., 2023). By considering the mental models held by consumers about the well-being implications of AI-enabled personalization, this research expands the boundaries of personalization research (Mehmood *et al.*, 2023), broadens the scope and boundary of TSR work (Previte &

Robertson, 2019), and also responds to calls for a consumer-oriented approach in TSR (Russell-Bennett *et al*., 2019).

Second, our research advances the TSR literature by presenting a comprehensive overview of the various impacts of AI-enabled personalization on consumers' lives and the society in which they live, which reflect individual and societal well-being (Anderson & Ostrom, 2015; Nasr & Fisk, 2019). By considering mental models about well-being implications of AI-enabled personalization at the societal level, our research extends the dominant focus on the individual level – that is, the self – in personalization literature (e.g., Hutmacher & Appel, 2022; Wittkowski et al., 2020). In line with research highlighting the dynamic interplay between individual and societal well-being (Blocker & Barrios, 2015; Leo, Laud, & Chou, 2019), our findings show that AI-enabled personalization influences societal well-being in a manner reminiscent of individual well-being, encompassing eudaimonic, hedonic, and relational dimensions. The relational dimension implies an extension of the common two dimensional view of well-being (i.., eudaimonic and hedonic) to a tridimensional approach (White, 2017). This three-dimensional view on well-being at the individual and societal level with its positive and negative facets (i.e., extended versus restricted self and affluent versus ailing society) contributes to a more comprehensive understanding of the transformative potential of AI-enabled personalization and may even inform TSR scholars that investigate well-being impacts of other technological breakthroughs and innovations (Andersen et al. 2013; Nasr and Fisk 2019).

Finally, this study also contributes to understanding the cultural nuances in the context of mental models about the well-being implications of AI-enabled personalization, particularly in the dichotomy of WEIRD versus non-WEIRD societies. In WEIRD societies, our findings suggest personalization may align more closely with individualistic tendencies, emphasizing personal utility and autonomy. Conversely, in non-WEIRD societies, our

findings indicate that the communal aspects, such as collective benefits and societal harmony, might be more pronounced. This cultural distinction – currently under-researched in extant TSR literature (Finsterwalder et al., 2017) – underscores the need for a more inclusive and culturally sensitive approach in AI-enabled personalization research, emphasizing that one size does not fit all. By incorporating these cultural considerations, our research paves the way for more globally representative models of consumer behavior and well-being in the digital era – yet another way in which TSR is advanced (Christofi, Kvasova, & Hadjielias, 2023; Ostrom et al., 2021).

5.2 Managerial and policy implications

The findings of our research present pivotal managerial and policy implications in the realm of AI-enabled personalization, with a specific focus on its influence on both individual and societal well-being. Both private as well as public organizations are encouraged to adopt a structured framework, as outlined in our study, to assess and enhance the well-being implications of personalization efforts. This approach enables a balanced consideration of both the positive and negative facets of well-being at individual and societal levels, as depicted in Figure 1. This framework facilitates a thoughtful and informed decision-making process that aligns with the broader goals of enhancing individual and societal well-being (cf. UN SDG 3 – Hammedi *et al*., 2023) in the era of advancing personalization technologies. The identified positive facets in individual and societal well-being represent opportunities for enhancement and optimization of AI-enabled personalization efforts. Managers can draw insights from these positive dimensions to inform strategies that amplify the positive impact of personalization on individuals and society at large. Simultaneously, proactive measures may be implemented to mitigate or even prevent the emergence of negative implications stemming from AI-enabled personalization at both levels. Similarly, policy makers need to

establish clear regulations and ethical guidelines to govern the development and deployment of AI personalization for the good of individuals and society, while limiting its downsides.

At the individual level, it is crucial for managers to understand and leverage the positive aspects of AI-enabled personalization, such as its potential to augment an individual's extended self, as highlighted by Belk (2013) and Čaić *et al*. (2018). However, they must also be vigilant of the risks associated with AI-enabled personalization, including the potential to evoke a restricted sense of self among consumers. This duality underscores the need for a balanced approach in personalization initiatives that promote positive well-being outcomes while mitigating potential drawbacks. Factors such as algorithmic bias (Davenport *et al*., 2020), over-personalization (Gebremeskel & de Vries, 2023), filter bubbles (Kwak, Lee, & Lee, 2021), and the potential homogenization of preferences (Liu et al., 2021) raise concerns about the unintentional confinement of an individual's identity within predefined boundaries and should thus be taken into consideration when designing personalization initiatives, as well as public policy and regulation.

