

# ***Emotion as Interface: A Self-Determination Theory Framework for Gamified Digital Fashion Engagement***

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**Abstract.** Digital fashion is evolving from a visual novelty into an infrastructure for consumer engagement, yet research and industry practice remain dominated by technology- and attribute-centric perspectives that explain what digital fashion is rather than why consumers emotionally commit to it. Drawing on self-determination theory and recent advances in fashion-technology consumer research, this conceptual paper develops the Emotion-Driven Gamified Digital Fashion (EDGDF) framework, which positions culturally grounded emotional narrative as a design antecedent of psychological need fulfilment, engagement, and digital fashion adoption. The framework is illustrated through three landmark cases — Sky: Children of the Light, Papergames' Nikki dress-up franchise, and Animal Crossing: New Horizons — whose documented emotional design pipelines, stage-based identity models, and wearable digital assets exemplify the framework's mechanisms at global scale. Five propositions specify how emotional narrative depth, gamified interaction, stage-based personalisation, and cultural grounding shape the fulfilment of autonomy, competence, and relatedness, thereby driving engagement, digital fashion adoption, and the perceived value of emotional digital assets. The paper contributes an emotion-centric extension of self-determination-based fashion-technology research, derives managerial implications for fashion brands and game-industry collaborations, and discusses how emotion-driven design travels across cultural origins, including the global rise of Chinese-originated digital fashion worlds.

**Keywords:** digital fashion, gamification, self-determination theory, emotional branding, metaverse

## **1. Introduction**

Digital fashion — clothing and accessories designed, rendered, and worn in digital environments — has moved from the periphery of gaming culture to the centre of strategic experimentation in the fashion industry. As virtual worlds, social platforms, and game ecosystems converge into persistent consumer spaces, fashion consumption increasingly involves items that exist only as data: avatar skins, virtual garments, and collectable digital wearables [1, 2]. Luxury and mass-market brands alike now treat these environments as a new frontier of value creation, launching digital collections, virtual stores, and tokenised garments [3]. Consumer research has begun to map this terrain, identifying the attributes that drive digital fashion adoption in the metaverse — renderability, visual

appeal, and customizability — and distinguishing digital fashion as experiential content from NFT fashion as an ownable digital asset [1, 2].

In parallel, a second stream of work has established that the motivational engine of fashion-technology experiences is psychological need fulfilment. Grounded in self-determination theory (SDT), which holds that the needs for autonomy, competence, and relatedness sustain intrinsic motivation [4], studies have shown that gamified, personalised, and engaging virtual reality fashion applications fulfil these needs and thereby strengthen in-app purchase intention [5], and that gaming commerce fulfils Chinese consumers' basic psychological needs in everyday consumption contexts [6]. What people do in digital fashion environments, this literature suggests, is fundamentally driven by how well the experience satisfies autonomy, competence, and relatedness.

Yet a conspicuous gap remains. Existing models largely theorise the attributes of the technology and of the digital item — what digital fashion affords — while leaving under-theorised the content that fills the experience: what digital fashion means. Consumer research has long argued that possessions constitute the extended self [7], that digital possessions perform this function in online worlds [8], and that consumer goods carry culturally constituted meaning that individuals draw upon to construct identity [9]. When a digital garment encodes a personally resonant story, it may operate less like a decorative skin and more like a memory made wearable. Emotion, however, has been treated mainly as an outcome of fashion-technology experiences — enjoyment, pleasure, hedonic appeal — rather than as a design antecedent that can be systematically engineered into gamified digital fashion.

This paper addresses that gap through two research questions. RQ1: How can emotional narrative be conceptualised as a design input in gamified digital fashion experiences? RQ2: Through what mechanisms does emotionally grounded, gamified digital fashion shape consumer engagement and adoption?

In answering these questions, the paper makes three contributions. First, it develops the Emotion-Driven Gamified Digital Fashion (EDGDF) framework, which integrates culturally grounded emotional narrative into the self-determination-based account of fashion-technology consumption as a design antecedent of need fulfilment, engagement, and adoption. Second, it illustrates the framework through three landmark cases — Sky: Children of the Light, the Nikki dress-up franchise, and Animal Crossing: New Horizons — selected for their documented emotion-first design pipelines and their variation in platform, cultural origin, and monetisation model. Third, it derives implications for fashion brands, game-industry collaborations, and the cross-cultural travel of emotional design, including the global rise of Chinese-originated digital fashion worlds. The remainder of the paper reviews the relevant literature, explains the conceptual methodology, presents the case, and then specifies the framework and its propositions before discussing theoretical and managerial implications.

