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Ethnic Diversity, Organizational Diversity Climate, and the Perceived Value of Deepfake Personas: A User Study with Marketing Professionals

D'alice Ntumba Tshilemba[a], Joni Salminen[b], Ilkka Kaate[c] and Bernard Jansen[d]

[a]School of Business and Economics, Åbo Akademi University, Turku, Finland; [b]School of Marketing and Communication, University of Vaasa, Vaasa, Finland; [c]Department of Marketing and International Business, University of Turku, Turku, Finland; [d]Qatar Computing Research Institute, Hamad Bin Khalifa University, Ar-Rayyan, Qatar

ABSTRACT

Beyond fraud, deepfake personas can be utilized in human-centered design to represent user groups. This study investigates how deepfake persona sets of different ethnic diversity can offer strategic value for human-computer interaction (HCI) design processes. In an online experiment with 81 marketing professionals evaluating persona sets of varying diversity, the more diverse sets were perceived as significantly more inclusive, more inspiring for market coverage, and more valuable for identifying market opportunities, with no compromise of perceived persona quality or task performance. Findings show that these perceived strategic benefits were consistently associated with organizational diversity climate, consistent with institutional theory. These findings advance persona, advertising, and HCI research by repositioning deepfake technology from a solely technological risk to a strategic design resource driven by the organizational diversity climate, with direct implications for inclusive HCI practice and diversity policies.

KEYWORDS

Deepfake personas; diversity; perceptions; professionals; institutional theory

1. Introduction

Marketing has always recognized that representation matters. Decades of research confirm that who appears in a campaign and how authentically they are portrayed influences consumer engagement, brand perception, and market reach (Burgess et al., 2024; Campbell et al., 2025; Eisend et al., 2023; Forehand & Deshpandé, 2001; Khan et al., 2025). What is less understood is what happens before the campaign, in the design room, where professionals decide whose face to feature, which consumers to prioritize, or who the target audience is (Clarke, 2015; Friess, 2012; Salminen et al., 2021). These decisions are increasingly being made with the help of personas.

Personas, defined as fictional yet realistic representations of target users, are a common design tool in human-centered design to build empathy and maintain focus on end users throughout the design process (Cooper, 1999; Grudin & Pruitt, 2006; Nielsen, 2019). Personas combine demographic characteristics, behavior patterns, goals, and contextual details to create a simplified and memorable presentation of user segments (Miaskiewicz & Kozar, 2011; Salminen et al., 2018). This form of user presentation transforms abstract data into relatable persona profiles, PDFs, or posters that facilitate communication within design teams and guide decision-making in product development, service design, and marketing applications (Friess, 2012; Miaskiewicz & Luxmoore, 2017; Pruitt & Grudin, 2003; Salminen et al., 2020).

In human-computer interaction (HCI), personas act as decision support tools and boundary objects that transform user research into a practical representation that inform design choices (Grudin & Pruitt, 2006; Miaskiewicz & Kozar, 2011; Salminen et al., 2018). Marketing represents a key

CONTACT D'alice Ntumba Tshilemba dalice.tshilemba@abo.fi School of Business and Economics, Åbo Akademi University, Turku, Finland.

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organizational setting where professionals use personas not only to understand consumers but also to make important choices about targeting, message design, and campaign design (Clarke, 2015; Jansen et al., 2024; Revella, 2015, 2015; Salminen et al., 2020; Salminen et al., 2021). Despite widespread claims about the benefits of personas in design practice, empirical evidence of their value in real organizational decision-making remains limited (Friess, 2012; Salminen et al., 2018). The legitimacy of personas as HCI tools depends not only on their technical design but also on whether professionals find them useful for decisions they face in practice. We term this *strategic value* the perceived usefulness of a persona set in supporting professional assessments, such as identifying target audiences, inspiring campaign coverage, and recognizing market opportunities (Salminen et al., 2018, 2022). Investigating the strategic value of personas is therefore an important concern in HCI; it addresses whether personas can fulfill their purpose as decision support tools within organizations where they are used.

Personas were originally created through a labor intensive research process, including interviews, observations, and surveys, but these methods face documented practical limitations in scalability and real-time adaptation (Jansen et al., 2021; Pruitt & Grudin, 2003). These limitations have driven interest in AI-generated personas, enabled by large-scale user interaction data and advances in computational analytics (An et al., 2018; Jansen et al., 2020; Salminen et al., 2021). Amongst the most immersive developments are *deepfake personas*: realistic synthetic video representations of humans created using generative adversarial networks (GANs) and advanced deep learning techniques (Kaate et al., 2023, 2024). Where traditional persona profiles are static, deepfake personas offer dynamic, talking personas designed to increase engagement and empathy (see Figure 1).

However, the same generative process that enables scalability also raises serious concerns about bias and the authentic representation of diversity. Studies document under-representations of ethnic minorities in AI avatar platforms and variations in emotional expression across ethnic groups (Kaate et al., 2024; Kaate et al., 2025). More broadly, AI systems trained on large datasets often encode and amplify existing societal biases (Bolukbasi et al., 2016; Caliskan et al., 2017; Noble, 2018). Evidence that AI-generated faces reproduce gender stereotypes and racial homogenization adds to concerns about algorithmic bias (AlDahoul et al., 2025; Park et al., 2024). For marketing professionals using deepfake personas, these issues are especially serious, unlike those of non-AI-based personas, whose traits can be traced to specific user research data. Deepfake personas are generated by algorithms that provide little to no insight into how representation decisions are made. This makes it difficult for practitioners to identify or verify potential biases in practice (Barocas & Selbst, 2016; Salminen et al., 2020).

Prior research has examined deepfake personas-related technical qualities, such as whether AI can generate realistic, diverse faces or on individual perceptions, like whether users find deepfake personas authentic or credible (Kaate et al., 2023a; Kaate et al., 2023, 2024; Roe et al., 2025). But the organizational contexts where these tools are adopted and used have received relatively little attention in persona research (Friess, 2012; Grudin & Pruitt, 2006; Miaskiewicz & Luxmoore, 2017). What still needs to be explored is how *organizational* factors influence professional engagement with deepfake personas. This is a significant gap because professionals do not evaluate design tools in isolation but within organizations that influence what and how they interact with and engage with these tools (Orlikowski & Iacono, 2001; Skeels & Grudin, 2009; Uhde & Hassenzahl, 2021). Institutional theory provides a framework for examining these organizational factors, arguing that organizational structures, policies, and practices have a stronger impact on individual behavior than personal beliefs or values (DiMaggio & Powell, 1983; Scott, 2008). Consistent with the microfoundations of institutional theory (Cardinale, 2018; Powell & Colyvas, 2008), we study this institutional influence at the level of individual professionals' perceptions of their organization's diversity climate.

In diversity research, studies show that diversity climate (employees' shared perceptions about what is important, policies, and practices related to diversity) more accurately predicts responses to diversity initiatives than individual attitudes (Chrobot-Mason & Aramovich, 2013; Kalev & Dobbin, 2022; Nishii, 2013). If this applies to deepfake persona evaluations, then ensuring accurate ethnic representation and persona quality is an important first step, but it does not guarantee that professionals will use diverse personas effectively. Even well-designed, ethnically diverse persona sets may be underused if the organizational environment does not prioritize diversity as a strategic value. In other words, what

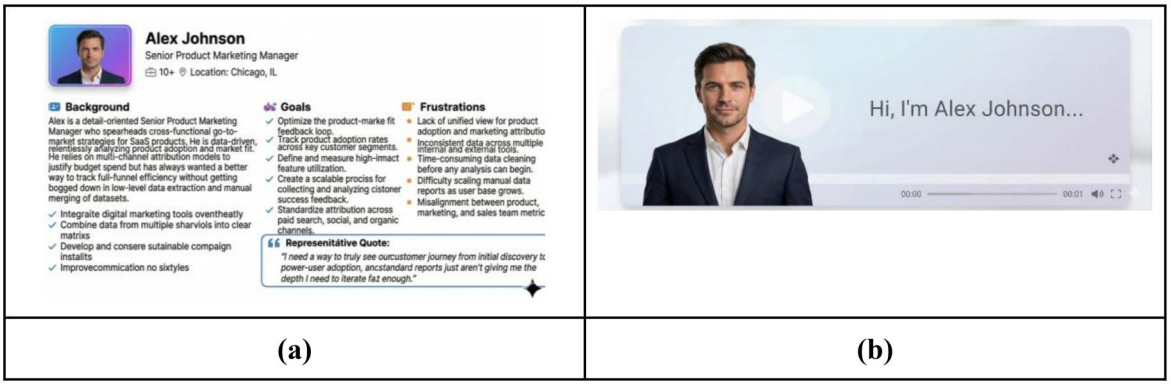

Figure 1. Examples of **(a)** a static persona profile, which has traditionally been used for user representation in human-computer interaction, where personas stem from, and **(b)** a deepfake persona, which is a "living, talking" person that represents the goals, needs, and wants of a group of people. The reader is encouraged to zoom in for better legibility.

professionals do with diverse deepfake personas depends not only on the quality of the personas but also on whether their organizations have built an environment that sees diversity as a strategic asset.