At the societal level, organizations must equally navigate the delicate balance between enhancing societal well-being and mitigating potential negative perceptions such as the fears of a surveillance, enslaved or abrasive society. This necessitates strategies that clearly demonstrate the societal benefits of personalization, like promoting sustainable practices and community engagement, while maintaining transparent communication about data usage and privacy. Proactively engaging with community feedback and conducting impact assessments can help identify and address any unintended negative consequences. Moreover, recognizing the pervasive influence of personalized digital environments in modern societies, regulatory interventions can serve as a mechanism to uphold standards of individual and societal well-being, ensuring that AI-enabled personalization practices align with ethical considerations and prioritize positive experiences.

Finally, in light of our research findings, the imperative for cultural sensitivity in AI-enabled personalization becomes clear. Organizations must acknowledge and adapt to the diverse mental models shaped by cultural contexts. For WEIRD societies, personalization strategies could be more individual-centric, focusing on personal preferences and autonomy. In contrast, in non-WEIRD societies, emphasis might be placed on community and collective values, aligning with the societal norms of these regions. Such inclusivity guarantees that AI-enabled personalization is effective and resonates across diverse societal groups, not just a select few (Fisk et al., 2023; Mende et al., 2024). In designing AI-enabled personalization initiatives, firms should thus delve into the mental models of consumers across cultures, tailoring their initiatives to these nuanced perceptions. By leveraging insights from our research and adopting a balanced perspective, organizations are better equipped to understand the complexities associated with AI-enabled personalization.

5.3 Limitations and Future Research

This study sheds light on consumers' perspective on the transformative potential of AI-enabled personalization at individual and societal levels. Some limitations, however, suggest directions for future research. First, the present research focused on the transformative potential of AI-enabled personalization in general while future research can examine the transformative potential of specific types (e.g., in-store personalization, app personalization, etc.) of AI-enabled personalization. Second, while this research attributes the observed differences between Belgian and Pakistani respondents to WEIRD versus non-WEIRD cultural distinctions, it is important to acknowledge that these populations may also differ in other significant areas such as exposure to technology and AI legislation. Therefore, future studies should consider a broader selection of countries to gain a more comprehensive understanding of how these additional dimensions might influence the transformative potential of AI-enabled personalization. Future research endeavors may also explore other

than cultural and national factors that contribute to the divergence in mental models, about the interplay between (AI-enabled) personalization and well-being such as belonging to minority or not. Third, this research relies on open-ended survey for data collection. Although open-ended survey questions can avoid bias introduced by suggesting responses to respondents and allow them to give detailed responses, they can also cause potential reduction in data quality and response rate and increased missing data when respondents have to type extensive responses (Connor Desai & Reimers, 2019). We, therefore, propose that future research collects critical incidents pertaining to the transformative potential of (AI-enabled) personalization by in-depth interviews or other types of data. Fourth, our study suggests that consumers across diverse cultures may have mixed mental models associated with AI-enabled personalization. In these contexts of ambivalence, how consumers cope with emotions of opposite valence needs further investigation. Extant literature on ambivalence in service contexts is scarce (Lunardo & Saintives, 2018) which further warrants future research in this area.

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Figure 1. Consumers' mental models linked to transformative potential of AI-enabled personalization

WELL-BEING LEVELS	WELL-BEING FACETS	*Eudaimonic facets*	*Hedonic facets*	*Relational facets*
Individual level	(+) ***Extended Self***	**(+) Utilitarian Self** = Feeling a sense of efficiency and effectiveness in the addressing of one's needs and wishes	**(+) Happy Self** = Feeling positive emotions through pleasure and personal growth	**(+) Connected Self** = Feeling valued and embraced by others
	(-) ***Restricted Self***	**(-) Exploited Self** = Feeling manipulated and treated unfairly	**(-) Unhappy Self** = Feeling negative emotions such as annoyance, irritation, a sense of weirdness, or fear	**(-) Limited Self** = Feeling constrained by external factors
Societal level	(+) ***Affluent society***	**(+) Convenience Society** = Feeling that members of society can consume with little resource investments	**(+) Prosperous Society** = Feeling that members of society are elevated	**(+) Inclusive Society** = Feeling that members of society are acknowledged, valued, and included
	(-) ***Ailing society***	**(-) Enslaved Society** = Feeling that members of society are consuming in a submissive manner	**(-) Surveillance Society** = Feeling that members of society do not have control over their personal information	**(-) Abrasive Society** = Feeling that society is marked by a lack of concern for others and an atmosphere of division and exploitation