## 2. Literature review

### 2.1. Digital fashion and NFT fashion

Digital fashion refers to garments and accessories that exist solely in digital form and are worn by avatars or superimposed onto images and videos of physical bodies. Research on metaverse consumer behaviour shows that avatar personalisation is a central fashion practice in virtual worlds, and that the adoption of digital fashion is driven by item-level attributes: renderability, the technical quality with which garments are displayed; visual appeal, their aesthetic attractiveness; and customizability, the degree to which consumers can adapt items to themselves [1]. These attributes

shape both continuance intention toward virtual worlds and purchase intention for digital fashion, positioning digital garments as experience goods whose value is realised in use [1].

A further distinction separates digital fashion (DF) from NFT fashion (NF). Drawing on social listening and consumer surveys, Ki et al. [2] demonstrate that consumers perceive the two as distinct: DF functions primarily as digital content consumed for experience, whereas NF is framed by collectability, licensability, and ownability — it is traded, owned, and held as a digital asset. This distinction matters for the present argument because emotional meaning may attach differently to content and to assets: a story-rich digital garment may be experienced in the moment as content, yet also kept, displayed, and transferred as an emotionally significant possession. The DF/NF distinction therefore provides the vocabulary for what this paper later calls emotional digital assets.

## 2.2. Gamified fashion experiences and self-determination theory

Self-determination theory proposes that human motivation is sustained by the fulfilment of three basic psychological needs: autonomy, the experience of volition and self-direction; competence, the experience of effectance and mastery; and relatedness, the experience of connection with others [4]. The framework has proved especially productive for understanding play: video games are motivating precisely because well-designed game systems satisfy these needs [10], and gamification — the use of game design elements in non-game contexts — has been shown to satisfy intrinsic needs through features such as avatars, points, badges, leaderboards, and meaningful stories [11, 12].

Fashion-technology research has imported this lens directly. Lau and Ki [5] demonstrate that when virtual reality fashion applications are gamified, personalised, and engaging, consumers experience need fulfilment, which in turn increases in-app purchase intention. Studying Chinese consumers in gaming commerce, Ki et al. [6] similarly link basic psychological need satisfaction to consumption psychology and behaviour. Across these studies, SDT functions as the dominant explanatory account of why consumers return to, and spend within, fashion-related digital experiences. What remains underspecified is the design content that activates need fulfilment: gamification research catalogues mechanics, and digital fashion research catalogues item attributes, but neither stream explains how the narrative substance of an experience is engineered.

## 2.3. Emotion, culture, and narrative in fashion consumption

Fashion consumption has always been symbolic. Possessions contribute to the extended self [7], and in digital environments dematerialised possessions — from avatars to virtual goods — extend the self in new ways [8]. The meaning of consumer goods is culturally constituted and moves from the culturally constituted world into goods and then into individual lives [9]. Narrative is a key vehicle of this transfer: when consumers process brand communications as stories, they build stronger connections to brands because narrative structures map onto their own lived experience [13]. Hedonic consumption research likewise shows that emotional and sensory qualities of products drive consumer behaviour beyond utilitarian evaluation [14], a logic that extends to digital interfaces whose visual form and realism generate hedonic appeal [15].

Culture shapes not only what goods mean but how emotion itself is organised. The distinction between independent and interdependent self-construal [16] is foundational here: in many East Asian contexts, the self is constituted through relationships, and emotion is communicated structurally — through action, provision, silence, and expectation — rather than through explicit verbal expression. Consumer research confirms that culturally grounded design resonates: consumers respond to ethnic-inspired design in ways shaped by their cultural self-view and

confidence [17]. For fashion, this implies that garments and accessories can operate as carriers of culturally specific emotional structures, not merely of aesthetic style.

Finally, the mechanisms through which emotionally meaningful fashion spreads are increasingly digital and social. Social media influencers function as human brands whose self-actualisation and lifestyles provide consumers with inspiration [18, 19], and consumer brand engagement — a consumer's cognitive, emotional, and behavioural investment in a brand — is now understood as a central outcome of interactive media environments [20]. Even the realism of virtual influencers shapes marketing effectiveness [21]. Synthesising these streams, emotional narrative emerges as a plausible but untheorised antecedent of engagement in gamified digital fashion: possessions extend the self, narrative connects goods to lived experience, culture structures emotion, and digital environments mediate engagement. What is missing is a framework that specifies how emotional narrative enters the design of gamified digital fashion and through what mechanisms it shapes consumer outcomes.

