



Master's Degree Program in Marketing

Chair of Customer Relationship Management

The Paradox of Proximity: How Human and AI-Based
Recommendation Systems and Intimacy Shape
Exclusivity in Luxury Beauty CRM

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ABSTRACT

This thesis explores the relationship between artificial intelligence-based recommendation systems and their impact on consumer responses in the context of customer relationship management (CRM) in the luxury cosmetics sector. Today, CRM practices are fully integrated into luxury strategies, and personalization technologies have taken on a central role. Therefore, the objective is to conduct a more in-depth analysis to understand whether perceived exclusivity derives from the source of the recommendation agent or from the evaluation of the recommendation itself. Through two quantitative experimental studies, we investigated whether the source, credibility, and congruence influence trust, the intention to follow the recommendation, and perceived exclusivity.

The data reveal that the nature of the recommendation agent is indirect, with the agent instead taking on a role that operates through the variable of perceived credibility. Another variable that proved central is perceived congruence between the consumer's personal needs and the recommendation. This emerges as a central predictor of trust, intention, and exclusivity, while relational intimacy plays a relatively limited role. In conclusion, the findings bring to light the importance of the quality and congruence of recommendations and the extent to which these two variables shape consumer judgments in a luxury context. This study offers a new perspective and interpretation of AI-driven personalization and its use in hedonic contexts.

INTRODUCTION

With advances in technological development, specifically those related to personalization and contemporary marketing, luxury brands founded on exclusivity and distance are facing a strategic tension.

As discussed by authors Cailleux, Mignot, and Kapferer (2008), historically, luxury brands have been reluctant to adopt customer relationship management systems, as these are traditionally used and associated with mass distribution, and conceptually linked to approaches that were thought to be inconsistent with luxury: luxury brands feared that they would erode the logic of exclusivity and rarity. Subsequently, with a shift in marketing from a transactional to a relational approach, luxury brands also began to take an interest in CRM, seeking to understand how to exploit its apparent potential. The first real challenge was to understand in depth how to adapt these new tools to a market characterized by profoundly different dynamics, to prevent this proximity to new technologies from blurring the boundaries between luxury and mass distribution. Thus, CRM began to be perceived as a lever capable of generating value beyond the symbolic appeal of each brand name, a catalyst capable of building genuine and long-term relationships with customers. This development was additionally accelerated by increased competition and brands shifting their strategy from “Premium” to “New Luxury.”

This factor has left luxury brands with no choice but to use CRM systems to create strategic differentiation.

Today, CRM in luxury goods is not only responsible for managing the brand image but also plays a central role in strengthening legitimacy and prestige by consolidating individual relationships with customers and further underscoring the brand's differentiation from the mass market. The shift from a one-to-many approach to a one-to-one approach illustrates how CRM in luxury is based on a deep understanding of consumer desires and expectations, the creation of a relational “basic contract,” and the centrality of the customer experience, promoting retention and the dynamics of belonging, advocacy, and co-optation within specific communities linked to the brand. In luxury, CRM is no longer understood solely as a system of technological tools but as a relational philosophy. Although the transition from one-to-many to one-to-one is a cornerstone of the CRM approach to luxury, it has not been without its obstacles.

In fact, with the evolution of technology and the advent of highly personalized, data-driven strategies, it has become clear that collecting data on each customer would be progressively unsustainable if supported solely by human effort. In this context, artificial intelligence comes into play. It enables the management of large volumes of data at scale. AI can intervene in the

design and management of the service, modifying the type of personalization and the relationship between the brand and the consumer (Huang & Rust, 2021).

Although technological evolution and the advent of advanced technologies in recommendation systems are revolutionary, they do not eliminate questions about perception. This misperception is because consumers may react differently when faced with the same recommendation from different types of recommendation agents, human or AI. The literature shows that there is indeed a difference in consumer responses, which could create tension in contexts where symbolic interaction plays a central role (Logg et al., 2019).

This research focuses on a sector that has been distinctively noteworthy in recent years, driven by growth and the interest it has generated. According to McKinsey & Company (2023), the cosmetics market is expected to grow by up to \$590 billion over the next 4 years. This growth is driven by an incremental market demand for products ranging from skincare to haircare, including fragrances and cosmetics. A 5% annual growth rate is also expected over the next 10 years. A more detailed analysis of the segments reveals that the luxury cosmetics sector has experienced even greater expansion.

This phenomenon can be explained by changes in consumer behavior, greater emphasis on high-quality formulations, increased demand, and the development of channels that facilitate faster, easier purchasing. (Fortune Business Insights, 2023; Statista, 2024) From a macro perspective of the luxury sector, which also includes the luxury cosmetics segment, a certain resilience has been noted despite macroeconomic obstacles. A fairly certain stability of approximately €1.44 trillion has been estimated over the past year, which explains why, despite certain geopolitical and economic conditions, consumers have shown particular interest in luxury purchases (Bain & Company & Altagamma, 2024). The data is precise. The luxury sector is rapidly expanding and can withstand any macroeconomic downturn. For this reason, it is important to continue investigating the dynamics behind this segment, especially by taking this context into account to understand the relationships and dynamics of personalization as it sits at the intersection of high consumer involvement, symbolic value creation, and the ongoing demand for differentiated, emotionally resonant brand–consumer interactions.

In the luxury market, CRM plays a distinctly different role compared to mass consumer markets. The actual value of a luxury brand lies not in interaction frequency or intensity, but in its symbolic value, the wealth of its experience, and a controlled, appropriate relational distance. Early studies on the role of CRM in the luxury context highlight a structural friction between traditional CRM logic, which aims to reduce the distance between brand and consumer, increase the level of personalization and frequency of interactions, and the opposite

classic characteristics of luxury: exclusivity, rarity, and myth creation (Cailleux et al., 2009). That said, CRM must adapt this logic without distorting the classic rules of the luxury market; it needs to adopt a strategy that approaches the consumer in a measured manner, operating as a selective relationship mechanism that reinforces a sense of belonging to a restricted circle while preserving concepts such as distance and aspiration. Excessive familiarity or hyper-personalization risks eroding the brand's aura, which is why the success of good CRM use lies in maintaining the right balance between recognition and restraint (Cailleux et al., 2009).

Ko et al.'s (2023) studies examine the paradoxical nature of luxury personalization, focusing on the tension between automation and engagement. Their work discusses how luxury value creation is inherently symbolic and emotional, relying on curated interactions that convey refinement, discretion, and emotional intelligence rather than data-driven optimization (Ko et al., 2023). The paradox lies in the fact that while luxury consumers want exclusive attention and recognition, they also expect a level of personalization that is consistent with and appropriate to the code of luxury, a code of conduct that includes a controlled level of intimacy and a brand-consumer relationship that is not mass-market but personalized. This type of personalization is most effective when perceived as conveying human values and emotions, rather than mechanical efficiency.

Consequently, the authors raise doubts regarding the suitability of fully AI-driven personalization systems in luxury contexts, as automation may undermine the experiential artistry and symbolic control that define luxury relationships (Ko et al., 2023). Luxury goods consumption is strongly driven by emotional factors that characterize the sector. Luxury brands engage with dimensions such as deep identity, self-expression, and self-worth. Therefore, they can generate intense emotional responses, including pride, pleasure, excitement, and desire (Mandler et al., 2020). These emotional responses are not random but strategically evoked through craftsmanship, aesthetic excellence, heritage narratives, and sensory richness.

The nature of the interaction between the brand and the consumer strongly influences emotional involvement in this industry. Mandler et al.'s (2020) research indicates that consumers expect interactions that are carefully orchestrated, human-centered, and emotionally resonant, extending beyond the product's functional attributes. In this context, the role of personalization is to increase emotional closeness without compromising the aspirational distance that defines luxury. CRM strategies perceived as impersonal, overly automated, or excessively data-driven may disrupt this emotional balance, diminishing the affective value that sustains luxury brand relationships (Mandler et al., 2020).

The tension between maintaining distance and fostering connection indicates a broader conflict between exclusivity and inclusion in contemporary luxury markets. Recent studies explain that luxury brands should manage this tension by offering selective access and emotional engagement that do not dilute the brand's symbolic capital (Debenedetti et al., 2024). More broadly, the risk of flattening the hierarchical structure that underpins luxury value becomes a real threat when exclusivity is poorly managed. In AI-driven systems, when customization is overly automated, it may implicitly suggest concepts of mass reach, ease of access, and homogeneity, which are at odds with customers' expectations of privilege and exclusivity. Personalization provided by human advisers, on the other hand, is more in line with accepted standards of luxury as it often conveys a feeling of competence, special attention, and exclusive access (Debenedetti et al., 2024).