Contextual Factors

- **Culture** (WEIRD versus non-WEIRD)

Table 1. Overview of Personalization-Well-Being Papers

Authors	Methodology	Country	Personalization	Well-being	Why Need for Present Research
Fan & Pool (2006)	Conceptual	Not applicable	Service personalization in terms of the relationship	Positive implications for psychological well-being (cf. individual well-being)	No focus on AI-enabled personalization No focus on societal well-being No insight into cultural differences
Lee et.al. (2011)	Conceptual	Not applicable	Personalizing products and prices based upon data on consumer preferences	Negative implication for consumer welfare (cf. individual well-being) but positive implications for social welfare (cf. societal well-being) when personalizing firms have autonomous choice of privacy protection	No focus on AI-enabled personalization No insight into cultural differences
McConkey et al. (2018)	Qualitative	Ireland	Personalized as opposed to congregated arrangements for vulnerable people	Positive implications for personal well-being (cf. individual well-being) are more pronounced for people with intellectual disability with higher support needs than for people with mental health problems	No focus on AI-enabled personalization No focus on societal well-being No insight into cultural differences
Abdullahi et. al. (2019)	Quantitative	Nigeria	Personalized health intervention based upon data about consumer gender and age	Positive implications for subjective well-being (cf. individual well-being)	No focus on AI-enabled personalization No focus on societal well-being No insight into cultural differences
Rohani et. al. (2020)	Quantitative	Not specified	Personalized recommender system	Positive implications for mental health and well-being (cf. individual well-being)	No focus on societal well-being No insight into cultural differences
Kraaij et. al. (2020)	Quantitative	Netherlands	Personalized feedback and coaching through mHealth app	Positive implications for well-being for individuals at work (cf. individual well-being)	No focus on societal well-being No insight into cultural differences
Wittkowski et. al. (2020)	Quantitative	European region	Perceived personalization arising from self-tracking technologies	Positive implications for well-being (cf. individual well-being) through advice compliance	No focus on societal well-being No insight into cultural differences
Henkens et al. (2021)	Quantitative	USA	Perceived personalization by smart service system	Positive implications for two well-being facets – i.e., eudaimonic and hedonic well-being (cf. individual well-being) – through engagement	No focus on societal well-being No insight into cultural differences
Hutmacher & Appel (2022)	Conceptual	Not applicable	Personalized digital environments	Positive implications for hedonic well-being but not for eudaimonic well-being (cf. individual well-being)	No focus on societal well-being No insight into cultural differences
Pardini et. al. (2022)	Quantitative	Italy	Personalized interventions	Positive implications for people's well-being (cf. individual well-being)	No focus on AI-enabled personalization No focus on societal well-being No insight into cultural differences
Shryock & Meeks, 2022	Literature review	Not applicable	Personalized health programs	Positive implications for people's well-being (cf. individual well-being)	No focus on AI-enabled personalization No focus on societal well-being No insight into cultural differences
Mende et al., 2024	Quantitative	USA	Personalized communication	Positive well-being implications for stigmatized consumers	No focus on societal well-being No insight into cultural differences

Table 2. Demographic profile of survey respondents

Demographic details of respondents			
	Belgium (n=101)	Pakistan (n=75)	Total (n=176)
Age Mean SD	 26.7 years 10.3	 32.7 years 5.8	 28.9 years 9.3
Gender (%) Male Female	 45.5 % 52.5%	 77.3 % 22.7 %	 59 % 41 %
Work status (%) Working Student	 43.6 % 56.4 %	 85.9 % 14.1 %	 60.8 % 39.2 %
Civil status (%) Single Married/Cohabiting Other	 67.3 % 21.4 % 11.2 %	 38.4 % 60.3 % 1.4 %	 54.9 % 38.1 % 7.0 %