### 3. Methodology

This study is a conceptual paper that follows the theory synthesis approach to conceptual article design [22]. Its purpose is not to test hypotheses but to integrate previously disconnected streams of research — self-determination-based fashion-technology consumption, digital fashion and NFT fashion research, and the symbolic, cultural, and narrative account of fashion consumption — into a new framework with explicit propositions that can guide subsequent empirical work.

To keep the theorising concrete, the framework is developed in dialogue with three illustrative cases [23]. The cases were selected from published design documentation, developer statements, and industry reporting according to three criteria: (a) each operates a virtual world in which garments and accessories are central to the player experience; (b) each demonstrates an explicit, documented emotion-first design pipeline rather than purely attribute-driven design; and (c) together they vary in platform (mobile social adventure, mobile and cross-platform dress-up, console life simulation), cultural origin (United States, China, Japan), and monetisation model (cosmetic microtransactions, gacha, premium purchase), so that the framework is examined against diverse commercial logics. The three cases — Sky: Children of the Light, Papergames' Nikki franchise, and Animal Crossing: New Horizons — were analysed by mapping documented design elements onto constructs from the literature, which then informed the framework's propositions. Consistent with the illustrative use of cases in conceptual research, the cases demonstrate the plausibility and operation of the framework rather than support statistical generalisation.

### 4. Case analysis: three landmark virtual fashion worlds

#### 4.1. An emotion-first design pipeline

Sky: Children of the Light, released by thatgamecompany in 2019, exemplifies the emotion-first pipeline at scale. The studio's stated mission is to create games that produce positive change in the human psyche, and its design process works backwards from target emotions — wonder, companionship, gratitude — rather than forwards from mechanics or visual assets [24]. In Sky, the signature garment, the cape, is not cosmetic decoration but the instrument of flight: its level, earned through exploration and social cooperation, literally determines how far and how freely a player can move through the world. The game's economy likewise begins from an emotion: candles, the core currency, are most meaningfully obtained and spent through giving — lighting other players, gifting

friends — so that gratitude and generosity are structural, not rhetorical [24]. Monetisation is deliberately constrained so that spending cannot purchase superiority over others, protecting the emotional contract from the toxicity of competitive pay-to-win design. The pipeline runs from lived emotional experience, through emotional mechanism, relational structure, and wearable form, to a digital asset the player carries (Fig. 1). The commercial outcome — over 260 million downloads [25] and a Guinness World Record for the most users in a concert-themed virtual world [26] — suggests that emotion-first pipelines are not a niche aesthetic stance but a viable mass-market logic. Emotion is thus not the packaging of the product but its skeleton.

Three emotional structures organise Sky's world, and each is carried by what players wear. Loneliness and connection: players first appear to each other as silhouettes and must spend candles to reveal one another's appearance, so that being seen in one's chosen cape and hair is an earned, gifted intimacy. Generosity: at first, gratitude cannot be expressed verbally; the only channel is giving light, which makes bestowing — rather than displaying — the primary social gesture. Transience and commemoration: seasonal events and limited capes mark time, so garments function as memorabilia of shared periods rather than static items. In each case the garment materialises the emotional structure: the cape is at once the means of flight and the visible record of a player's journey through loneliness, generosity, and memory.

## 4.2. Identity stages rather than demographics

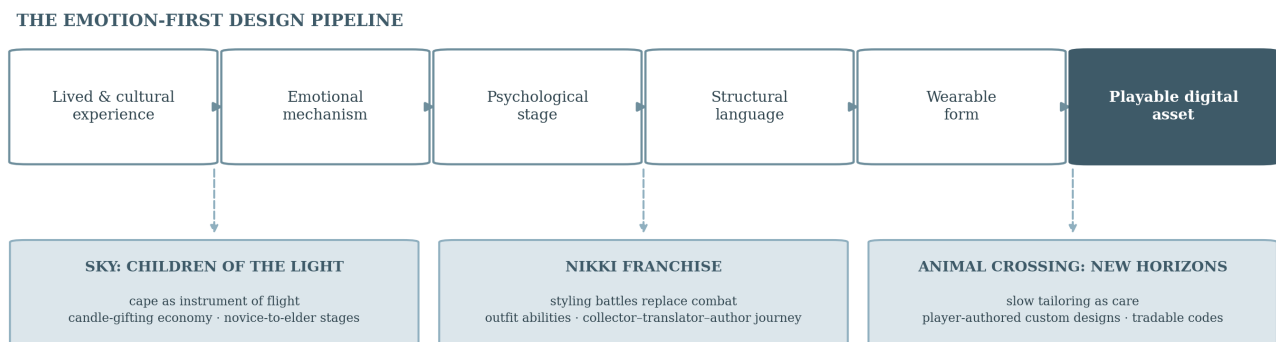


Figure 1. The emotion-first design pipeline observed across the three cases: Lived and cultural experience is abstracted into emotional mechanisms, staged identity models, structural languages, wearable forms, and playable digital assets