A separate but related question is whether the ethnic diversity of personas affects how professionals perceive the quality of those personas. If ethnically diverse deepfake personas are seen as less realistic, credible, or authentic than non-diverse sets, this could create a practical barrier to their use, one that no amount of organizational support or strategic intent can easily overcome. Kaate et al. (2025) establish that ethnic diversity does not compromise basic persona quality; whether ethnic diversity influences how professionals assess the *strategic value* of those personas remains an open question. This distinction matters: equal perceived quality does not necessarily mean equal perceived value. A set of personas may be deemed credible and realistic regardless of their ethnic composition, but ethnically diverse persona sets may be seen as considerably more valuable for strategic planning because they better represent a wider target market. These two gaps, one organizational and one individual, shape our research questions. In an online experimental user study with 81 marketing professionals, we put forth three research questions (RQs):

RQ1: Does ethnic diversity in deepfake persona sets influence professionals' perceptions of personas' strategic value?

RQ2: Do organizational diversity factors or individual diversity attitudes more strongly influence professionals' perceptions of the value of deepfake personas?

RQ3: Does the ethnic diversity of deepfake persona sets influence professionals' perceptions of persona quality and task performance?

This study makes three main contributions to HCI research. First, we show that ethnic diversity in deepfake persona sets positively influences perceived strategic value. Second, we show that this strategic value effect is associated with the organizational diversity climate, not by personal diversity attitudes. Third, this study contributes to emerging research on the practical use of deepfake technology in design settings (Kaate, 2025; Whittaker et al., 2023), and challenges the common view of deepfake technology as solely a risk and shows that ethnically diverse deepfake personas can serve as effective strategic tools for inclusive marketing design without compromising the persona quality factors that professionals rely on.

2. Related work and hypothesis

2.1. Diversity and deepfake personas

Personas have evolved from qualitative, ethnographic research-supported representations (Cooper, 1999) to data-driven approaches using digital analytics and user behavioral data (An et al., 2018; Jansen et al., 2020; Salminen et al., 2019). Traditional personas, while effective at humanizing data and facilitating empathy with user groups, face ongoing limitations; their creation is resource and time-

consuming, and they often become less relevant as user behavior changes over time (Jansen et al., 2021). This has led to a shift toward quantitative and algorithmic methods that promise scalability and greater objectivity, although issues of algorithmic bias still remain (Salminen et al., 2021).

The development of AI-generated personas has advanced alongside this trend, involving multiple AI models, such as large language models (LLMs), that produce detailed personas with narratives, visuals, and behavioral patterns (Amin et al., 2025; Sattele & Ortiz, 2024). Deepfake personas represent one of the most immersive developments in this space (Kaate et al., 2023, 2024). Commercial platforms provide professionals with high-quality AI-generated persona videos featuring realistic facial expressions, lip-syncing, and customizable demographics (Chan et al., 2024; Tan et al., 2025).

However, AI generation introduces its own challenges. Biases in the training data of generative models lead to systematic underrepresentation of certain demographic groups (Bolukbasi et al., 2016; Kaate et al., 2025). Generative AI systems often create generic personas that overlook the unique needs and behaviors of underrepresented groups. This problem worsens when models are used without additional grounding data, leading to the misrepresentation of minorities, older adults, and culturally diverse populations (Haxvig et al., 2025; Huang & Huang, 2026; Lazik et al., 2025). The black-box nature of AI algorithms further complicates the situation, making it difficult for professionals to understand or validate the choices made in representation (Barocas & Selbst, 2016; Passi & Barocas, 2019; Rudin, 2019). Studies show that AI-generated faces can trigger uncanny valley effects, reducing perceived naturalness and creating discomfort that hampers the empathetic role that personas are meant to fulfill (Kaate et al., 2023, 2024; Lazik et al., 2025; Sattele & Ortiz, 2024). This happens when synthetic faces look almost human but have visual flaws that reveal their robotic nature, causing discomfort to users (Mori et al., 2012). This matters for deepfake personas because if professionals find them uncomfortable to watch, they are unlikely to empathize with them, defeating the main role that personas are designed for.

Most research on deepfake personas focuses on technical capabilities or individual perceptions of quality; questions about institutional factors that shape how professionals engage with deepfake persona tools remain largely unexplored. A specific and relevant gap also remains in whether implementing ethnic diversity in deepfake personas compromises perceived persona quality. Early deepfake persona research identifies uncanny valley effects and concerns about perceived authenticity, realism, and credibility as challenges (Haxvig et al., 2025; Kaate et al., 2023b, 2024; Lazik et al., 2025), suggesting that diversity might negatively affect perceived quality. However, Kaate et al. (2025) found no significant differences in perception of personas across ethnically diverse deepfake personas, indicating functional equivalence across key quality measures. Given the limited prior research, this study examines how the ethnic diversity of deepfake persona sets influences professionals' perceptions of quality.

2.2. Inclusive design and perceived persona value

Inclusive design principles highlight the importance of accurately representing diverse user groups (Trewin et al., 2018; Wobbrock et al., 2011). Research on diversity in design tools shows that demographic traits of personas affect designers' attention, empathy, and design choice (Hill et al., 2017; Salminen et al., 2023). However, concerns about tokenistic representation, that is, superficially changing demographic features without real cultural understanding, which can reinforce stereotypes instead of promoting genuine inclusions (Chapman & Milham, 2006; Turner & Turner, 2011).

For ethnic diversity, evidence points to both opportunities and risks. Including diverse persona representations can help practitioners recognize previously overlooked user groups and develop more inclusive solutions (Goodman-Deane et al., 2018, 2021). However, without genuine cultural understanding, diverse personas may reinforce stereotypes or present inauthentic portrayals (Fuglerud et al., 2020; Hill et al., 2017). In advertising, diversity in design materials affects how professionals perceive target audiences and develop strategic plans. Exposure to diverse representation increases cognitive flexibility and creative thinking (Friedman et al., 2016; Kurtzberg, 2005), suggesting that ethnically diverse persona sets can be more innovative and inspiring for practitioners. Diverse representation in marketing materials also signals comprehensive market thinking and an inclusive approach among professionals (Campbell et al., 2025; Eisend et al., 2023).

Kaate et al. (2025) found that ethnic and gender diversity in deepfake personas did not affect basic perception dimensions, such as authenticity and credibility. However, that research did not examine what this study terms strategic value. The perceived usefulness of a persona set for advancing broader organizational goals beyond baseline quality dimensions such as realism or credibility. This conceptualization draws on persona research showing that professionals use personas not only for functional design tasks but also for broader strategic purposes, including customer portfolio management, market prioritization, and organizational decision-making (Salminen et al., 2022). Consistent with this, Salminen et al. (2018) found that personas serve strategic goals by helping decision-makers prioritize certain groups and address conflicting needs within target market functions, regardless of whether the persona is perceived as realistic or credible. Strategic value, therefore, captures the dimensions along which professionals evaluate whether design tools genuinely support their work objectives as opposed to meeting a functional need.

This gap matters because meeting quality standards does not eliminate differences in how value is perceived at the strategic level. A persona set may be seen as equally credible regardless of its ethnic composition, whereas a diverse set might be seen as more useful for strategic planning because it better represents the target market's range. This distinction is important when professionals evaluate design tools for practical use, as the ability to indicate inclusivity, encourage broad thinking, and support recognition of market opportunities provides direct professional benefits. Building on this, we propose the following hypotheses:

H1a: Ethnically diverse deepfake persona sets are perceived as more inclusive than non-diverse deepfake persona sets.

H1b: Ethnically diverse deepfake persona sets are perceived as more inspiring of coverage than non-diverse deepfake persona sets.

H1c: Ethnically diverse deepfake persona sets are perceived as more valuable for identifying market opportunities than non-diverse deepfake persona sets.

H1d: Ethnically diverse deepfake persona sets are perceived as more representative of a complete target market than non-diverse deepfake persona sets.

H1e: Ethnically diverse deepfake persona sets are perceived as more inspiring for creative advertising ideas than non-diverse deepfake persona sets.