These standpoints show that the paradox of proximity tends to govern the CRM domain. The literature indicates that consumers seek emotional connection and personalized engagement but expect boundaries around intimacy, discretion, and symbolic hierarchy. In the luxury realm, in order to preserve brand meaning, personalization needs to remain selective and experiential. When this becomes overly detached from contextual sensitivity or too automated, it risks crossing these boundaries and undermining the very values that define luxury.

Although in recent years there has been an increase in literature on personalization and recommendation systems, the focus has mainly been on their accuracy and effectiveness, as well as on the outcomes related to the level of trust they engender. On the other hand, less attention has been paid to the negative consequences that an excessive level of intimacy can have in CRM systems in the luxury sector, which by definition finds its uniqueness in exclusivity and symbolic distance. Specifically, previous literature does not clarify the conditions under which closeness between a brand and a consumer can undermine perceived exclusivity and prestige rather than enhance them. While it is true that perceived transparency and credibility are recurring themes in the discourse on AI and its use, the role they play in the connection between different levels of CRM intimacy and the congruence of personalization in the context of luxury cosmetics remains unexplored.

These gaps are particularly relevant to the context in which they occur: the luxury cosmetics industry. In this sector, where the body, the image one has of it, and the consumer's identity are central and inevitably intersect with personalized recommendations, potentially amplifying both the benefits and risks of intimate brand–consumer interactions.

This thesis, therefore, aims to examine, based on the paradox that has emerged from the literature, under what conditions intimacy can compromise interpersonal relationships and

symbolic value in luxury contexts. Consequently, the research aims to answer the following questions.

RQ1: When does CRM-driven intimacy shape consumers' perception of exclusivity and prestige in luxury beauty brands?

RQ2: How do different levels of CRM-driven intimacy and personalization congruence interact to influence perceived transparency and credibility in luxury beauty CRM contexts?

To address these research questions, a multi-study approach was employed to capture the complexity of relationships in the luxury sector. Study 1 examines the influence of the recommendation agent's nature—AI-powered versus human-powered—on consumer responses and relationships with luxury brands in the context of online recommendations. This study assesses whether the type of recommendation agent shapes perceptions of intimacy and relational closeness, and whether such proximity is consistent with luxury codes or undermines exclusivity and prestige. Building on this, Study 2 investigates how varying levels of intimacy (high versus low), recommendation congruence (high versus low), and personalization affect perceptions of transparency and credibility regarding both the recommendation agent and the recommendation itself. The research posits that intimacy is not inherently detrimental but may become so when it is inconsistent with or exceeds consumer expectations. Accordingly, Study 2 explores the conditions under which CRM systems may overstep relational boundaries and erode the symbolic values of exclusivity and prestige central to luxury.

The remainder of the paper is structured as follows. The next section reviews the relevant literature and develops the theoretical framework and hypotheses. The subsequent section outlines the research methodology and experimental design. The following section discusses empirical results. The final section discusses the theoretical and managerial implications of the findings, along with limitations and directions for future research.

THEORETICAL CONTRIBUTION

2.1 Recommendation Source: AI vs Human recommenders

In Customer Relationship Management, the source of recommendation, whether human or artificial, is a strong determinant of consumer response. Much of the literature shows that the degree of consumer acceptance of a recommendation is not simply determined by its objective performance, but above all by deep-seated beliefs and psychological expectations regarding the consistency and appropriateness of recommendation agents across different decision-making contexts. The first studies on this phenomenon were reported by Dietvorst, Simmons, and Massey (2015), who introduced the concept of algorithm aversion. This new concept examines and explains how humans systematically prefer the judgment of another human being over that of an algorithmic device, even when there is only a single, minor error in the algorithm. These experiments show that there is a strong asymmetry in error tolerance; this is because, on one hand, human errors are accepted as ‘human’ and therefore forgivable, but on the other hand, this tolerance is not applied to algorithms, which are defined as incompetent, even though they are statistically better than humans (Dietvorst et al., 2015). This difference seems to arise from an affective and psychological process more than a rational analysis of accuracy. In consumption contexts characterized by high symbolic value, these affective expectations become particularly salient. In fact, the value of luxury is primarily constructed through symbolic meaning and uniqueness rather than functional performance alone (Vigneron & Johnson, 2004; Kapferer & Bastien, 2009). Therefore, emotional expectations regarding the appropriateness of machine-based judgment influence consumer attitudes. The tendency to resist algorithmic advice is subsequently amplified in sectors and contexts deemed purely human, subjective, or emotionally charged. Longoni, Bonezzi, and Morewedge (2019) demonstrate in their studies that individuals are more inclined to prefer human expert advice over artificial intelligence advice in contexts such as the medical field, even if the algorithm’s performance is better than or equal to that of humans. From this standpoint of the decision-making process, it is clear that this aversion does not stem from the quality of performance but rather from the fear of dehumanizing the decision-making process, as the algorithm fails to understand nuances of empathy, context, and sensitivity (Longoni et al., 2019). Furthermore, the study affirms that as transparency and the algorithm’s credibility increase, resistance does not decrease, indicating that acceptance is constrained by categorical beliefs about where AI “belongs.” This is relevant in luxury beauty contexts characterized by sensory evaluation, aesthetic judgment, and personal meaning, where consumers may view algorithmic

recommendations as inconsistent with the nature of the task. Subsequently, Castelo, Bos, and Lehmann (2019) redefine the concept of algorithm aversion by introducing a task-dependent framework. Their studies show that there is no general aversion to algorithms, but rather that acceptance depends on whether the action is perceived as objective and computational or subjective and experiential. They therefore conclude that algorithms are preferred in analytical contexts where rule-based reasoning is applied. In contrast, the human approach is preferred for decisions involving emotional interpretation and judgment that capture every nuance (Castelo et al., 2019). The study ascribes this behavioral distinction to a task-agent congruence heuristic, in which consumers hold stereotypes about beliefs that “machines are good at numbers, humans are good at feelings.”

This task-dependent framework is relevant in the luxury sector, where products often combine search attributes (e.g., ingredients, functional claims) with experience attributes (e.g., scent, texture, symbolic meaning), suggesting that the effectiveness of AI versus human recommendations may vary systematically across product types. In subsequent studies, the concept of algorithm appreciation is investigated, which provides another insight into the phenomenon. Research by Logg, Minson, and Moore (2019) shows that individuals feel comfortable consulting algorithmic advisors when they lack trust or confidence in their personal judgment, or when the decision is presented as technical. This is because, in such situations, algorithms are perceived as neutral and unbiased, thereby increasing acceptance. However, this dynamic is context-dependent: when decisions involve sensory evaluation, symbolic interpretation, or identity relevance, algorithmic preference declines sharply (Logg et al., 2019), as is the case in the luxury beauty context.

In the luxury sector and contexts, where consumption is highly symbolic, people tend to prefer human recommendations. Previous research shows that when a purchase is linked to concepts such as self-expression, consumers show a strong preference for the human over the robotic. This is because human involvement usually increases perceptions of individuality and authenticity. Robotic involvement is still believed to increase perceptions of homogeneity and standardization. The studies offer a theoretical basis for expecting differentiated responses to human versus AI advisors, given the strong identity-marker function of luxury beauty products. Additionally, it emerges from subsequent literature that the source of the recommendation influences consumer reactions through perceived transparency and perceived credibility, which then shape the willingness to follow the recommendation (Mazzù et al., 2025). Consistently, studies show that consumers are more likely to use AI-based recommenders for search-type products, while human “super experts” outperform AI in experience-based categories.

Therefore, prior studies show that AI and human recommenders cannot be reduced to an absolute dichotomy; instead, they are influenced by a range of perceptual and circumstantial factors.

2.2 Perceived transparency and perceived credibility

It is essential to understand the psychological dynamics underlying consumers' evaluation to algorithmic recommendations (Shin, 2021) given that AI- based recommendation systems are increasingly common in CRM practices.

Previous literature has shown that consumers rarely rely solely on functional outcomes when using AI-driven recommenders; instead, they rely on interpretive cues to decode the intentions, reliability, and competence of the recommendation agent. This phenomenon becomes apparent when there is a lack of complete information and limited clarity about how the algorithm performs a specific task. (Shin, 2021; Teodorescu et al., 2023). For this reason, perceived transparency and perceived credibility are introduced as mediators to understand whether they affect the development of trust in consumer responses. (Park & Yoon, 2024). Furthermore, studies by Ning et al. (2022) have revealed that there is no direct relationship between transparency and trust in algorithmic recommendations; instead, transparency operates through trusting beliefs related to the perceived competence and benevolence of the recommending agent.

Perceived transparency refers to the extent to which consumers believe that recommendations are clear and, in the case of AI, how transparently its functioning is explained.

Consequently, a higher level of transparency will reduce the sense of uncertainty associated with the algorithmic process (Shin, 2021). Previous literature shows that transparency acts as a precursor to trust, as it enables consumers to form a reliable mental model for evaluating the algorithm's output (Shin, 2021).