Table 3. Profile of focus group participants

Focus group participants		
	Gender	Characteristics
Respondent # 1	Male	Belgian
Respondent # 2	Female	Belgian
Respondent # 3	Male	Pakistani living in Belgium (minimum 5 years)
Respondent # 4	Female	Pakistani living in Belgium (minimum 5 years)
Respondent # 5	Male	Pakistani living in Pakistan
Respondent # 6	Female	Pakistani living in Pakistan

Table 4. Individual Well-Being Facets Evoked by AI-enabled Personalization

Coding – Individual Well-being					Culture		Illustrative evidence
Emergent theme	Third-order	Second-order	First-order	Zero-order	W	nW	
EXTENDED SELF	Utilitarian self = feeling that wishes and needs are efficiently and effectively addressed	feeling that wishes and needs are effectively addressed	improved usefulness	useful, needs are met, added value, relevant, …	X	X	"*it makes for more interesting ads, which may even add value, instead of showing things that don't interest me at all"* - R#231-W
			feeling helped	felt helped, better helped, …	X		"*I also like that the ads are well suited to my lifestyle. This way I don't have to look for nice articles myself*" - R#182-W
			reduced information overload	less overwhelmed, only relevant information, …	X	X	"*people are less overwhelmed with advertising and information that does not matter but one gets customized advertisements and information*" - R#20-W
			enhanced user experience	enhances experience, better experience,…	X		*"I think personalization enhances the user experience of certain services and products*" - R#6-W
			feeling satisfied	satisfactory, feel contented, pleasing experience, …		X	*"it gives an extra boost of customer satisfaction"* - R#188-nW
		feeling that wishes and needs are efficiently addressed	saving time	help find solutions faster, get immediately what you want,	X	X	"*Interesting to quickly find new movies/series that I must see*" - R#225-W
			reduced effort	reduces effort, less efforts,…	X	X	*"positive. It reduces effort"* - R#26-nW
			sense of ease	makes search easier, easy buying, …	X	X	*"It can make things easier like Netflix recommendations, as long as it stays within certain limits*" - R#177-W
	Happy self = experiencing positive emotions	experiencing pleasure	experiencing fun	fun to shop, had to laugh, …	X		*"I think people will find it more fun to shop in this way, for example with the Zalando app"* - R#160-W
			experiencing pleasant surprise	pleasant to discover new things, pleasantly surprised, …	X		*"I didn't even know asos had these items, so I was pleasantly surprised" - R#173-W* *"It makes me happy to see that there's a new series or something out there"* – R#2-W-FG
			experiencing interest	this was interesting, caught attention, …	X		*"personalization can be (relatively) more interesting than average advertising, especially in terms of content"* - R#233-W
		experiencing personal growth	experiencing learning and development	personal development, get to know new things, …		X	*"it creates postive impact for customers. They get to know new things" - R#28-nW* *"… but on the other hand it has a also the potential of discovering things which you may miss and I think that can add to your personal development" respondent # 3-nW-FG*
			experiencing empowerment	building confidence, empowerment, …		X	*"personalization allows more freedom to individuals"* - R#16-nW
	Connected self = feeling embraced by other actors	feeling valued	feeling personally valued	feeling special, feel privileged, feel appreciated, …	X	X	*"Personalization (...) realizes them that they are important"* - R#54-nW
			feeling recognized for ownership	ownership with offering, ownership		X	*"ownership with offerings"* - R#17-nW
		experiencing a connection with brand/firm	bonding with brand/firm	creates relationship, creates customer-firm bond, …		X	*"it create positive relation b/w customer and company to fulfill his real want"* - R#49-nW
			feeling engaged with brand/firm	engagement, emotional attachment, …		X	*"It creates emotional attachment"* - R#231-nW