H1f: Ethnically diverse deepfake persona sets are perceived as better reflecting the diversity of consumer needs than non-diverse deepfake persona sets.

H1g: Ethnically diverse deepfake persona sets are perceived as offering greater variation in strategic insights than non-diverse deepfake persona sets.

2.3. Institutional theory and organizational diversity climate

Institutional theory provides a framework for understanding how organizational structures influence individuals' behavior (DiMaggio & Powell, 1983; Powell & DiMaggio, 1991; Scott, 2008). While institutional theory's foundation describes field and organizational level structures and isomorphic pressures, a more recent stream of scholarship on its microfoundations argues that pressures are sustained and enacted through individual cognition and perceptions (Cardinale, 2018; Powell & Colyvas, 2008), and provides a theoretical basis for studying institutional influence through individual level perceptions of organizational climate, as we do here. The main idea is that an organization's structures, policies, practices, and norms have a greater influence on individuals' behaviors than their personal beliefs or values. Organizations create institutionalized environments with shared understandings, expectations, and routines that guide members' behavior, even when these organizational norms conflict with personal preferences (DiMaggio & Powell, 1983). HCI research increasingly recognizes that technology use is influenced not only by individual cognition and interface design but also by the organizational and societal contexts in which use takes place (Orlikowski & Iacono, 2001; Skeels & Grudin, 2009; Uhde &

Hassenzahl, 2021). Personas are used and evaluated within organizations, not by isolated individuals, making organizational context a relevant factor in understanding how HCI tools work in practice (Canossa & Drachen, 2009; Jansen et al., 2020; Salminen et al., 2022). Institutional theory provides a framework for exploring these factors. Within this framework, organizational diversity climate refers to employees' shared perceptions of how their organization values, supports, and implements diversity (Barak, 2000; Barak et al., 1998; Cox, 1993). Diversity climate includes multiple dimensions: leadership commitment to diversity, formal diversity policies and programs, equitable practices and procedures, and accountability for diversity outcomes (Nishii, 2013). A strong diversity climate indicates to employees that diversity is organizationally valued and that recognizing and leveraging it aligns with broader organizational goals.

A meta-analysis of twenty-five years of diversity climate research found that the relationships between diversity climate and outcomes vary by climate type, with inclusion climate showing strong connections to employee attitudes and behaviors (Holmes et al., 2021). This confirms that organizational climate factors influence diversity outcomes more effectively than individual attitudes alone (Chrobot-Mason & Aramovich, 2013; Kalev & Dobbin, 2022; Nishii, 2013). Organizations with strong inclusion climates experience higher employee engagement in diversity initiatives, greater recognition of diversity's strategic significance, and improved diversity outcomes across various areas. On the other hand, those companies with weak diversity climates, even individuals with strong personal diversity values, may struggle to engage effectively with diversity practices, as the institutional environment shapes which behaviors are reinforced and rewarded (DiMaggio & Powell, 1983; Scott, 2008).

Research shows that organizational factors influence how practitioners interact with tools that have diversity implications, from marketing diversity policies and inclusive practices shape how advertising and marketing professionals identify market opportunities, develop creative strategies, and respond to diverse consumer segments (Middleton & Turnbull, 2021; Roth-Cohen & Gvili, 2026) to broader organizational behaviors (Kalev & Dobbin, 2022; Nishii, 2013). In HCI, these organizational factors are underexamined but practically important factors in determining whether diversity enabling technologies are used effectively (Lazik et al., 2025; Orlikowski & Iacono, 2001; Skeels & Grudin, 2009). When organizations view diversity as adding value to the team and as a resource for long-term collaboration, employees adopt this view and incorporate it into their professional work (Dwertmann et al., 2016; Hofhuis et al., 2016). These organizational factors often operate independently of personal attitudes in guiding professionals' behavior (Johnson & Grier, 2011).

In evaluating deepfake persona sets, institutional theory indicates that attitudes toward organizational diversity should directly affect how advertising professionals perceive and value ethnic diversity within these sets. Professionals in organizations that actively promote diversity are more likely to recognize the strategic benefits of diverse representation. On the other hand, professionals in organizations with weaker diversity cultures might overlook these strategic advantages, even if they personally value diversity, because their institutional environments do not emphasize diversity as an important asset. The main idea is that organizational environments affect how professionals perceive traits; the same set of traits may be evaluated differently depending on the professional's institutional environment. Building on this, we hypothesize:

H2: Organizational diversity climate will more strongly predict professionals' perceptions of the strategic value of ethnically diverse deepfake persona sets than their personal attitudes toward diversity.

3. Methodology

3.1. Study overview and procedure

We used a between-subject experimental design to investigate how professionals perceive and evaluate ethnically diverse deepfake persona sets during an advertising task. The experiment was designed to reflect real-world advertising persona use while maintaining experimental control. Participants were asked to imagine they were part of an advertising team for HeaSip, a fictional organic cold-brew brand created for this study. HeaSip's new product targets women aged 25–35 who value sustainability, health,

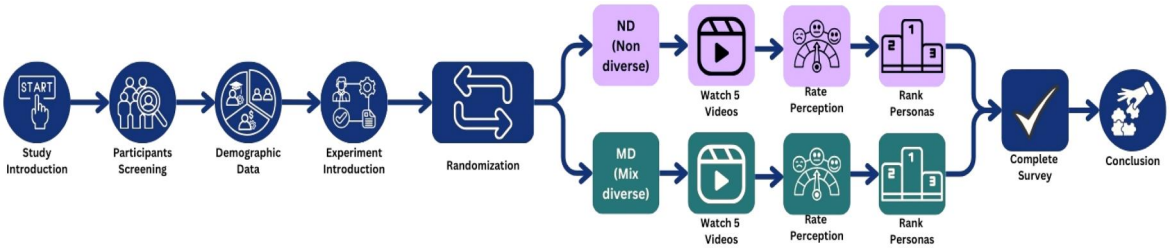

Figure 2. Experimental process as seen by the participants in this study.

and ethical consumption. A fictional brand was used to avoid preconceived biases participants may hold toward existing brands. Participants were recruited through Prolific, a well-established online research platform widely used in social science and HCI research (Brown & Toyama, 2026; Ferraro et al., 2024; Kiskola et al., 2023, 2023; Peer et al., 2022). To allow a direct comparison of persona performance across conditions, "Sofia", a persona of European background, was included in both conditions: non-diverse (ND), including all white personas, or diverse (MD) conditions, which included personas from different ethnic backgrounds. The shared control persona Sofia's purpose was to test whether set level diversity produces a contrast effect on an unchanged persona. All participants provided written informed consent before participating. Before the experiment began, participants received an information sheet explaining the study's purpose, the task, how the data would be used, and their right to withdraw at any time without consequence. Participation was voluntary, and all responses were collected anonymously; no identifiable information was retained beyond the Prolific ID assigned to each participant. Participants who consented then provided demographic information before being randomly assigned to one of the two conditions: non-diverse (ND) or diverse (MD). In each condition, participants watched five deepfake persona videos, each lasting 60–90 s. After watching each video, participants rated their perceptions of persona quality and strategic value, then provided open-ended responses describing the thought process behind their evaluations. Behavioral metrics, including response times and click patterns, were automatically recorded using Qualtics' built-in tracking features. The average session duration was approximately 34 min ($M = 33.96$, $SD = 15.6$). See Figure 2 for the visual process of the experiment as seen by the participants.

3.2. Deepfake persona creation

We created ten deepfake persona videos to represent HeaSip's global target audience of professional working women aged 25–35 who value sustainability, health, and ethical consumption. Personas were developed based on insights from existing literature (Bhamra et al., 2011; Khan et al., 2015; 2025). Deepfake persona videos were created using existing avatars on HeyGen's AI platform (https://www.heygen.com). HeyGen was selected for its advanced lip-syncing technology, realistic facial expressions, and seamless video-creation capabilities, which have been validated in similar studies (Chan et al., 2024; Tan et al., 2025). Each deepfake persona video followed a consistent script structure addressing lifestyle, values, goals, and pain points related to sustainability and healthy living. Ten deepfake personas were created with diverse ethnic backgrounds to ensure that findings were not driven by any single ethnic group. All ten personas shared an identical script structure and content, similar video length, settings and backgrounds, professional attire, and were produced through the same HeyGen process. Ethnicity is closely related to an individual's facial appearance, and these features cannot be manipulated independently of an avatar's identity. The manipulation is therefore best understood as ethnically diverse instead of a strict single-factor ethnicity manipulation. Participants were randomly assigned to either the ND condition, in which all five personas were white, or the MD condition, in which the five personas represented mixed ethnic (African, Asian, Hispanic or Latino, Middle Eastern, and European) backgrounds (see Figure 3). To validate the quality of personas and the experiment stimuli, we conducted pilot testing with 30 advertising professionals who were not included in the main study. Analysis of the pilot data confirmed that the DFP appeared ethnically diverse. This validation indicates

Figure 3. Persona sets from the experiment, including (ND) no ethnic diversity and (MD) high ethnic diversity.

that any observed effects could be attributed to ethnic diversity rather than other persona differences (see the online supplementary material[1] for complete persona profiles).