This mechanism is supported by empirical evidence: transparency increases relationship satisfaction and user confidence. Park and Yoon (2024) propose, based on signaling theory, that transparency cues serve as observable signals that help reduce ambiguity, allowing users to infer benevolence and integrity even in the absence of complete technical comprehension. When information asymmetry and consumer empowerment characterize the context, as assumed by signaling theory, consumers use transparency as an interpretive cue to infer the strategy the company is pursuing. They try to understand whether the company is being honest and whether its actions are legitimate (Cambier & Poncin, 2020). Furthermore, transparency affects users' general relational and affective judgments, as well as their logical assessments of

system correctness. For relational and affective judgments, the literature refers to fairness and moral appropriateness in AI-mediated interactions (Park & Yoon, 2024). The consumer-facing retail sector offers another perspective for a better understanding of this dynamic. In e-commerce settings, transparency and utility are two strong predictors of confidence in AI algorithms, making transparency a fundamental step in trust towards AI (Teodorescu et al., 2023).

Even if the source of this evidence is not luxury-related, it is nevertheless instrumental in reinforcing the generalizability of transparency as a psychological mechanism through which consumers evaluate algorithmic recommenders (Teodorescu et al., 2023). Although the arguments discussed above are empirically supported, the study nevertheless warns against assuming a direct or automatic relationship between transparency and trust. Explainability and causality indeed increase trust and acceptance. However, this phenomenon occurs only when explanations significantly support the cause-and-effect relationships underlying the algorithmic results for consumers (Shin, 2021). Shin (2021) also explains that transparency itself is essential but not sufficient to build trust in cases where there are overly technical or inconsistent explanations that can cause cognitive load.

Perceived credibility plays a central role in this process. Since credibility is not an objective factor but depends on the consumer's professional assessment, it is used as a general estimate to gauge how honest, but not manipulative, a recommendation is. Attention is also paid to how expert and relevant it is in decision-making processes.

A robust body of literature agrees that it is one of the factors that most influence consumer behavior (Pornpitakpan, 2004; Halder et al., 2021). Credibility represents an immediate cognitive evaluation that shapes reliance and precedes the development of trust (Papenmeier et al., 2019).

Recent studies show that credibility plays an even more critical role when technological systems mediate interactions. In fact, in recommendations where the human variable is not present, consumers are inclined to accept them only when there is a strong perception of competence. This mental shift must take place even before consumers can receive the recommending agent from an effective trust perspective (Mazzù et al., 2023). Credibility is eroded when explanations are not convincing, reducing the trust, even if the system performed well (Papernmeier et al., 2019).

At a higher level of empirical generalization, a study reveals that the relationship between explainability and trust in AI is significant but moderate, suggesting substantial variability across context (Atf & Lewis, 2025).

This analysis shows that explainability does not automatically increase trust. Its effects vary depending on users' interpretations, especially their assessments of competence, relevance, and plausibility, which are central to perceived credibility (Atf & Lewis, 2025). These findings suggest that credibility acts as an interpretative filter through which transparency and explainability influence trust, rather than as a simple byproduct of information disclosure. A dual mediation framework emerges from this stream of research. Transparency and perceived credibility operate as complementary mechanisms that influence consumer responses through distinct dynamics. Transparency primarily concerns whether the recommendations process is legible and fair, while credibility regards the competence of the recommendations and the extent to which it can be relied upon (Shin, 2021; Papenmeier et al., 2019).

In setting characterized by high involvement, excessive intimacy or hyper-personalization may paradoxically weaken trust when it is not underpinned by adequate transparency and credibility. By contrast, when these mechanisms are properly calibrated, they can legitimize both AI- and human-based recommendations while preserving the aspirational distance that defines luxury brands.

2.3 Variations in intimacy and congruence

Consumer responses to recommendation systems in luxury CRM are not uniform; instead, they are contingent on individual- and context-level boundary conditions that shape how recommendation sources are interpreted and evaluated. Prior research shows that generational differences, perceived intimacy, and the degree of fit between the recommendation and the consumer may moderate the effects of recommendation source and personalization intensity. In luxury beauty contexts, the aforementioned variables amplify sensitivity to relational cues. Generational differences can potentially be a moderating variable in the reaction to human or AI-powered recommendations. Generational cohort theory explains that consumer reactions to technological advances are strongly influenced by socio-technological factors (Bolton et al., 2013). Gen Z and Millennials have been exposed to digital environments from an early age and tend to be more familiar with algorithmic systems and data-driven personalization, which may translate into greater baseline openness to AI-enabled interactions (Bolton et al., 2013). However, greater technological exposure does not necessarily imply unconditional trust. Studies show this is mainly tied to when individuals got exposed to technology for the first time. Those who have been exposed to technology from a young age demand greater transparency and relevance than those who were introduced to technology later in life. This explains why younger individuals may be more sensitive to inconsistent personalization

(McKnight et al., 2011). Older generations, on the other hand, place more importance on expertise and the sense of reassurance they feel during advisory interactions. This means that they are more likely to prefer human interactions and recommendations in subjective decision-making contexts, as this would provide a higher degree of security (Bolton et al., 2013).

The degree of personalization and the level of perceived intimacy integrated into the recommendation represent a second key moderator. Personalization is generally associated with higher relevance and deeper engagement, but its effects are not entirely linear. In marketing, a well-documented paradox shows that increasing personalization can create privacy and intrusiveness-related concerns and, in turn, discomfort or reactance when consumers feel excessively monitored or “over-known” (Aguirre et al., 2015). Studies by Bleier and Eisenbeiss (2015) show that the effectiveness of personalization depends on perceived control and appropriateness. However, overly intense personalization might undermine positive responses even when recommendations are objectively relevant. In luxury CRM, discretion and distance are closely tied to brand value, making interactions easily “too intimate”. This would result in a misalignment with normative expectations for how a luxury brand should relate to its customers. That being said, highly personalized recommendations, especially when perceived as automated or overly data-driven, may generate resistance. On the other hand, similar levels of personalization are often better received when delivered through human advisors, because a human advisor is believed to better read the situation and provide a more nuanced form of engagement. Consumer congruence represents a crucial moderating factor shaping their acceptance. Congruence refers to the degree of alignment between the content of the recommendation and the consumer’s preferences or needs. Self-congruity theory suggests that consumers respond more favorably to stimuli that correspond to their self-image and identity goals, particularly in symbolic and identity-relevant consumption domains (Sirgy, 1982).

Moreover, the literature confirms that even a lower level of quality of the recommendations perceived congruence can increase the level of trust and intention to follow the recommendations (Bleier & Eisenbeiss, 2015). Within recommendation systems, congruence operates not only at the product level but also at the level of the recommending agent and the task involved, as consumers evaluate whether the source is appropriate for the type of judgment required. Therefore, it can be stated that when recommendations are perceived as congruent with personal needs and identity, algorithmic advice is more accepted.

Conversely, perceived misalignment tends to intensify resistance toward algorithmic recommendations and reinforces preferences for human advisors. In the luxury beauty context,

where recommendations are closely tied to self-presentation, taste, and identity narratives, congruence is therefore likely to amplify or attenuate the effects of recommendation source on trust and follow-through intentions. The difference in reaction, based on the different nature of the recommending agent, is not always the same and does not follow a predictable fixed pattern. Instead, said reactions depend on a set of boundary conditions that shape how recommendation sources are interpreted and evaluated.

2.4 Trust, Exclusivity, and Behavioral Intentions

Trust is a central concept in the approach to interactions based on recommendation systems. In branding and relationship marketing literature, trust is defined as the consumer's confident expectation that a brand or agent will act in a reliable, honest, and benevolent manner (Chaudhuri & Holbrook, 2001). Trust acts as a tool used to reduce risks and vulnerability in situations where there is an asymmetry in information. Empirical evidence consistently shows that trust is a critical antecedent of both attitudinal and behavioral loyalty, positioning it as a key driver of long-term relational outcomes rather than a short-term evaluative response (Chaudhuri & Holbrook, 2001). In digital environments, where recommendations are central, trust becomes particularly important because consumers are forced to rely on intermediaries, whether human or algorithmic, without being able to observe how decisions are made entirely. In this context, however, trust takes on a different nuance.

In the luxury market, it goes beyond its mere function of reducing uncertainty and takes on a relational and symbolic dimension. The latest studies on luxury brand–customer relationships show a strong correlation between the trust that characterizes luxury brands and consumers' emotional and affective attachment to them. This suggests that trust is no longer used solely as a measure of competence and reliability, but is, above all, a measure of the extent to which the brand relationship conveys prestige (Song et al., 2012). Therefore, in luxury CRM interactions, trust legitimizes the brand as a credible source of customer guidance.