A second shared move across the cases is to model users by identity stage rather than demographics. Papergames' Nikki franchise — Love Nikki (2015), Shining Nikki (2019), and Infinity Nikki (2024) — builds its entire world, Miraland, on a styling journey: fighting is prohibited and all conflict is resolved through styling battles, so the player's avatar advances not by combat level but by growth as a stylist [27]. The franchise models this growth in stages. New players begin as collectors, assembling wardrobe breadth; intermediate players become translators, learning the language of tags, attributes, and themes to express intent through garments; and advanced players act as authors, composing original looks and curating shared guild identities. Each stage personalises the same wardrobe: a dress means inventory to the collector, vocabulary to the translator, and signature to the author. The model has proven commercially durable — Love Nikki surpassed 85 million downloads and US\$400 million in lifetime revenue, Shining Nikki has exceeded US\$400 million, and Infinity Nikki drew 30 million pre-registrations and 10 million downloads in its first week [27, 28]. Sky exhibits a parallel staging, from the novice moth to the

elder who mentors others, with cape level and constellation progress as its visible markers. These stages are states a player moves through, not fixed types, so the brand–user relationship extends across a life rather than ending at a single purchase.

### 4.3. Structural metaphor as an emotional grammar

Animal Crossing: New Horizons (2020) demonstrates the third mechanism — structural metaphor, in which how elements approach, cover, or move relative to one another is itself the emotional content. Its tailoring shop, the Able Sisters, encodes care structurally: the elder sister Sable begins silent, facing her sewing machine, and only through the player's repeated, unhurried visits does she gradually turn, speak, and share the sisters' family history — affection materialised as slow approach, never announced. Custom designs let players draw garments pixel by pixel and share them through codes, converting personal and cultural memory into wearable, giftable form; during the 2020 pandemic these garments became emotional infrastructure, worn at in-game weddings, graduations, and memorials when physical gatherings were impossible. The world's emotional grammar proved legible to the fashion industry itself: within months of release, Valentino, Marc Jacobs, and Sandy Liang had released official in-game designs [29], and the game has sold 49.91 million copies [30]. Structural metaphor here is not decorative motif but relational pacing and player authorship — yet the principle is identical: how elements approach and connect expresses the relationship.

### 4.4. From wearable to playable: the asset layer

Across the three cases, garments finally operate as playable, ownable digital assets, closing the loop from emotion to possession. In Sky, capes, masks, and concert memorabilia are unlocked through play and seasonal participation, personalised through combination, worn on the avatar, and kept as durable possessions that record a player's history; the AURORA concert showed these assets functioning collectively, as thousands of identically winged avatars gathered in a single virtual world [26]. In Infinity Nikki, outfits double as gameplay abilities — a grooming dress that lets the player befriend animals, a musician's gown that performs — so that wearing is itself a core verb of play, and wardrobes are curated as long-term assets [27]. In Animal Crossing, design codes make garments tradable cultural objects whose circulation extends far beyond the game into social media and official brand collaborations [29]. Read through the digital extended self [8] and the DF–NF spectrum [1][2], these cases suggest a common trajectory: when a digital garment materialises an emotional narrative that the player has personally enacted, it becomes a candidate for keeping, displaying, and trading — an emotional digital asset rather than disposable content.

### 4.5. The Emotion-Driven Gamified Digital Fashion framework

Synthesising the literature and the cases, this paper proposes the Emotion-Driven Gamified Digital Fashion (EDGDF) framework (Fig. 2). The framework treats four design antecedents — emotional narrative depth, gamified interaction, stage-based personalisation, and cultural grounding — as drivers of psychological need fulfilment, which in turn produces consumer engagement and, ultimately, digital fashion adoption and the perceived value of emotional digital assets. Table 1 summarises how the cases operationalise each construct; the propositions below specify the framework's logic.