3.3. Measures

Perceptual constructs were measured using 5-point Likert scales (1 = Strongly disagree, 5 = Strongly agree). Persona perceptions and strategic value constructs were measured using single items, which are suitable for concrete, well-defined constructs when respondents are domain experts (Bergkvist & Rossiter, 2007). Diversity perceptions were measured using multi-item scales adapted from the Diversity Perception Scale (Barak et al., 1998), which captures both organizational and individual dimensions of diversity attitudes. Pilot testing with 30 advertising professionals confirmed that all measures produced sufficient variance, were clearly understood, and were completed efficiently without confusion, an important factor since participants evaluated five personas each. Table 1 summarizes measures by construct category, research question, and hypothesis.

Persona quality measures assessed whether introducing ethnic diversity in deepfake personas affected baseline quality perceptions. This was based on research into persona perception, uncanny valley theory, and deepfake persona studies (Kaate et al., 2023, 2024; Mori et al., 2012; Salminen et al., 2021; Salminen et al., 2020). Authenticity evaluated how genuine, natural, and believable participants found each deepfake persona to be. Empathy measured how easily participants could imagine themselves in the persona's life, the main functional goal of using personas in professional practice (Friess, 2012; Jansen et al., 2020). Creepiness measured discomfort or unease related to AI-generated content. Stereotyping captures judgments about cultural misrepresentation and oversimplification. Willingness to use was measured by whether participants would use the deepfake persona in their advertising tasks and served as a main quality outcome variable.

Strategic value measures capture the dimensions along which professionals evaluate design tools to ensure that they align with organizational goals beyond just basic functionality (Hartson et al., 2001; Salminen et al., 2018, 2022). Inclusivity assessed whether the persona set was perceived as inclusive of the target market. Coverage inspiration measured whether the persona set inspired ideas about broader market coverage. Market opportunity identification assessed whether the persona set was considered valuable for uncovering new market opportunities. Creative inspiration checked whether the persona

Table 1. Summary of study variables. Complete measurements and questionnaire items are available in the online supplement.

Variable type	Variable	Construct	Measurements	RQ	Hypothesis
Independent Variables	Ethnic diversity composition	Diverse vs non-diverse deepfake persona sets	Experimental manipulation	RQ1,2,3	H1a-g, H2
	Diversity perception	Organizational diversity inclusion, personal diversity values, and personal diversity comfort	5-Point Likert	RQ2	H2
Depended Variables	Persona Quality	Authenticity, empathy, creepiness, stereotyping, and willingness to use		RQ3	
	Strategic Value	Inclusivity, coverage, inspiration, market opportunity identification, creative inspiration, needs diversity, insight variation, completeness.		RQ1	H1a-g
	Task performance	person a selection, perceived task difficulty		RQ3	
	Behavioral Measures	Response time, click count.		RQ3	
	Qualitative	Open-ended	Text responses	RQ1	

set motivated creative advertising approaches. The need for diversity was measured by whether the persona set provided different strategic insights. Completeness evaluated whether the persona set was seen as a comprehensive representation of the target market. We distinguish two subsets of strategic value measures. Representational measures (inclusivity, completeness, needs diversity) assess whether the diverse set appears more diverse and are therefore closely tied to the manipulation itself, and the generative measures (coverage, inspiration, market opportunity identification, creative inspiration, insight variation) ask participants to draw an inference beyond the visible composition of the persona set.

Diversity predictors included three measures of individual and organizational diversity (Barak et al., 1998): organizational diversity inclusion climate, which measures the shared perceptions of how the organization values and implements diversity; personal diversity value, individual commitment to diversity as a professional value; and personal comfort with diversity, individual ease engaging with diverse people and representation. Instead of measuring diversity climate within a single organization, we assessed participants' individual perceptions of how their organizations value, support, and promote diversity. This approach aligns with survey-based diversity climate research conducted across multiple organizations (Barak et al., 1998; Holmes et al., 2021).

Task performance measures included persona selection, in which participants ranked the five personas from 1 to 5 based on their perceived fit with the HeaSip target audience, and perceived task difficulty, which was self-reported as the difficulty of the persona selection task.

3.4. Participants and recruitment

Eighty-one advertising and creative professionals were recruited for this study through Prolific. Participants were recruited from multiple organizations, because recruiting from only one organization would have produced too little variation in perceptions of the organizational diversity climate to assess its predictive effects. Participants who share the same workplace tend by nature to hold similar perceptions of the organization's diversity climate (Ayele et al., 2024; Holmes et al., 2021). Eligibility required at least one year of professional experience in marketing or related fields such as advertising, social media management, and user experience (UX), where personas are commonly used, ensuring that evaluations reflected practitioner expertise rather than general population responses. Prolific's screening systems identified a pool of 1125 eligible participants, from whom 100 were recruited. Seventeen participants were excluded for failing the attention check, operationalized through two items: a self-reported viewing compliance item shown after the five persona videos, and an instructional response item embedded with the personal diversity value block requiring selection of a specific response regardless of the participant's actual opinion, and two for insufficient advertising experience, resulting in a final sample of 81 advertising professionals. Both attention check items were administered identically across conditions. The final sample included 56% (n = 45) females, 43.21% (n = 35) males, and 1.23% (n = 1)

non-disclosed gender. Participants' ages ranged from 19 to 68 years (M = 32.80, SD = 9.90) and professional experience from 1 to 25 years (M = 5.93, SD = 5.10), indicating a mature, professional group suitable for research on advertising decision-making.

3.5. Data analysis

3.5.1. Quantitative analysis

Data were analyzed in three stages corresponding to our research questions. For RQ1, a multivariate analysis of variance (MANOVA) was conducted to control for multiple comparisons across correlated strategic value measures. Wilks' λ, Pillai's trace, and Hotelling-Lawley trace were reported. Following a significant multivariate effect, independent samples t-tests were conducted for each variable with both Bonferroni and Holm corrections applied. For RQ2, separate ordinary least squares (OLS) multiple regression models were estimated for each of the strategic value variables, with organizational diversity inclusion climate, personal diversity value, and personal comfort with diversity entered simultaneously as predictors. Overall model fit was evaluated using F-statistics and R^2. For RQ3, an independent-samples t-test compared persona-quality perceptions and task-performance measures across conditions. For persona selection, which involved ranked ordinal data, the non-parametric Mann-Whitney U test was used to compare ranking distributions between conditions. Chi-square analyses additionally assessed ranking patterns and distribution differences. Behavioral measures, including dwell times, page submission times, and click counts, were analyzed using independent samples tests to determine whether exposure to different persona sets demanded extra cognitive effort. Randomization checks were conducted before all primary analyses, using independent-samples t-tests on demographic variables, professional experience measures, and baseline diversity perceptions to confirm group equivalence prior to the experimental manipulation.

3.5.2. Qualitative analysis

To supplement the quantitative results and gain insight into participants' thought processes during the evaluation, we analyzed open-ended responses where participants described their perceptions of each persona during the task. Each of the 81 participants responded to five personas in their assigned condition, producing 405 individual responses. Of these, 54 participants provided responses suitable for thematic analysis (ND = 26, MD = 28); the remaining participants gave non-substantive responses such as n/a or no. Responses were coded at the response level rather than the participant level. This approach was necessary because participants often evaluated each persona differently; for example, the same participant might describe one persona as inspiring market expansion and another from the same set as not so inspiring because they felt too similar to the previous one, so aggregating all responses to participant level would have hidden these within participants' differences. Although responses were organized within participants, thematic analysis does not assume statistical independence across participants. Instead of treating each response as separate data, we identified themes based on their appearance and consistency across participants' responses, which is standard practice in thematic analysis (Braun & Clarke, 2021; Campbell et al., 2013).

We used reflective thematic analysis (Braun & Clarke, 2021) to identify themes across the 270 responses. The first coder performed initial coding across all responses to identify patterns and themes. The second then independently reviewed and verified the coding, checking the application of codes, the boundaries of themes, and the interpretation drawn from them. Disagreements and uncertainties were resolved through discussion until both coders reached consensus, ensuring the final coding reflected shared understanding rather than individual interpretations. Throughout the process, both coders engaged in reflective discussions to consider how their perspectives influenced interpretive decisions, consistent with an interpretivist approach that treats participants' responses as context-dependent rather than objectively fixed (Goldkuhl, 2012). The results of this analysis are presented in Section 4.2.