Perceived exclusivity and luxury perception relate to whether a recommendation experience preserves or erodes the symbolic value that defines a luxury brand, going beyond trust alone. In literature, luxury is perceived as a multidimensional construct, with values ranging from prestige to symbolic meaning. The mental association with greater functional performance is not enough to categorize a product as luxury, demonstrating how other values are far more descriptive (Vigneron & Johnson, 2004). Here, exclusivity helps regulate access to the brand since it signals social distinction and defines the symbolic boundaries as well as reinforcing consumers' feelings of belonging to a privileged group associated with the brand, strengthening

luxury evaluations. (Wang et al., 2022). Hence, luxury value emerges from the relational cues that are part of the recommendation experience, which subtly tell who is included, and who is not, in the brand's symbolic universe. The relational nature of exclusivity is further supported by research on status signaling and luxury consumption. The results of studies by Hans, Nunes, and Dreze (2010) show that since luxury derives its intrinsic value from social distance, it is important that it maintains a certain degree of selectivity and distance in interactions between brands and consumers. In fact, if the signals that define luxury become too visible and accessible, then their power to signal these specific values will diminish. Applying this argument to the interactions that brands have with consumers through CRM, it is assumed that any recommendation perceived as too generic or automated is regarded as lacking exclusivity, regardless of its accuracy. This perspective is particularly relevant in the luxury beauty sector, where curated and humanized recommendations can reinforce luxury perception by preserving the symbolic boundary that underpins exclusivity, and where recommendations often operate as extensions of identity, taste, and self-presentation rather than purely functional advice.

The third dependent variable considered is willingness to follow the recommendation. Rather than capturing a simple evaluation, this variable reflects the moment at which consumers become open to acting on the advice they receive. In the literature, this idea is closely connected to the notion of trusting intentions, understood as the intention to rely on and make use of recommendations provided by an advising agent (McKnight et al., 2011).

Prior research also shows that trust in the advisor plays a decisive role in shaping this willingness, even when the objective quality of the recommendation remains unchanged (Benbasat & Wang, 2005). The extent to which luxury consumers are willing to follow brand recommendations suggests that they should be understood more as a form of behavior guided and influenced by symbolic and hedonistic reasons than by utilitarian ones. In fact, empirical evidence shows that willingness reflects the alignment between the consumer and the brand's value proposition (Martín-Consuegra et al., 2019). Even when AI interactions are included, digital assistance primarily influences consumer responses through engagement mechanisms and experiential cues, showing that, even in digital sectors and still in luxury, there must always be particular care and attention in developing an affective and emotional relationship.

These will, in fact, be perceived by the consumer as authentic and consistent (Rahman et al., 2023).

The three dependent variables help capture how recommendation-based interactions unfold in luxury CRM. Trust relates to whether consumers are willing to accept the recommendation source, perceived exclusivity concerns whether the interaction preserves the symbolic meaning

of luxury, and willingness to follow the recommendation marks the point at which these evaluations turn into action (Chaudhuri & Holbrook, 2001; Vigneron & Johnson, 2004; Benbasat & Wang, 2005; Han et al., 2010).

2.5 Hypothesis development

The impact of relationship proximity and personalization in luxury CRM does not depend solely on their intensity but also on the context in which they occur. It depends on the nature of the agent making the recommendation: artificial intelligence or human. The latest research reveals that integrating new technologies could create tensions between the efficiency of recommendations and the symbolism of luxury. Research by Xu and Metha (2022) shows that introducing artificial intelligence can potentially devalue perceptions of luxury. This is due to consumers' mental association of artificial intelligence with standardization and robotics. This association would inevitably reduce the mental association between luxury, exclusivity, and human craftsmanship.

Subsequent experimental studies by academics show that the adverse effect of AI is more pronounced in luxury contexts, suggesting that the luxury domain amplifies the penalties associated with algorithmic mediation (Nozawa et al., 2022).

Previous literature emphasizes how the phenomenon of algorithm aversion explains the mental mechanism that occurs when consumers tend to devalue algorithmic advice as soon as they notice an error, even when the algorithm outperforms humans (Dietvorst, Simmons, & Massey, 2015). This would explain why perceptions and approaches to recommendations, especially in artificial intelligence systems, remain linked to competence (Glikson & Woolley, 2020). Human recommendation agents, on the other hand, are associated with empathy and moral agency, which are fundamental to building trust (Mayer, Davis, & Schoorman, 1995). The different reactions and perceptions that consumers have towards the different nature of the recommendation agent can have a direct effect on trust, behavioral intention, and perceptions of exclusivity in luxury beauty. Formally:

H1 (direct effect)

In luxury beauty CRM contexts, the source of the recommendation agent (AI vs Human), influences consumers' perceived exclusivity, trust towards the recommender, and intention to follow the recommendation

Relational closeness is not always treated as a positive lever; instead, its role is closely linked to the context in which it occurs. In fact, brand relationship norms hold that consumers always have expectations about the right level of closeness. When there is a mismatch between the brand's level of closeness and the consumer's expectations, the norm is inevitably violated. This would lead the consumer to evaluate the brand negatively (Aggarwal, 2004). In luxury contexts, excessive closeness and familiarity may not be aligned with consumers' expectations, especially when they seek a certain distance and prestige from luxury brand consumption. This can eventually lead to an erosion of exclusivity.

The personalization process further intensifies this tension. While it is true that, in most cases, personalization increases engagement, it can also increase perceived intrusiveness, especially when it signals excessive knowledge or unwanted proximity (White et al., 2008; Aguirre et al., 2015). Consumers are more likely to react negatively when boundary violations occur in areas closely tied to their personal identity, as they are susceptible in these domains. The luxury cosmetics sector adds a layer of complexity, as it is a sector particularly linked to the body and one's identity, which are sensitive and personal issues. Personalization, therefore, fits into a complex context in which excessive closeness could undermine prestige. Thus, Customer Relationship Management (CRM), excessive levels of personalization, and relational intimacy can be counterproductive, potentially diminishing perceptions of exclusivity and the overall luxury value.

In this context, the effects of relational intimacy depend on the concept of congruity and consumer expectations. The self-congruity argues that consumers respond more favorably when brand stimuli align with their self-concept (Sirgy, 1982; Dolich, 1969). Evaluations are particularly interested in the degree of identity alignment (Escalas & Bettman, 2003; Reed et al., 2012) because brands and consumer experiences can be incorporated into the self (Belk, 1988). Furthermore, congruity schema studies show that when expectations are activated and incongruity is perceived as inappropriate, negative responses are generated (Meyers-Levy & Tybout, 1989; Aggarwal & McGill, 2007). From a CRM perspective, it can be inferred that relational intimacy increases expectations of accuracy. When both intimacy and congruity have a high level, the closeness is perceived as appropriate, hence reinforcing trust, the intention to follow recommendations, and the perception of exclusivity. In conditions of high intimacy and low congruence, the sense of violation increases. When intimacy is low, consumer expectations are reduced, so the role of congruence is less pronounced. It is hypothesized that congruence may moderate the relationship between intimacy and consumers' perception of exclusivity and trust. Formally:

H2 – simple moderation

Perceived congruence moderates the relationship between intimacy and consumer responses, such that the effects of intimacy on trust, intention to follow, and perceived exclusivity varies depending on the level of congruence.

In the context of recommendations, whether artificial intelligence or human, consumer responses are highly influenced by credibility. Previous literature indicates that the credibility has a strong effect on behavioral intentions and compliance (Pornpitakpan, 2004). Credibility appears to be such a strong concept that it acts both as a peripheral cue and a guide for message processing, as explained in the Elaboration Likelihood Model (Petty & Cacioppo, 1986). This occurs when consumers are exposed to scenarios with different levels of involvement. Furthermore, credibility is not a one-dimensional concept but rather a multidimensional one, as it includes competence and reliability (Ohanian, 1990). These dimensions are also found in theoretical models of trust formation (Mayer, Davis, & Schoorman, 1995). In digital contexts, trust models confirm that credibility predicts subsequent behavioral intentions (McKnight, Choudhury, & Kacmar, 2002). As the luxury market is symbolic in nature, its consumption is not functional but hedonistic and specifically linked to identity and symbolic differentiation (Kapferer & Bastien, 2009). This explains how credibility also influences the perception of exclusivity. If the source is considered competent and reliable, then the perception of legitimacy and controlled access will also increase. A low level of credibility can compromise the symbolic integrity of the brand. Furthermore, differences in the nature of the recommending agent activate ‘algorithm appreciation’, preferring algorithmic advice and activating different credibility inferences (Logg, Minson, & Moore, 2019). However, this preference could be compromised by the nature of the task required from the agents: subjectivity and personal identity lead to greater skepticism towards algorithms (Castelo, Bos, & Lehmann, 2019). It follows that the nature of the recommendation agent can influence the perception of credibility and competence, which in turn shapes trust in the recommender, the intention to follow the recommendation, and the perception of exclusivity. The following hypothesis postulates that the effect of the recommendation source on the dependent variables is mediated by the perception of credibility. Formally:

H3

The effect of recommendation source on trust, intention to follow, and perceived exclusivity is mediated by consumers’ perceptions of credibility.