RESTRICTED SELF	Exploited self = feeling manipulated	feeling lured into buying	feeling targeted to buy	convince to buy, greater urge to look/buy	X	X	"*Also, the personal title gives a false sense of personality and sympathy when it's all about sales*" - R#233-W
			feeling pressured to buy	pressured, pushy, forces to buy, …	X	X	*"You really get the feeling that you are constantly being pulled" - R#182-W* *"… not a blessing, but a curse. What I mean to say is it is exploitative because it forces consumers to buy the product."- R#6-nW-FG*
		feelings of intrusiveness	having privacy concerns	invasion of privacy, intrusive, invades personal privacy, …	X	X	*"I think personalization is good up to a certain level. The danger, of course, is in the over-collection of personal data and preferences, which makes your privacy smaller and smaller"* - R#5-W
			feeling tracked	being watched, being followed, …	X		"*Not a fan because all search information is tracked*" - R#12-W
	Unhappy self = experiencing negative emotions	feeling weak	feeling weird	weird feeling, super tricky, creepy, …	X		*"I thought it was weird because I only looked it up once"* - R#176-W
			feeling frightened	a little scared, frightening, dangerous, …	X		"*That privacy is completely lost, which causes a frightening feeling"* - R#200-W
		feeling upset	feeling irritated	irritation, frustration, …	X		*"I choose what I need, I must not have suggestions of things that do not know me"* - R#230-W
			feeling annoyed	annoyance, annoying	X		*"Looking for a new job is something personal. I find it unheard of to get push advertising about it"* - R#270-W
	Limited self = experiencing constrained by others	feeling constrained by others	having less voicing opportunities	give your own opinion less, feel like a puppet, …	X		*"You will give your own opinion less, because they remember your previous examples"* - R#17-W
			experiencing less freedom of choice	choice restriction, less freedom of choice, …	X		*"We are increasingly guided by a computer program that stores and evaluates our preferences, this can be positive but also very frightening at times as we have less freedom of choice ourselves"* - R#153-W
		experiencing hindrances to grow	not keep learning	limits the mind, not searching on your own, …	X	X	*"if you didn't get those personalized ads, you would start searching on your own and maybe that way learn about what you're looking for and maybe change your mind, come across new or better items"* - R#173-W

Note. W=respondents from Belgian as representing a WEIRD culture, nW=respondents from Pakistan reflecting a non-WEIRD culture, FG=focus group

Table 5. Societal Well-Being Facets Evoked by AI-enabled Personalization

Coding – Societal Well-being					Culture		Illustrative evidence
Emergent theme	Third-order	Second-order	First-order	Zero-order	W	nW	
AFFLUENT SOCIETY	Convenience society = feeling that members in society can consume with little resource investments	feeling that society focused on saving resources	saving time	saves time, get rid of spending too much time, …		X	"*It helps to save precious time and have services in minimum time for a better user experience*" - R#36-nW
			saving money	saves resources, saves money		X	*"They can find different deals to save money and time"* - R#73-nW
		feeling that society focused on comfort	creating comfort	feel more comfortable, feeling at ease, …	X	X	*"Society feels relaxed about moving with this service"* - R#97-nW
			immediate gratification	getting right ads without having to filter it, immediately seeing appropriate ads, …	X		*"There are good consequences such as finding what you are looking for faster even if it is a movie or a new mobile phone"* - R#199-W
	Prosperous society = feeling that members in society are elevated	feeling that society is learning about its members' wishes and needs	creating awareness for wishes and needs	raise awareness, sense of awareness, …	X	X	*"Good! Better adjusting the offer at a social level can help raise awareness"* - R#119-W
			giving insight into wishes and needs	better understanding, knowledge about people's choice, …	X	X	*"Can provide a better understanding of what the demand is for"- R#20-W "it can also bring prosperity or better healthcare. For instance, if it's in support of dermatologist, I know it's being used, so maybe it could help you in a healthcare system"* – R#2-W-FG
		feeling that society makes its members happy by satisfying their needs	satisfying needs and wishes	more accurate tailoring, better fulfillment of needs, satisfied society, …	X	X	*"… tailor their offerings ever more accurately to the needs and tastes of individual users"* - R#33-nW
			making happy by treating humanly	everyone happy, people get better, elevating others, …	X	X	*"Society comes out humanely, something that happens too much numerically in the current time"* - R#121-W
		feeling that society that creates economic welfare for its members	fostering economic growth	can help economy, helps grow small businesses, …	X	X	"*It helps to grow small businesses*" - R#8-nW
			stimulating economic activity	increase the trade activities, drives repeat engagement,		X	*"Personalization is especially effective at driving repeat engagement and loyalty over time"* - R#38-nW
	Inclusive society = feeling that members with different needs are included in society	feeling that society appreciates its members	making people feel useful	feel useful as an individual within society	X		"*Can be positive to feel useful as an individual within our society*" - R#234-W
			making people feel special	makes them feel special, being specially treated, …		X	"*It makes them feel special*" - R#144-nW
		feeling that society is characterized by belongingness	bringing people together	can bring people together, family atmosphere, …	X		"*Nice way to bring up when you see a friend's name. Can bring people together a little more*" - R#157-W
			establishing better relationships	people/group interaction, enhances relationships, …		X	"*Good Social norms could be established if good content and information are dispersed*" - R#48-W
		feeling that society that embraces diversity	embracing cultural diversity	colorful society, a diverse whole, …	X		"*Not only in RAS habits and ideology, but 'even further' and 'closer' than that. We are not a NUMBER, we are a part of the whole, a diverse whole*" - R#122-W
			embracing diverse needs/issues	look for diversity, avoid body image issues, …		X	"*Embraces the diverse consumer needs and acknowledges niches of needs"* - R#12-nW