4. Results

4.1. Randomization and manipulation check

Preliminary analysis confirms successful experimental manipulation and data quality. The randomization checks show no significant differences between conditions on demographic variables. Participants in both conditions were similar in age (M_{ND} = 33.56, SD = 12.27; M_{MD} = 32.02, SD = 6.73), professional experience (M_{ND} = 6.30, SD = 5.97; M_{MD} = 5.55, SD = 4.05), and gender ($_{ND}$ = 21 females, 20 males; $_{MD}$ = 24 females, 15 males, and 1 preferred not to say). Ethnic backgrounds were also similar across conditions (χ^2 (4) = 7.86, p = 0.097), with most participants in both conditions European origin (ND = 22, ND =17), and African origin (ND = 17, MD = 12), followed by Asian origin (ND = 1, MD = 6), Hispanic or Latino (ND = 1, MD = 4) and Middle Eastern (ND = 0, MD = 1). This lack of significant differences confirms successful random assignment and indicates that groups were comparable on all measured characteristics before experimental manipulation. This baseline suggests that any observed future differences are likely due to exposure rather than preexisting group differences. Moreover, we assessed participants' understanding of the ethnic diversity manipulation by asking whether the personas they viewed came from different ethnic backgrounds. They recorded their responses on a 5-point scale, with one indicating "strongly disagree" and five indicating "strongly agree." Results confirm the effectiveness of the ethnic diversity manipulation (M_{ND} = 2.61, SD = 1.26; M_{MD} = 4.83, SD = 0.68). An independent t-test showed a significant difference between conditions, t (79) = −9.88, $p < 0.001$, with a large effect size (Cohen's $d = -2.18$), indicating that participants in the MD condition perceived the personas they saw as belonging to different ethnic backgrounds.

4.2. Does ethnic diversity in deepfake persona sets influence professionals' perceptions of persona strategic value? (RQ1)

4.2.1. Ethnic diversity and perceptions of the strategic value of deepfake personas

We tested H1a-g, which tests whether ethnic diversity in deepfake persona sets significantly improves perceived strategic persona value across seven measures: Inclusivity, coverage inspiration, market opportunity identification, creative inspiration, needs diversity, insights variation, and completeness. A multivariate analysis of variance (MANOVA) (see Figure 4) examined differences across all seven variables simultaneously. Results show a significant overall effect of ethnic diversity: Wilks' λ = 0.52, F (19, 61) = 2.93, $p < 0.001$, Pillai's trace =0.48, $p < 0.001$, Hotelling–Lawley trace = 0.91, $p < .001$. This significant multivariate effect indicates that ethnic diversity substantially influenced professionals' perceptions of the strategic value of persona across the measured variables.

Given the significant multivariate effect, follow-up independent samples t-tests were conducted for each measure (see Table 2), with Bonferroni and Holm corrections applied to control for multiple comparisons. The strongest effect was for *inclusivity* ($d = 1.34$), where diverse persona sets were rated nearly 1.7 points higher on a five-point scale, the largest difference observed across all measures. *Coverage inspiration* showed a similar large effect ($d = 0.87$). Both effects remained significant after Bonferroni and Holm's corrections, making them the most robust results. *Completeness*, *market opportunity identification*, and *creative inspiration* showed medium effects that survived Holm correction, while *needs diversity* and *insight variation* showed small to medium effects that did not survive either correction, indicating that these effects are less robust or require larger samples to detect reliably.

These results are consistent with H1a-g, though the strength of evidence varies by measures. H1a inclusivity was supported with a very large effect (d = 1.34), and H1b coverage inspiration showed a large effect (d = 0.87). H1c market opportunity identification, H1d completeness, and H1e creative inspiration showed medium effects (d = 0.58, 0.60, 0.55). While H1f needs diversity, H1g insight variations showed small-to-medium effect sizes (d = 0.48, 0.48). These results show that professionals view diverse deepfake persona sets as providing greater strategic value, especially in signaling inclusivity and encouraging broader user coverage.

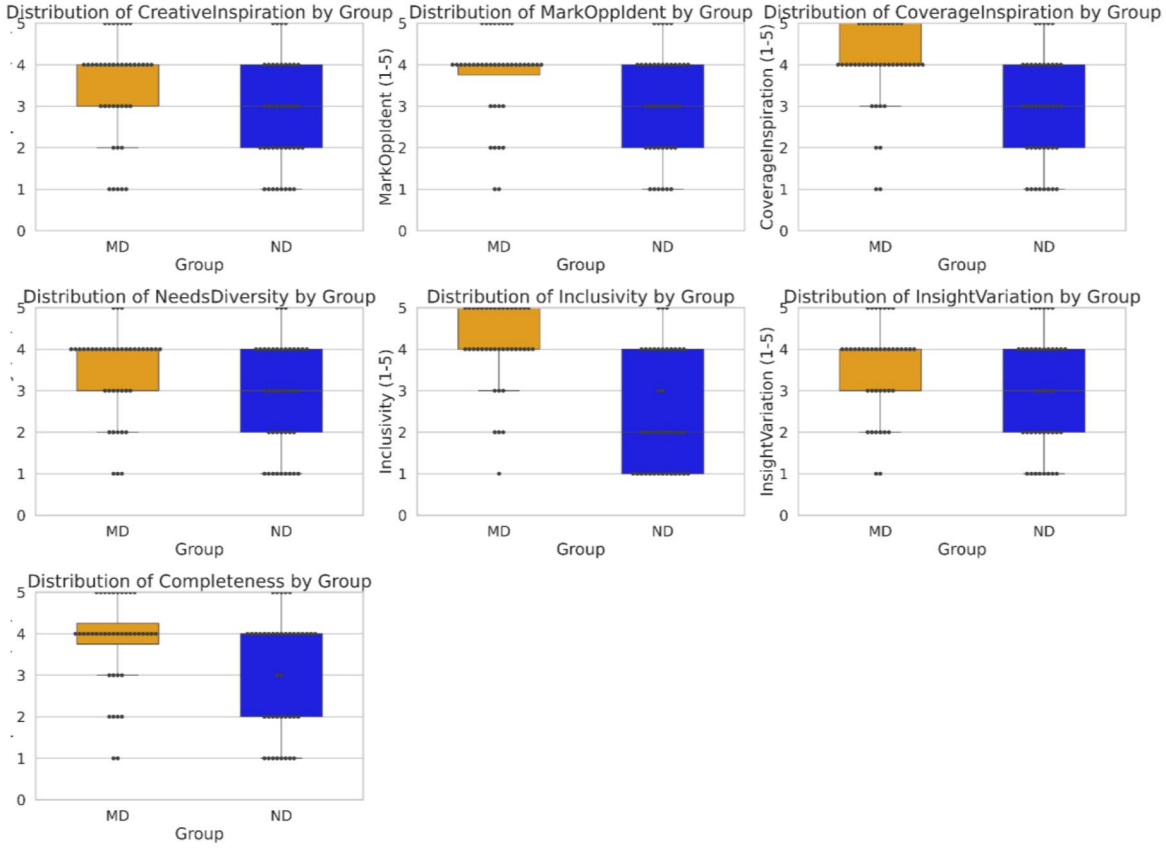

Figure 4. Multivariate analysis of variance (MANOVA) results comparing strategic value perceptions between non-diverse and diverse deepfake persona conditions.

Table 2. Independent t-test comparing strategic value perceptions across ND and MD conditions.

Measure	ND M (SD)	MD M (SD)	t	p	Cohen's d
Inclusivity	2.45 (1.40)	4.10 (1.00)	−6.06	<.001***	1.34
Coverage Inspiration	2.90 (1.32)	3.93 (1.02)	−3.91	<.001***	0.87
Completeness	3.05 (1.40)	3.80 (1.09)	−2.70	.008**	0.60
Market Opp. Identification	3.07 (1.27)	3.75 (1.06)	−2.61	.011*	0.58
Creative Inspiration	2.76 (1.28)	3.45 (1.24)	−2.48	.015*	0.55
Needs Diversity	2.85 (1.30)	3.43 (1.06)	−2.17	.033*	0.48
Insight Variation	2.95 (1.40)	3.55 (1.11)	−2.14	.035*	0.48

Note: ND group, $n = 41$; MD group, $n = 40$. Cohen's *d*: small = ± 0.20, medium = ± 0.50, large = ± 0.80. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$. Cohen's d is reported as MD minus ND, with positive values indicating higher scores in the MD condition. Inclusivity and coverage inspiration survived both the Bonferroni correction; inclusivity, coverage inspiration, completeness, market opportunity identification, and creative inspiration survived the Holm correction.