OVERVIEW OF STUDIES

To test the research's hypothesis, two experimental studies in the luxury beauty context have been conducted. This was done by using the same measures of consumer response that were used across both studies. The respondents were provided with a constant context, which involved an online recommendation for a high-end skincare product, a facial serum for an evening routine targeted at dry skin.

In the first study, the nature of the recommendation source (AI-based vs. human-based) and the level of relationship intimacy (low vs. high) between recommenders and consumers were examined to understand their impact within a mediated moderation framework. In a 2x2 between-subjects design, the nature of the recommendation source and the level of CRM intimacy were manipulated. This resulted in four experimental scenarios, each randomly assigned to respondents. The objective of the study was to examine the psychological mechanism underlying consumers' evaluations by testing whether the effect of recommendation source on trust, intention to follow, and perceived exclusivity operates through perceived credibility, and whether this process is conditionally influenced by relational intimacy (PROCESS Model). Study 2 is considered an extension of the first study. Here, the aim is to isolate a single relational condition and then examine its boundary condition. The degree of CRM-driven intimacy (high vs. low) and the degree of suggestion congruence (high vs. low), defined as the alignment between the recommended product and the customer's requirements, preferences, and usage patterns, were manipulated using a 2 x 2 between-subjects design. Respondents were randomly assigned to one of four experimental conditions, consistent with the methodology of the previous study. The objective of the study is to assess whether the level of congruence of the recommendation has any moderating effect on intimacy, which in turn has an effect on the dependent variables. The study was conducted by maintaining a stable context for each of the four recommendations (AI-powered recommendation agent) to identify contextual boundary conditions of relational personalization in luxury CRM interactions.

A summary of the studies is provided in Table 1, and the conceptual model is presented in Figure 1.

Studies	Sample	Experimental Design	
Study 1	Prolific users (N= 224)	2 (Recommendation source: AI vs. Human) $\times$ 2 (Interaction intimacy: Low vs. High) between-subject design	IV: Recommendation source W: Interaction intimacy (Low vs. High) M ₁ : Perceived transparency M ₂ : Perceived credibility DV= Perceived exclusivity / Trust / Intention to follow
Study 2	Prolific users (N= 237)	2 (Interaction intimacy: Low vs. High) $\times$ 2 (Congruence: Low vs. High) between-subject design	IV: Interaction intimacy (Low vs. High) W ₂ : Congruence (Low vs. High) DV: Perceived exclusivity / Trust / Intention to follow

Table 1 Summary of research designs

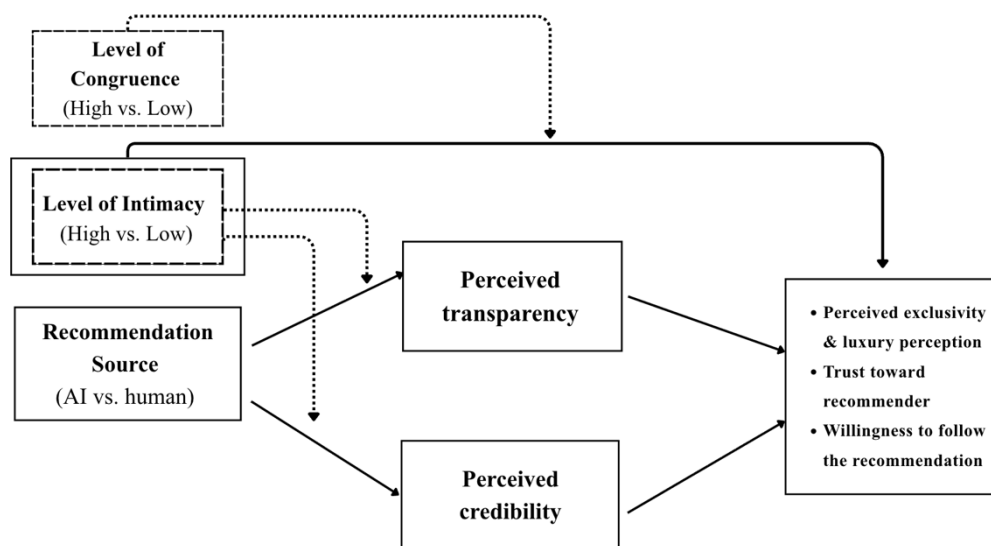


Figure 1 Conceptual Model

Independent variables across studies: Recommendation source (Study 1) and level of intimacy (Study 2)

Moderation-effect variables: Level of intimacy (Study 1) and level of congruence (Study 2), indicated by dashed boxes

Mediation-effect variables: Perceived transparency and perceived credibility

Dependent variables: Perceived exclusivity and luxury perception, trust toward the recommender, and willingness to follow the recommendation

Dotted arrows indicate hypothesized moderation effects on the relationships between the antecedent variables and the mediators.

STUDY 1

3.1 METHODOLOGY

A total of 224 participants completed the study and were included in the final analysis. The sample consisted of 106 male participants (47.0%), 117 female participants (52.2%), and one participant who identified as non-binary or other (0.4%). Respondents were recruited via Prolific in exchange for monetary compensation and participated in a between-subjects experiment. Before testing the main hypotheses, the internal consistency of all multi-item scales was assessed using Cronbach's alpha coefficient. For Study 1, the three-item transparency scale (transparency_1, transparency_2, transparency_3) showed good internal consistency ($\alpha = .833$), indicating that the items reliably measured perceived transparency of the recommendation process. The credibility scale, composed of three items, demonstrated excellent reliability ($\alpha = .961$). The trust scale also exhibited internal consistency ($\alpha = .950$). The exclusivity scale showed good reliability ($\alpha = .901$). Finally, the willingness to follow scale demonstrated excellent internal consistency ($\alpha = .974$), confirming that the three items reliably measured participants' behavioural intentions.

Participants were randomly assigned to one of four scenarios in a 2 (Source of recommendation: AI vs. Human) $\times$ 2 (Relational intimacy: Low vs. High) design. The scenarios presented to respondents concerned CRM interactions in the luxury beauty sector. Participants were asked to evaluate their interaction with the recommendation, which randomly manipulated both variables: source (Human vs. AI) and level of relational intimacy. The agent's recommendation was a night product for dry, dehydrated skin from a fictional luxury brand. The nature of the recommendation agent was manipulated simply by declaring its nature to the

respondent, while the level of intimacy was manipulated by declaring that the recommendation was based on past behavior and purchases and on the respondent's personal preferences (in the case of high intimacy) or by declaring that the agent was using generic information for the recommendation (in the case of low intimacy).

After passing the manipulation checks regarding the source of the recommendation and the level of intimacy, they were given a questionnaire designed to measure transparency, credibility, trust, perceived exclusivity, and intention to follow the recommendation. All variables were measured using multi-item scales (3) on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree) (Mazzù et al, 2025). Subsequently, the dataset was cleaned using SPSS. Using the criterion of an intra-individual standard deviation of zero for all items on the scales, participants who showed straight-lining were excluded. The sample then went from 237 to 224 participants. After cleaning the data, PROCESS model 7 (Hayes, 2022) was used to test the first-stage moderation. In the analysis, the source of the recommendation (0 = Human; 1 = AI) was included as an independent variable (X), credibility as a mediator (M), relational intimacy (0 = Low; 1 = High) as a moderator (W), while trust, intention to follow the recommendation, and perceived exclusivity were tested separately as dependent variables (Y). Indirect effects were estimated using a bootstrap procedure with 5,000 samples and 95% bias-corrected confidence intervals, as recommended in the methodological literature (Hayes, 2022).

As an additional study, the mediating effect of credibility on the relationship between the source of recommendation and the dependent variables was tested. In this case, PROCESS model 4 (Hayes, 2022) was used. This model analyzes the indirect effect of X on Y via M, examining whether credibility explains this relationship. The indirect effects were estimated using a bootstrap procedure with 5,000 samples and 95% bias-corrected confidence intervals, as recommended in the methodological literature (Hayes, 2022).