AILING SOCIETY	Enslaved society = feeling that members in society consume in a submissive manner	feeling that members in society are triggered to buy	increasing buying temptations	triggered to buy, buying behavior is stimulated, …	X		*"Temptation, even people who cannot afford it are constantly triggered"* - R#29-W
			more impulse purchases	increases impulse purchases, more repurchases, …	X		*"I think personalization (in the form of advertisements) increases impulse purchases"*- R#6-W
		feeling that society encourages overconsumption	spending unnecessarily	unnecessary spending, larger consumer society, …	X		*"I think it contributes to a larger consumer society, in which too much is thrown away"* - R#152-W
			encouraging overconsumption	encourage overconsumption, encourages to consume more, …	X		*"It may well encourage overconsumption, which is not always ideal. Can cause imbalance in goods, availability, ..."* - R#12-W
		feeling that high expectations mark society	raising expectations	raises expectations, never ending consumer needs, …	X	X	*"but at the same time raise expectations for future purchases"* - R#233-W
	Surveillance society = feeling that members in society are losing control	feeling that society is characterized by privacy issues	privacy issues due to info misuse	information misuse, major risk is protecting our data, …	X		*"We give a lot of information to the world (unknowingly as well as consciously) that can be abused"* - R#148-nW
			privacy issues due to loss of secrecy	less security, less privacy, issues with personal privacy	X	X	*"This can lead to a society in which the boundaries for privacy hang on a thin line" - R#19-W* *"... you think you are living in a society they are you know just looking into what you are doing"* – R#4-nW-FG
		feeling that society is characterized by loss of independence	being steered	pushed into a certain preference, more technology dependence, …	X		*"I think there's a big danger in it because companies collect a lot of information … That data allows them to have a lot of power and influence people"* - R#7-W
			reducing choice	restricts choice, limits opportunity, …	X	X	*"Personalization has issues with … and limiting choices based on his/her past history"* - R#14-nW
	Abrasive society = feeling that society is marked by little concern for others	feeling that division characterizes society	limiting view of reality	only certain parts of reality are displayed, get to see very niche, …	X		*"it can be dangerous because only certain parts of reality are displayed (for example, think of personalization for political advertisements)" - R#5-W* *"I think it might contribute to polarization in society because individuals get that constant reinforcement of their own views"* - R#1-W-FG
			pigeonholing consumers	class creation, you are immediately cornered, more pigeonholed, …	X	X	*"… it would keep people in their own bubble, just wanting and seeing things they like. … exploring outside would be limited I guess"* - R#207-nW *"the biggest problem with personalization is that you go down the rabbit hole"* – R#1-W-FG
		feeling that exploitation characterizes society	not taking care of people	well-being can be put at risk, feeling of being used, …	X		*"Individual well-being can be put at risk at the expense of profit or the fear of losing a potential buyer"* - R#123-W *"All of a sudden you feel that you are living in a society where you no more have a control and someone else is deciding for you"* - R#4-nW-FG
			creating hostile environment	can be kind of apathy, create a feeling of jealousy, …	X		*"There can be a kind of apathy in the long run. Currently, this tactic "works" because people feel addressed, but the more often it is used, the less personal it feels"* - R#235-W
			big companies pushed forward	larger companies have advantage, disappearance of small companies, …	X		*"Perhaps the largest, richest companies will also be pushed forward in this way and the smaller companies or self-employed people will disappear here?"* - R#173-W

Note. W=respondents from Belgian as representing a WEIRD culture, nW=respondents from Pakistan reflecting a non-WEIRD culture, FG=focus group