4.2.2. Qualitative support for strategic value findings

Open-ended responses supported the quantitative results, emphasizing three common themes in how exposure to ethnically diverse persona sets influenced participants' thinking during the study. ***Commercial value and market reach***: participants in MD conditions recognized the commercial value of exposure to ethnic diversity, consistently viewing a diverse deepfake persona set as a way to discover untapped market opportunities, directly reflecting the significant effect on market opportunity identification observed in the t-test results. Participants expressed this in clear strategic terms, e.g., "*It was interesting to use different ethnicities to capture different markets*" (P18); "*I believe that if brands could get out of the habit of wanting to narrow down their targeting, the campaigns would reach a better reach and cover different types of audiences that could buy into the brand*" (P71). These responses indicate that ethnic diversity in deepfake persona sets actively encouraged professionals to rethink the commercial potential of their campaigns beyond their usual targeting assumptions.

4.2.2.1. Inclusivity and broad target audience representation. Participants across both conditions recognized the influence of ethnic diversity on target representation, although MD participants expressed this recognition more explicitly through strategic language, highlighting the study's very large inclusivity effect. Responses showed that participants saw diverse persona sets as evidence that target audiences can be both diverse and inclusive through shared values. For example, P79 noted that "*I felt like all of the personas fit the model of potential clientele, but also represented a very diverse group of people. It shows that your target audience can have diversity, all while having similar beliefs and ideals*". Others explicitly connected visual diversity to market opportunities, e.g., "*Having personas with different ethnic background in mind and representation on the ad space definitely explore more market opportunities that only one*" (P76). These responses suggest that inclusive representation is seen not as a limitation to strategic focus but as an extension of it.

4.2.2.2. Strategic creative inspiration. Both conditions produced themes of creative inspiration, but with a meaningful qualitative difference in emphasis that adds an understanding of the quantitative effect on creative inspiration. Participants in ND described creative stimulation in a broad term, for example, "*Looking at these personas inspired my creative advertising I wouldn't have thought of before*" (P54). MD participants, however, framed creativity in more strategic and culturally aware ways, describing diverse personas as opportunities to broaden targeting, explore new campaign directions, and authentically engage with specific communities. For example, one participant noted, "*Personas like the ones shown earlier can be an opportunity to broaden targets and messages. I think it gives us opportunities as creatives to explore new outlets and campaigns. When it comes to focusing on ethnicity, we should definitely consult people who belong to the group of the persona's race or culture to make it accurate*" (P35). These differences in responses suggest that ethnic diversity in deepfake persona sets not only increases creative inspiration quantitatively but also shifts that inspiration from general ideation to strategic value thinking. These three themes give meaning to our statistical results, which show that professionals view diverse deepfake persona sets as providing more strategic value, especially in signaling inclusivity and encouraging broader user coverage.

4.3. Do organizational diversity factors or personal diversity attitudes more strongly influence professionals' perceptions of the value of deepfake personas? (RQ2)

Having established that ethnic diversity influences perceived strategic persona value, we tested H2, which predicted that organizational diversity climate, rather than individual diversity attitudes, would drive these perceptions. Multiple regression analyses were conducted predicting each strategic value variable from three diversity-related predictors: (1) organizational diversity climate, (2) personal diversity values, and (3) personal comfort with diversity. Organizational diversity climate emerged as a consistent and significant predictor across the models, with sufficient explanatory power, whereas personal diversity attitudes showed no significant relationships with any outcome. Personal diversity showed a negative coefficient direction in four of the seven models (inclusivity $\beta = -0.30$; market opportunity $\beta = -0.14$; completeness $\beta = -0.34$; insight variation $\beta = -0.27$), though none reached statistical significance. This consistent negative trend may indicate that professionals with stronger personal diversity values apply more scrutiny when evaluating diverse deepfake persona sets, a pattern worth exploring in future research.

Figure 5 shows regression coefficient results for organizational diversity inclusion across all outcomes, where it was a significant predictor. For *Inclusivity*, the overall model was significant: F (3, 77) = 3.14, $p = 0.030$, $R^2 = .109$. Organizational diversity climate was the sole predictor ($\beta = 0.60$, SE = 0.19, t = 3.11, $p = 0.003$, 95% CI [0.21, 1.00]). Personal diversity attitudes were not significant. *Coverage inspiration,* the overall model was significant, F (3,77) = 3.85, $p = 0.013$, $R^2 = .130$. Organizational diversity climate was the sole significant predictor ($\beta = 0.49$, SE = 0.17, t = 2.86, $p = 0.005$, 95% CI [0.15, 83]). Personal diversity attitudes were not significant. For *Market opportunity identification*, the overall model was significant, F (3,77) = 3.07, $p = 0.033$, $R^2 = .107$. Organizational diversity climate was the only predictor ($\beta = 0.46$, SE = 0.16, t = 2.81, $p = 0.006$, 95% CI [0.14, 0.79]). Personal diversity attitudes were not significant. The overall models for *needs diversity F (3,77) = 1.90,* $p = 0.137$, $R^2 =$

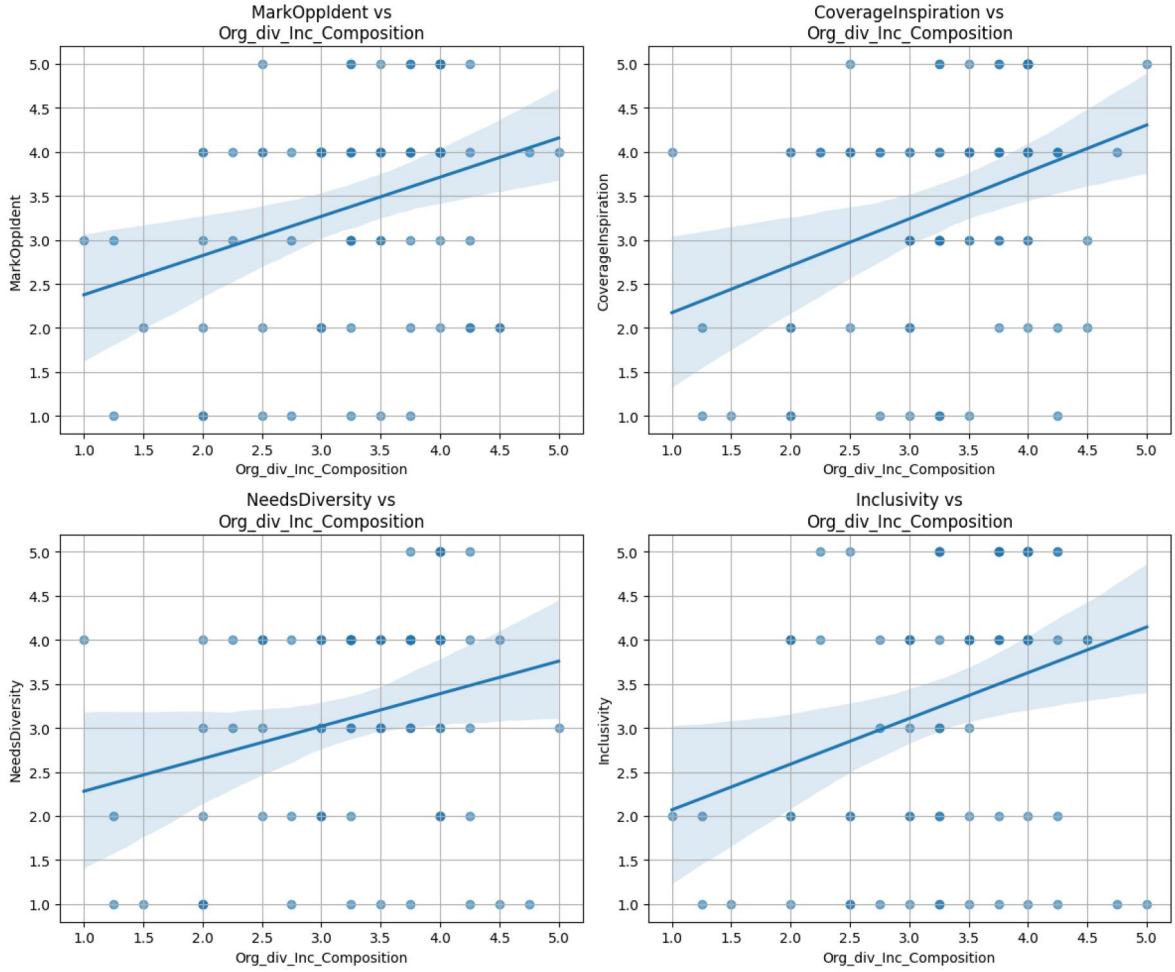

Figure 5. Regression coefficients (β) showing the relationship between organizational diversity inclusion perception and advertising effectiveness perceptions. Only statistically significant relationships are displayed here ($p < 0.05$).