3.2 FINDINGS

When using PROCESS Model 7 (Hayes, 2022), the study posed the recommendation source (AI vs. human) as the independent variable (X), credibility as the mediator (M), relational intimacy as the moderator of the first stage (W), and trust, intention to follow, and perceived exclusivity as a dependent variable (Y). The study consisted of 237 respondents. The results were the following: The regression model predicting credibility was significant, $R^2 = .3264$, $F(3, 207) = 33.43$, $p < .001$. Both sources ($b = -.3635$, $SE = .1541$, $p = .0193$) and intimacy (b

= 1.5035, SE = .1537, $p < .001$) had significant main effects on credibility. However, the interaction between source and intimacy was not significant ($b = .2897$, SE = .3083, $p = .3486$), with an increase in explained variance ($\Delta R^2 = .0029$, $F(1, 207) = .8827$, $p = .3486$), indicating that intimacy did not significantly moderate the effect of source on credibility. Regarding the dependent variable trust, the model was significant, $R^2 = .7812$, $F(2, 208) = 364.15$, $p < .001$. Credibility strongly predicted trust ($b = .9700$, SE = .0355, $p < .001$). However, the direct effect of source on trust was not significant ($b = -.1446$, SE = .0953, $p = .1305$). The conditional indirect effects of source on trust through credibility were $-.4656$ (95% CI $[-.9572, .0271]$) at low intimacy and $-.1936$ (95% CI $[-.4643, .0862]$) at high intimacy. For intention to follow, the model was also significant, $R^2 = .6944$, $F(2, 208) = 236.28$, $p < .001$. Credibility significantly predicted intention ($b = .9895$, SE = .0460, $p < .001$), while the direct effect of source was not significant ($b = -.0785$, SE = .1241, $p = .5276$). The conditional indirect effects were $-.5010$ (95% CI $[-1.0043, .0000]$) at low intimacy and $-.2144$ (95% CI $[-.4966, .0665]$) at high intimacy. The model for perceived exclusivity was significant, $R^2 = .5053$, $F(2, 208) = 106.24$, $p < .001$. Credibility significantly predicted exclusivity ($b = .7478$, SE = .0521, $p < .001$), whereas the direct effect of source was not significant ($b = -.1334$, SE = .1406, $p = .3439$). The conditional indirect effects were $-.3786$ (95% CI $[-.7661, .0095]$) at low intimacy and $-.1620$ (95% CI $[-.3802, .0539]$) at high intimacy. Subsequently, Study 1 aims to examine more closely the role of the mediator, credibility, in relation to the recommendation source, the independent variable, and the dependent variables: trust towards the recommender, perceived exclusivity, and intention to follow the recommendation. The analysis was conducted using PROCESS Model 4 (Hayes, 2022). Recommendation source showed a limited effect on perceived credibility, $b = -.3150$, SE = .1777, $p = .0776$, 95% CI $[-.6651, .0351]$, confirming consistency with theoretical assumptions. The mediating effect of credibility on intention to follow showed full mediation, suggesting a significant indirect effect $b = -.3044$, BootSE = .1675, 95% CI $[-.6273, -.0234]$. The confidence interval did not include zero. On perceived exclusivity, credibility showed a significant indirect effect $b = -.2493$, BootSE = .1399, 95% CI $[-.5242, -.0187]$, indicating, again, full mediation. However, the direct effect of the independent variable recommendation source on exclusivity was non-significant ($b = -.1522$, SE = .1308, $p = .2458$, 95% CI $[-.4099, .1055]$). Results showed a marginal direct effect on trust ($b = -.1670$, SE = .0936, $p = .0758$, 95% CI $[-.3216, -.0124]$), with a significant indirect effect ($b = -.2993$, BootSE = .1686, 95% CI $[-.5810, -.0184]$). This confirms a consistent mediation pattern in which credibility accounts for most of the effect of source on trust

3.3 DISCUSSION

In line with theoretical expectations, credibility, the mediator, has an impact on the dependent variables of the study: intention to follow the recommendation, trust towards the recommender, and perceived exclusivity. The results of the study show that the source of the recommendation is interpreted through two fundamental cognitive variables: competence and reliability. Contrary to what was hypothesized, there is no interference from intimacy in this cognitive mechanism. However, this dynamic suggests that the credibility consumers attribute to a recommendation does not change easily across relational contexts. In a luxury scenario, dominated by strong values such as access control and legitimacy, as well as consistency, credibility would appear to be a dominant criterion, regardless of the level of perceived intimacy. Intimacy increases overall credibility, but the nature of the recommending agent does not vary with the level of intimacy. It emerges that in luxury, there is a symbolic rigidity in which consumers consider the nature of the recommendation more important than the level of relational closeness. Therefore, intimacy acts as an additive role. Study 1 better defines the limits within which the relational dimension influences methods of luxury evaluation. The mediation analysis explains the psychological mechanism happening in study 1. The data reveal a consistent mediating role of perceived credibility across all dependent variables, even if the main hypothesis was not supported.

The second part of Study 1 confirms a strong mediating effect of the credibility variable on all dependent variables. Specifically, full mediation is evident for both intention to follow the recommendation and exclusivity, and partial mediation for the variable trust towards the recommender. This indicates that, for a recommendation, the perception of its credibility has a strong influence on outcomes, leaving an indirect role for the nature of the recommending agent on the dependent variables. The assessment of credibility, therefore, plays a central role: when the recommendation is perceived as credible, consumers tend to have higher trust in it, a higher perception of the brand's exclusivity, and a greater behavioral inclination to follow it. It is therefore clear that, without credibility, the difference between the nature of the recommender would not have a meaningful effect. Additionally, credibility is considered a strong psychological factor that influences the dynamics and approach between AI-powered and human-based recommenders.

STUDY 2

4.1 METHODOLOGY

A total of 237 participants completed the study and were included in the final analysis. The sample consisted of 112 male participants (47.0%), 124 female participants (52.2%), and one participant who identified as non-binary or other (0.4%). Respondents were recruited via Prolific in exchange for monetary compensation and participated in a between-subjects experiment. Prior to testing the main hypotheses, we assessed the internal consistency of all multi-item scales using Cronbach's alpha coefficient. The personalization scale showed $\alpha = .965$. The product congruence scale achieved $\alpha = .975$. The trust in AI scale demonstrated reliability ($\alpha = .984$). The exclusivity scale in Study 2, $\alpha = .968$. , The willingness-to-follow scale in Study 2 achieved $\alpha = .985$, confirming its robustness in both studies. These consistently high reliability coefficients across all scales (ranging from .833 to .985) provide strong evidence that the measurement instruments used in this research were internally consistent and appropriate for testing the proposed hypotheses. After a short introduction, participants were randomly assigned to one of four experimental conditions in a 2 (Intimacy: Low vs High) $\times$ 2 (Congruence: Low vs High) factorial design. The study design was as follows. Participants were exposed to four scenarios in which the level of congruence and the level of intimacy of the recommendation source were manipulated.

To further set the context, the source of recommendations for this study was AI-powered across all scenarios. Participants were aware of this. Regarding the intimacy manipulation, the study presents to the respondents a high intimacy condition and a low intimacy condition. The high intimacy condition scenario explained to participants that the fictional no-name brand used their past purchase data, personal data, and personal preferences to create a recommendation for them. The low intimacy condition scenario explained to participants that the fictional no-name brand used generic information to generate a personal recommendation. Regarding the manipulation of congruence, the study presents respondents with a high and a low level of congruence for the recommendation. The high congruence scenario explained that the product was highly recommended and highly aligned with consumers' needs and preferences. The low congruence scenario explained that the recommended product did not match the respondent's needs or preferences. Therefore, participants were then exposed to one of the four conditions, which combined the two manipulated conditions. High Intimacy $\times$ High Congruence ($n=60$), High Intimacy $\times$ Low Congruence ($n=59$), Low Intimacy $\times$ High Congruence ($n=60$), and Low Intimacy $\times$ Low Congruence ($n=58$). To ensure the effectiveness of the manipulation, a

manipulation check was conducted. Respondents evaluated the perceived level of intimacy and congruence using dedicated items on a 7-point Likert scale, and all demonstrated understanding of the scenario presented. Subsequently, they were asked to answer questions measuring the core outcome variables: trust toward the recommender was assessed using a multi-item 7-point Likert scale (1 = strongly disagree; 7 = strongly agree (Mazzù et al. 2025), perceived exclusivity was analyzed using a multi-item 7-point likert scale (1 = strongly disagree; 7 = strongly agree) (Mazzù et al. 2025), and willingness to follow the recommendation was assessed using a multi-item 7-point Likert scale (1 = strongly disagree; 7 = strongly agree) (Mazzù et al. 2025). PROCESS Model 1 (Hayes, 2022) examined this relationship using a regression model that analyzed the interaction between the independent variable and the moderator. Relational intimacy was included as an independent variable (X), perceived congruence as a moderator (W), and trust, intention to follow the recommendation, and perceived exclusivity were analyzed separately as dependent variables (Y). This model tests whether the effect of intimacy varies with the level of congruence in the recommendation. The effects were estimated using 5,000 bootstrap samples and 95% confidence intervals.

4.2 FINDINGS

The first result regards exclusivity. The study revealed $R = .4973$, $R^2 = .2473$, $F(3, 233) = 25.52$, $p < .001$, which signals significance. Additionally, the study explained that congruence was found to be a strong predictor of exclusivity ($b = 1.35$, $SE = .31$, $t = 4.41$, $p < .001$). This suggests that higher levels of congruence lead to increasing levels of exclusivity. Regarding intimacy, the study did not reveal a significant result ($p = .161$), and no statistical significance was found for the interaction between Intimacy and Congruence. For the dependent variable Trust, the regression model showed the following results: $R = .5958$, $R^2 = .3549$, $F(3, 233) = 42.73$, $p < .001$. Although interaction was not statistically significant, congruence and intimacy were both significant and had a positive effect. For Congruence the results are ($b = 2.26$, $SE = .20$, $t = 11.14$, $p < .001$) and for Intimacy ($b = .35$, $SE = .20$, $t = 1.72$, $p = .087$). Regarding the last dependent variable, Intention to follow the recommendation, again the study showed a strong significance for congruence ($b = 2.60$, $SE = .20$, $t = 12.77$, $p < .001$), and Intimacy showed a marginal positive effect ($b = .38$, $SE = .20$, $t = 1.88$, $p = .061$). No relevant significance was shown in the interaction ($b = .52$, $SE = .41$, $t = 1.28$, $p = .201$).

4.3 DISCUSSION

The main purpose of study 2 is to investigate whether congruence can moderate the influence of intimacy on consumers. The study shows that congruence is indeed a key contextual driver of the dependent variables. Therefore, the level of congruence of the recommendation plays a fundamental role in how it is actually perceived by consumers. Additionally, a clear boundary condition pattern can be seen regarding the level of perceived exclusivity. It emerges that the effect of intimacy increases when congruence is high ($b = 1.11$), while the effect decreases in strength when congruence is low. Higher levels of exclusivity, with a recommendation aligned with personal needs, occur when a higher level of intimacy is present. Conversely, when the congruence of the recommendation is low, increasing intimacy would not change the perception of exclusivity. In the opposite situation, an increase of more than one point on the scale suggests a significant shift in perception. This boundary condition arises from exclusivity, which is important for understanding its role in the luxury context. Exclusivity is, in fact, one of the main drivers of this market, demonstrating great sensitivity to contextual alignment mechanisms, which reinforce its role.

GENERAL DISCUSSION

5.1 DISCUSSION OF FINDINGS

The data reveal a hierarchical system. Consumer responses are first built on credibility, which acts as a filter, guiding trust intention to follow the recommendation and perceived exclusivity. Subsequently, the level of congruence of the recommendation explains how much intimacy can generate symbolic value. Previous literature provides a framework for understanding the phenomenon, in which the tension between technological rationality and the symbolic logic of luxury is the protagonist. In a context where luxury depends on legitimacy, access control, and consistency of meaning (Kapferer & Bastien, 2009), technology can sometimes be intrusive, reducing the emotional essence of luxury (Xu & Mehta, 2022). For this reason, when AI-powered systems are applied to contexts with high symbolic and emotional value, they may receive more negative judgments than in other contexts where prestige and emotional closeness are not so central (Nozawa et al., 2022). However, the literature does not fail to point out that the task to be performed determines the type of judgment regarding AI; the perception of artificial intelligence is positive for mechanical-analytical tasks but more controversial in intuitive and empathetic tasks (Huang & Rust, 2018).

A key mechanism emerges from Study 1: the perceived difference between the nature of the source (human vs. AI) translates into perceived credibility, which can predict trust, intention to follow the recommendation, and perceived exclusivity. Empirically, a trend emerges that would explain how trust derives from assessments of trustworthiness (ability/reliability/integrity), making consumers “willing to be vulnerable” (Mayer et al., 1995). From a persuasive perspective, credibility can function as a central or peripheral cue that routes processing and attitudinal/behavioral outcomes (Petty & Cacioppo, 1986). Analysis of the collected data shows that credibility mediates the link between the source and the outcome. There is total mediation for intention to follow the recommendation, and exclusivity and partial mediation for trust. Study 1 also demonstrates something more informative: the non-significance between the nature of the recommending agent and intimacy. While it is true that relational intimacy increases credibility, it does not change the way the difference in source is interpreted in terms of competence and reliability. This result should be interpreted in relation to the context in which it occurs. In luxury, credibility is a stable and binding criterion that does not vary according to different levels of intimacy.

This is best expressed by the concept of cognitive dominance, which explains that consumers weigh epistemic signals much more heavily than relational ones (Glikson & Woolley, 2020). Furthermore, it would also explain the aversion to algorithms in subjective contexts (Castelo et al., 2019). When the luxury beauty context is perceived as strongly linked to subjective preferences, intimacy is not enough to influence the judgment of the legitimacy of the source, but it can increase its overall evaluation. This constraint is also interpreted as symbolic rigidity, since the evaluation is also linked to symbolic legitimacy and status (Kapferer & Bastien, 2009). If AI signals standardization, it can reduce the essence and perception of luxury (Xu & Mehta, 2022) and prove inadequate in other prestigious settings (Nozawa et al., 2022). From an inferential point of view, this rigidity manifests as an absence of first-stage moderation, in which the independent variable source and the moderator intimacy are additive to credibility. The second study introduces the concept of congruence. The results show that congruence anticipates and predicts trust, intention, and exclusivity, and that intimacy does not affect both trust and intention. Consequently, it emerges that when the AI source is taken as a given, the quality and congruence of the recommendation become the dominant lever. As the algorithm appreciation theory explains, algorithms are not always rejected; sometimes they are preferred (Logg et al., 2019). Congruence, therefore, becomes a boundary condition. Perfectly in line with self-congruity theory (Sirgy, 1982), consumers are more likely to prefer products or experiences that are consistent with their self-image, maintaining identity consistency and

avoiding dissonance between the self and external stimuli. The strong relationship between exclusivity and congruence translates into an increase in output values when there is consistency between recommendations and personal needs. Both studies reveal a two-layer system: in the first layer, we find evaluative anchoring, which explains the centrality of credibility, and in the second layer, we find boundary conditions, which explain the congruence that establishes when (and if) relational personalization can produce symbolic value and reinforce exclusivity (Sirgy, 1982; Belk, 1988; Escalas & Bettman, 2003).

The insignificance of some relationships is proof that cognitive criteria largely dominate judgments about the source, further constrained by symbolic rigidity (Kapferer & Bastien, 2009; Glikson & Woolley, 2020).

5.2 THEORETICAL IMPLICATIONS

Several theoretical implications can be drawn from the findings of these studies. The first concerns source credibility theory (Hovland & Weiss, 1951; Hovland, Janis, & Kelley, 1953). The effect of the theory becomes even stronger when there is no relationship between the independent variable (i.e., the source) and the credibility mediator. In the literature, the effectiveness of a recommendation usually depends on both the competence and reliability of the source. With the advent of advanced technology, and especially the introduction of artificial intelligence, the debate has shifted to the distinction between human and algorithmic recommendations, treating them as independent variables (Dietvorst, Simmons, & Massey, 2015; Logg, Minson, & Moore, 2019).

From the studies in this research, which originated and developed in the context of luxury beauty CRM, it emerges that the distinction between the nature of the recommendation agent does not seem to have any independent effect on relational outcomes. The impact of the source operates only through credibility, a central mechanism in persuasive processes, which is consistent with Pornpitakpan's (2004) studies. The theoretical contribution of this research is to shift the focus from the source effect to the credibility-mediated effect. Study 2 shows that, at a fixed source (AI), congruence predicts trust, intention, and exclusivity. This is perfectly consistent with Sirgy's self-congruence theory (1982).

Results explain that in the luxury beauty sector, there is a need for alignment with consumer preferences and a high degree of relevance. Overcoming the power of relational intensity. High congruence would also communicate to the consumer, on the brand's side, a high level of competence and selectivity, consistent with Spence's signaling theory (1973). High congruence

and, consequently, brand competence are necessary in sectors where status and distinction are central (Han, Nunes, & Drèze, 2010), as it would translate into personalized treatment. Exclusivity can also emerge from strong and precise personalization, not only from scarcity and distance. The weak statistical results of the effect of intimacy on the variables lead the research to recalibrate the luxury personalization paradox. The emerging theoretical distinction is between an affective dimension (relational closeness) and a cognitive dimension (perceived competence) of the recommendation. Luxury beauty is a context with high cognitive and symbolic involvement and, in line with the Elaboration Likelihood Model (Petty & Cacioppo, 1986), consumers are influenced by how right and well-founded a recommendation is, demonstrating that the latter is processed centrally and not peripherally. Additionally, the data suggest that the competence of the outcome is more relevant than the nature of the agent, shifting from a performance-based perspective rather than an intent-based one. Existing literature on algorithm aversion (Dietvorst et al., 2015) and algorithm appreciation (Logg et al., 2019) takes a two-level stance in the debate. However, this research takes a more procedural position where AI appears neutral until proven otherwise in terms of credibility and perceived congruence.