0.069; *creative inspiration* F (3,77) = 1.53, $p = 0.213$, $R^2 = 0.056$; *completeness* F (3, 77) = 1.74, $p = 0.165$, $R^2 = 0.064$, were not significant; individual coefficients within these models are not interpreted. Across all seven models, organizational diversity climate appeared to have a positive relationship, whereas personal diversity values and personal comfort with diversity showed no significant relationships. This consistent pattern of organizational diversity climate supports institutional theory and supports H2.

4.4. Does ethnic diversity of deepfake persona sets influence professionals' perceptions of persona quality and task performance? (RQ3)

We conducted exploratory analyses to examine whether ethnic diversity affects perceptions of the quality of deepfake personas and task performance. Five persona quality variables were measured: authenticity, empathy, creepiness, stereotyping, and willingness to use. Independent samples *t-tests* revealed no significant differences on four quality variables and one small significant difference (see Figure 6). *Authenticity* ($M_{ND} = 2.84$, SD = 1.42; $M_{MD} = 3.02$, SD = 1.33, t (403) = −1.33, $p = 0.186$, Cohen's $d = -1.32$). *Empathy* ($M_{ND} = 3.24$, SD = 1.26; $M_{MD} = 3.22$, SD = 1.30, t (403) = 0.19, $p = 0.851$, Cohen's $d = 0.019$). *Creepiness* ($M_{ND} = 2.43$, SD = 1.38; $M_{MD} = 2.52$, SD = 1.24, t (403) = −0.62, $p = 0.535$, Cohen's $d = -0.062$). *Stereotyping* ($M_{ND} = 2.78$, SD = 1.15; $M_{MD} = 2.80$, SD = 1.06, t (403) = −0.18, $p = 0.86$, Cohen's $d = -0.018$). *Willingness to use* showed the only significant difference ($M_{ND} = 2.94$, SD = 1.46; $M_{MD} = 3.27$, SD = 1.39, t (403) = −2.28, $p = 0.023$, Cohen's $d = -0.227$), a small effect suggesting that diverse persona sets marginally increase professional willingness to use. These

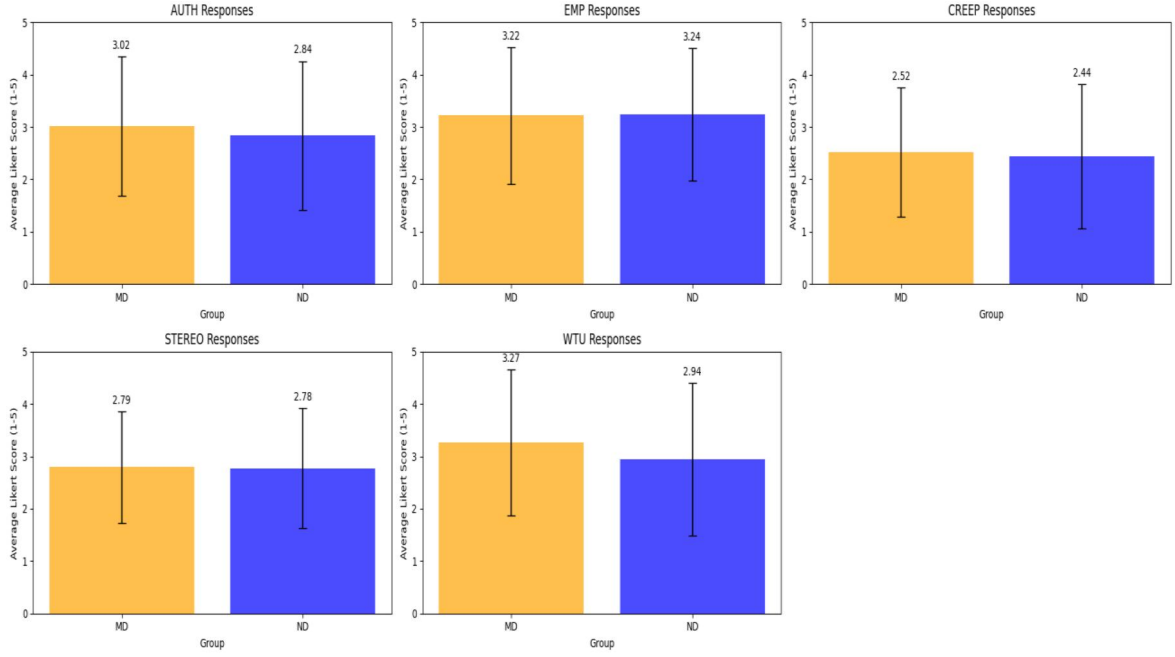

Figure 6. Mean ratings and standard deviations for persona perception measures across Non-diverse (ND, n = 41) and mixed-diverse (MD, n = 40) conditions. Error bars represent standard errors. No significant differences were found across any of the perception measures.

results establish functional equivalence: ethnic diversity did not affect perceived authenticity, empathy, creepiness, or stereotyping concerns; all effect sizes were negligible to very small ($d < 0.14$).

Task performance was explored through two measures: (1) persona selection, (2) perceived task difficulty. For persona selection, participants ranked all five personas from 1 to 5, with 5 being the one they thought best represented the target audience for HeaSip (the sustainable beverage brand in our scenario). To isolate the effect of ethnic diversity on performance, we analyzed the identical control persona ("Sofia") that appeared in both conditions. An Independent samples *t-test* results show that Sofia's ranking did not differ significantly between conditions ($M_{ND} = 2.93$, $SD = 1.44$; $M_{MD} = 3.33$, $SD = 1.38$) ($t\ (79) = -1.27$, $p = 0.207$, Cohen's $d = -0.28$). Comparing Sofia's ranking across these two independent groups allowed us to see whether the ethnic composition of the surroundings of the persona set influenced perception of the same persona. For Task difficulty, participants rated how difficult they found the person ranking task. An Independent samples *t-test* results show ($M_{ND} = 3.05$, $SD = 1.38$; $M_{MD} = 3.24$, $SD = 1.45$), ($t\ (79) = -0.61$, $p = 0.543$, Cohen's $d = -0.13$). These results show that the ethnic diversity of a deepfake persona set does not influence task performance, whether measured by persona selection ($d = -0.28$, $p = 0.207$) or perceived task difficulty ($d = -0.13$, $p = 0.543$). These exploratory results suggest that including ethnically diverse persona sets can be done without concerns about increased difficulty or reduced decision quality.

5. Discussion

5.1. Research implications

This study examined how ethnic diversity in deepfake persona sets affects the perceptions and decision-making of marketing professionals during campaign design tasks. The findings advance understanding in three areas: the strategic value of diverse persona sets, the influence of organizational diversity climate on professional perception, and the functional equivalence of ethnically diverse deepfake personas across quality factors.

The findings of this study are that ethnic diversity in deepfake persona sets significantly increased professionals' perceptions of strategic value across multiple measures, with inclusivity showing a particularly large effect. Diverse persona sets were rated nearly 1.7 points higher on inclusivity on a five-

point scale, a difference that has both practical and statistical significance. Coverage inspiration, completeness, and market opportunity identification also showed medium-to-large effects, while creative inspiration showed a medium effect. These findings confirm our hypotheses H1a-g and show that ethnic diversity in deepfake persona sets does not merely reflect demographic variation but actively signals strategic value to marketing professionals.

These results advance persona research. Prior research by Kaate et al. (2025) showed that ethnic diversity does not influence perceptions of persona quality, such as authenticity and credibility, establishing functional equivalence across diverse and non-diverse persona sets on basic quality measures. This study builds on this by showing that while ethnic diversity may be neutral with respect to technical quality, it influences how professionals perceive the strategic values of the person set. This difference matters because it shows that professionals evaluate design tools not only on technical performance but also on their ability to support broader organizational goals, consistent with the findings of Salminen et al. (2018, 2022). In turn, Campbell et al. (2025) argue that diverse representation encourages feelings of inclusion and indicates broader market awareness, which may help explain why advertising professionals rated ethnically diverse persona sets much higher on inclusivity. The finding that diverse deepfake persona sets were also perceived as more inspiring for coverage and more representative of the full target market suggests that visual diversity might encourage professionals to think more broadly about who the target market is and whom it could include. This is consistent with research showing that exposure to diverse representations increases cognitive flexibility and creative thinking during professional tasks (Friedman et al., 2016; Hundschell et al., 2022; Kurtzberg, 2005). Eisend et al. (2023) offer further theoretical support for viewing inclusivity and coverage as separate strategic factors, a distinction reflected in the different effect sizes seen for these two measures in our data.