5.3 PRACTICAL IMPLICATIONS

The importance of the role of quality of personalization is now evident. For managers and companies, this means investing more resources in improving the accuracy of recommendation systems rather than communicating the type of technological innovation. In practical terms, the focus should shift to consistently integrating behavioral data and consumer preferences to avoid standardization and generic recommendations. Furthermore, offering fewer products that are highly consistent with consumer preferences reinforces the perception of exclusivity, which could also be more effective than a high level of intimacy or a wide choice of products and/or suggestions. The study specifies that a high level of personalization intimacy does not guarantee a better outcome, which is why any level of intimacy should always be supported by an excellent level of congruence. If this does not occur, relational proximity may not yield results. Companies should focus more on the quality of recommendations, in terms of credibility and consistency, rather than on the level of relational closeness or the label of the source, even in the case of algorithmic recommendations, where AI.

LIMITATIONS AND FUTURE RESEARCH

The research has several limitations. First, it should be noted that the sample, recruited through the Prolific platform, was selected without a luxury experience screening process, which increased the sample's variability and size. Future research could examine whether the roles of credibility and congruence differ in the cognitive mechanisms of subjects with high involvement and expertise in the luxury or skincare category.

Second, despite the guarantee of experimental control and validity, the study does not present observations on longitudinal dynamics or behavioral effects, as both experiments rely on textual manipulations and self-reported measures from respondents. In the future, interactive experimental systems could be developed to more concretely verify consumer perceptions and behavior. Further tests could be developed to explore alternative causal structures, since the proposed model focuses solely on credibility and congruence. A further limitation concerns the choice of the object of study. The research focuses on a night serum from a luxury skincare brand. Relational elements could take on a more central role if the framework were applied to categories with greater symbolic intensity.

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APPENDIX I – EXPERIMENTAL STIMULI

Study 1 – Four scenarios presented

Human recommender – Low intimacy level

Please imagine that it is evening and you are visiting the official website of a high-end luxury beauty brand because you are looking to purchase a new skincare product for your evening routine. Your skin tends to feel dry and tight at the end of the day, especially after cleansing, and you usually look for products that are nourishing but not heavy.

While browsing the website, you enter a consultation section and interact with a human beauty advisor, available through the site. The advisor does not appear to have access to any prior information about you or your past interactions with the brand. During the consultation, the human beauty advisor recommends a high-end facial serum for your evening skincare routine. The recommendation is explained using general information about the product and standard skincare principles, without referring to your dry skin, evening sensations, routine steps, or personal preferences. The guidance feels professional but standardized rather than tailored to you.

Human recommender – High intimacy level

Please imagine that it is evening and you are visiting the official website of a high-end luxury beauty brand because you are looking to purchase a new skincare product for your evening routine. Your skin tends to feel dry and tight at the end of the day, especially after cleansing, and you usually look for products that are nourishing but not heavy. You have previously interacted with this brand and have an existing account on the website, where information about your skin type, preferences, and past consultations has been stored over time. While browsing the website, you enter a consultation section and interact with a human beauty advisor, available through the site. The advisor appears familiar with your profile and previous interactions with the brand. During the consultation, the human beauty advisor recommends a high-end facial serum for your evening skincare routine. The recommendation is explained by explicitly referring to your dry skin, the feeling of tightness you often experience in the evening, your usual routine steps, and your preference for lightweight but nourishing textures. The guidance feels closely tailored to you and framed as personalized advice based on a clear understanding of your needs.

AI recommender – Low intimacy level

Please imagine that it is evening and you are visiting the official website of a high-end luxury beauty brand because you are looking to purchase a new skincare product for your evening routine. Your skin tends to feel dry and tight at the end of the day, especially after cleansing, and you usually look for products that are nourishing but not heavy. While browsing the website, you interact with an AI-powered recommendation system integrated into the platform. The system does not appear to have access to any personal profile information or past interactions with the brand. During the interaction, the AI-powered recommendation system suggests a high-end facial serum for your evening skincare routine. The recommendation is explained using general product information and standard skincare principles, without referring to your dry skin, evening sensations, routine steps, or personal preferences. The guidance feels professional but standardized rather than tailored to you

AI recommender – High intimacy level

Please imagine that it is evening and that you are visiting the official website of a high-end luxury beauty brand because you are looking to purchase a new skincare product for your evening routine. Your skin tends to feel dry and tight at the end of the day, especially after cleansing, and you usually look for products that are nourishing but not heavy. You have previously interacted with this brand and have an account on the website, where information about your skin type, preferences, and past interactions has been stored over time. While browsing the website, you interact with an artificial intelligence–based recommendation system integrated into the platform. The system has access to the information available in your profile and to your previous activities on the website. During the interaction, the artificial intelligence–based recommendation system suggests a high-end facial serum for your evening skincare routine. The recommendation is explained by explicitly referring to your dry skin, the feeling of tightness you often experience in the evening, your usual routine steps, and your preference for lightweight but nourishing textures. The guidance feels highly personalized and is presented as tailored advice based on the information available in your profile

Study 2 – Four scenario presented

High intimacy level – High congruence level

Please imagine that it is evening and that you are visiting the official website of a high-end luxury beauty brand because you are looking to purchase a new skincare product for your evening routine. Your skin tends to feel dry and tight at the end of the day, especially after

cleansing, and you usually look for products that are nourishing but not heavy. You have previously interacted with this brand and have an account on the website, where information about your skin type, preferences, and past interactions has been stored over time. While browsing the website, you interact with an artificial intelligence–based recommendation system integrated into the platform. The system has access to the information available in your profile and to your previous activities on the website. During the interaction, the artificial intelligence–based recommendation system suggests a high-end facial serum for your evening skincare routine. The recommended product appears perfectly aligned with the needs of your dry skin, addresses the feeling of tightness you typically experience in the evening, and integrates naturally into the steps you usually follow in your nighttime routine. The recommendation is explained by explicitly linking the product to your skin characteristics, your routine, and your preferences, making the guidance feel highly personalized, coherent, and well aligned with your needs.

High intimacy level – Low congruence level

Please imagine that it is evening and that you are visiting the official website of a high-end luxury beauty brand because you are looking to purchase a new skincare product for your evening routine. Your skin tends to feel dry and tight at the end of the day, especially after cleansing, and you usually look for products that are nourishing but not heavy. You have previously interacted with this brand and have an account on the website, where information about your skin type, preferences, and past interactions has been stored over time. While browsing the website, you interact with an artificial intelligence–based recommendation system integrated into the platform. The system has access to the information available in your profile and to your previous activities on the website. During the interaction, the artificial intelligence–based recommendation system suggests a high-end facial serum for your evening skincare routine. The recommendation is presented by referring to the information available in your profile and to your past interactions with the brand; however, the suggested product appears poorly aligned with the specific needs of your dry skin and with the feeling of tightness you typically experience in the evening, and it does not integrate naturally into the steps you usually follow in your nighttime routine. Despite the system showing awareness of your characteristics and preferences, the advice feels misaligned with your current needs and usage habits.

Low intimacy level – high congruence level

Please imagine that it is evening and that you are visiting the official website of a high-end luxury beauty brand because you are looking to purchase a new skincare product for your evening routine. Your skin tends to feel dry and tight at the end of the day, especially after cleansing, and you usually look for products that are nourishing but not heavy. While browsing the website, you interact with an artificial intelligence–based recommendation system integrated into the platform. The system does not appear to have access to any specific information about your personal profile or to your previous interactions with the brand. During the interaction, the artificial intelligence–based recommendation system suggests a high-end facial serum for your evening skincare routine. The recommended product is presented as particularly suitable for skin that tends to feel dry and experience tightness at the end of the day, and as easy to incorporate into an evening routine thanks to its nourishing yet lightweight texture. The recommendation is explained by referring to these general product characteristics and typical usage, making the advice feel coherent with the described needs but not personalized to your individual characteristics.

Low intimacy level – Low congruence level

Please imagine that it is evening and that you are visiting the official website of a high-end luxury beauty brand because you are looking to purchase a new skincare product for your evening routine. Your skin tends to feel dry and tight at the end of the day, especially after cleansing, and you usually look for products that are nourishing but not heavy. While browsing the website, you interact with an artificial intelligence–based recommendation system integrated into the platform. The system does not appear to have access to any specific information about your personal profile or to your previous interactions with the brand. During the interaction, the artificial intelligence–based recommendation system suggests a high-end facial serum for your evening skincare routine. The recommendation is presented by referring to general product features and standard skincare principles, without linking the serum to the specific needs of your skin, the feeling of tightness you experience in the evening, or the usual steps of your routine. The advice appears professional but generic, and the recommended product seems poorly aligned with your personal characteristics and usage habit

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