The regression analyses consistently showed that organizational diversity climate, not personal diversity attitudes, predicted professionals' perceptions of strategic value across multiple outcomes, including inclusivity, coverage, inspiration, and market opportunity identification. Personal diversity attitudes showed no significant relationships across any outcomes. This supports H2 and is consistent with the microfoundations of institutional theory (Powell & Colyvas, 2008 & Cardinale, 2018), under which institutional pressures toward diversity become pronounced and actionable for individual professionals through their perceptions of team-level norms and practices. These findings have implications for how diversity in marketing is understood and addressed. Individual diversity training and personal attitude change matter in other contexts, but they may not be the primary factors of professionals' engagement with diverse deepfake persona sets. What seems to matter more is the diversity climate an organization creates through its policies, leadership commitment, and accountability structures. These factors influence whether professionals recognize and act on the strategic value of ethnic diversity in persona sets (Kalev & Dobbin, 2022; Nishii, 2013). Roth-Cohen and Gvili (2026) studied DEI engagement among advertising professionals and found that organizational contexts shape professionals' responses to diversity initiatives more broadly. Our findings extend this by showing that organizational climate specifically predicts how professionals perceive the strategic value of diverse design tools, even after controlling for personal attitudes.

While none of the personal diversity attitudes were statistically significant, one pattern in the data warrants attention. We observed an interesting pattern that deserves further investigation in future studies with larger samples. We observed that personal diversity values consistently showed a negative coefficient across four models. This may suggest that professionals with stronger personal diversity values apply more critical scrutiny when evaluating diverse persona sets. This pattern is exploratory and should be interpreted cautiously, but it is worth examining in future studies with larger samples.

Our findings indicate that ethnic diversity in deepfake persona sets did not significantly influence perceptions of authenticity, empathy, creepiness, or stereotyping, with all effect sizes very small or negligible. The only significant difference was a slight increase in willingness to use ethnically diverse deepfake persona sets, suggesting that, if anything, diversity does not appear to reduce acceptance of the personas and may slightly increase professionals' acceptance. Measures of task performance, persona selection, and task difficulty also showed no significant differences between conditions. These findings

matter for three reasons. First, they extend Kaate et al. (2025) by confirming similar quality perceptions across different professional groups and task scenarios, providing further evidence that ethnic diversity does not affect how professionals evaluate deepfake personas. Second, the results speak to concerns in existing research on deepfakes and AI-generated personas, that realistic synthetic representations risk triggering uncanny valley effects or reducing perceived credibility (Kaate et al., 2023a; Kaate et al., 2024). This study finds no evidence of this in the context of ethnic diversity; creepiness and authenticity perceptions remained stable regardless of ethnic composition, suggesting that diverse deepfake persona sets do not pose risks to the uncanny valley. Third, the consistent empathy levels across conditions are important as the primary goal of personas in user-centered design is to help professionals build emotional connections with the target audience (Friess, 2012; Jansen et al., 2020; Salminen et al., 2018). Similar to Schuller et al. (2024), who found that AI-generated personas preserve perceived quality similar to real human-created ones, our results indicate that ethnically diverse deepfake persona sets are not merely acceptable alternatives to non-diverse sets; they also provide greater perceived strategic value without obvious practical disadvantages.

5.2. Implications for practice

The results of this study have several practical implications for professionals and organizations working with personas. First, our findings show that ethnically diverse deepfake persona sets can be used in design workflows without worrying that diversity will reduce persona effectiveness, willingness to use, or task performance. The empathy and engagement that make personas valuable as design tools are preserved regardless of ethnic composition. Second, the dominant influence of the organizational diversity climate over individual diversity attitudes indicates that organizational training, rather than individual training alone, is the most effective way to maximize the strategic value of diverse design tools. Organizations should focus on cultivating inclusive organizational climates through inclusive policies, leadership commitment, and accountability structures for representation standards. Third, the strategic value factors measured in this study, such as inclusivity, coverage, inspiration, market opportunity identification, and completeness, give organizations a clear framework for evaluating diverse persona sets and auditing their design processes.

5.3. Limitations and future research

Some limitations should be considered alongside our findings. First, this study focused on the perceptions of marketing professionals, and the findings are based solely on these perceptions. The controlled experimental design, while facilitating causal inferences, may not fully capture the real-world advertising practice, where professionals work in teams and face additional challenges that may not have been present in our experiment. Future research should explore how advertising professionals engage with diverse deepfake persona sets in real-world, team-based settings, using actual products and real target audiences. Second, this study specifically examined ethnic diversity, which we best describe as ethnically diverse vs. non-diverse persona sets, leaving out other diversity attributes, such as gender, sexual orientation, physical ability, and economic status, in deepfake persona sets. Because this design isolates ethnicity as a single diversity dimension, it cannot speak to whether the strategic value effects reported here generalize to other demographic attributes. Future studies should explore how these diversity attributes in deepfake persona sets influence professional perceptions. Third, although the professional sample was relevant to marketing practice, it was limited to advertising contexts, which could limit its application to other user-design processes where personas are relevant. Future research should explore how diverse attributes affect professionals' perceptions across different contexts and scenarios. Relatedly, our retained sample included a relatively high proportion of participants of African origin. Future work should examine participants' ethnicity as a moderator of the strategic value effects reported here. Lastly, the consistent negative trend observed in personal diversity value coefficients across regression models, although non-significant, suggests the need for larger samples to determine whether diversity aware advertising professionals apply more critical evaluative standards to diverse design tools.

6. Conclusion

Previous research often focused on deepfakes in marketing as a means of manipulating content. This study offers a different view: deepfake personas can represent different customer types and provide advertising professionals with an empathetic, strategically valuable understanding of target audiences. We show that ethnically diverse deepfake persona sets provide a meaningful strategic value, without affecting perceived persona quality or task performance. These strategic advantages are associated more with organizational diversity climate than individual attitudes toward diversity, which has significant implications for how organizations should handle diversity efforts. Our findings position diverse deepfake personas not as a technical risk but as a strategic resource for inclusive design practices.

Note

1. https://osf.io/kw8h9/?view_only=e2997c6bc9d342b9b6cdb88ce2465ced.

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Ethics declaration

In accordance with the national guidelines of the Finnish National Board on Research Integrity (TENK), to which Åbo Akademi University is committed. Under these guidelines, the Åbo Akademi University review board waived ethical approval, as this study involved minimal risks to participants and collected only anonymous responses with informed consent.

Author contributions

CRediT: **D'alice Ntumba Tshilemba**: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Visualization, Writing – original draft, Writing – review & editing; **Joni Salminen**: Formal analysis, Investigation, Methodology, Supervision, Validation, Writing – review & editing; **Ilkka Kaate**: Supervision, Writing – review & editing; **Bernard Jansen**: Supervision, Writing – review & editing.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

D'alice Ntumba Tshilemba http://orcid.org/0000-0002-4643-3333
Joni Salminen http://orcid.org/0000-0003-3230-0561
Ilkka Kaate http://orcid.org/0000-0002-9429-3566
Bernard Jansen http://orcid.org/0000-0002-6468-6609

Data availability statement

Complete persona profiles, full videos, scripts, survey instruments, and the dataset are available in the online supplement.

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About the authors

D'alice Ntumba Tshilemba is a doctoral researcher in international marketing at Åbo Akademi University, where her thesis examines ethical issues in artificial intelligence. She has contributed to work on persona design, AI systems, and user modeling that bridges technical and design perspectives for emerging AI tools.

Joni Salminen is an Associate Professor (tenure track) in the School of Marketing and Communication at the University of Vaasa. His research focuses on data-driven personas and overlapping topics, such as Human-Centered AI, Quantitative UX, Interactive Systems, User Segmentation Algorithms, and so on.

Ilkka Kaate is a postdoctoral researcher in HCI and marketing at the University of Turku. His research examines deepfake personas, user experience, and ethical AI in design and marketing, focusing on how AI-generated personas shape user perceptions, trust, and engagement, and on how such systems can be designed responsibly.

Bernard Jansen is a visiting professor in the Department of Information Management at Peking University. His research publications focuses on Data-Driven Personas, and overlapping topics such as Human-Centered AI, Interactive Systems, UX, and Understanding Sponsored Search. He is editor-in-chief of Information Processing & Management (Elsevier).