P1: Emotional narrative depth in a gamified digital fashion experience positively influences the fulfilment of autonomy and relatedness. When digital garments encode narratives that consumers recognise as their own — as in Sky, where the cape materialises the emotional structures of loneliness, generosity, and commemoration — engagement becomes volitional rather than compliance-driven, supporting autonomy; and because the narratives address relational experience, wearing and sharing them connects consumers to others with similar histories, supporting relatedness. This extends narrative-processing and extended-self accounts into fashion-technology consumption.

P2: Gamified interaction built from structural metaphors positively influences competence fulfilment. Mechanics that let players adjust boundaries, release tensions, and reveal concealed elements convert abstract emotional work into concrete, masterable actions. Consistent with gamification research showing that game design elements satisfy the need for competence, such mechanics give consumers a felt sense of effectance — here, over emotional content rather than only over scores or levels.

P3: Stage-based personalisation of digital fashion strengthens avatar identification and thereby reinforces autonomy fulfilment and engagement. Matching digital garments to a consumer's psychological stage — statement pieces for the confrontation stage, translation devices for the understanding stage, growth certificates for the reconstruction stage — instantiated in Nikki's collector–translator–author styling journey and in Sky's progression from novice to elder — deepens customizability beyond surface aesthetics into identity relevance, aligning the avatar with the consumer's current self-narrative.

P4: Culturally grounded emotional narrative increases engagement, particularly among consumers who share the cultural frame, by activating cultural self-view and identity confidence. Each case grounds its emotional narrative in a concrete cultural frame — Nikki in an East Asian styling culture in which dress, not combat, resolves conflict; Animal Crossing in a Japanese aesthetics of slow care and seasonality; Sky in a universalist grammar of giving — and consumers who share the frame respond with recognition rather than novelty. Because such structures are legible as human themes beyond their origin culture, culturally grounded narrative may also travel, carrying cultural meaning to global consumers of digital fashion.

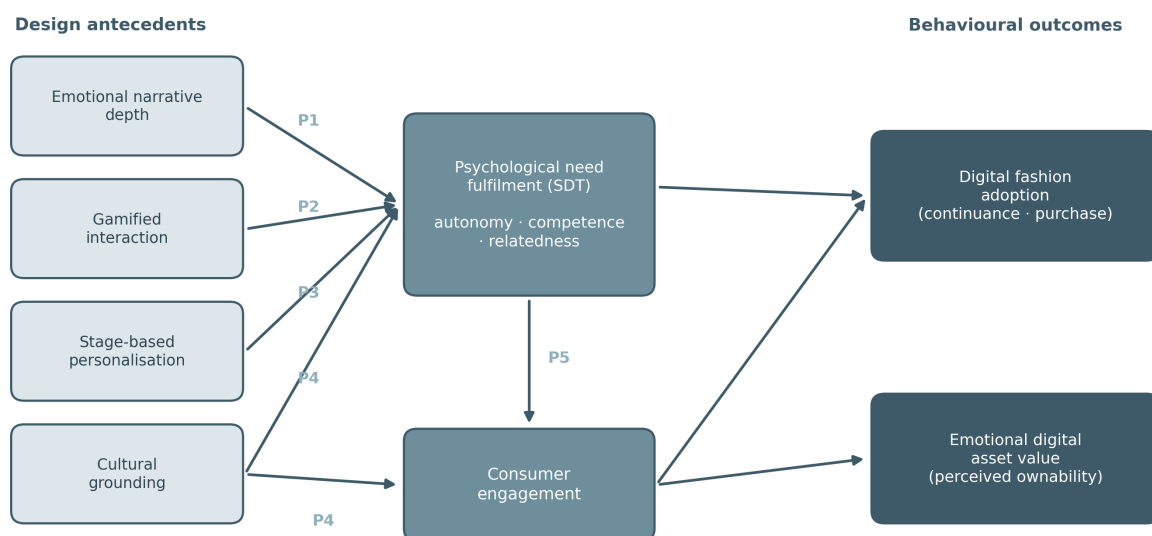


Figure 2. The Emotion-Driven Gamified Digital Fashion (EDGDF) framework

P5: Psychological need fulfilment increases consumer engagement, which in turn drives (a) digital fashion adoption — continuance intention and purchase intention — and (b) the perceived ownability and value of emotional digital assets. Narratively rich digital garments that consumers have personally unlocked, personalised, and worn are candidates to be kept, displayed, and traded as meaningful possessions rather than disposable content, suggesting that emotional narrative may shift how value is distributed across the DF–NF spectrum.

Table 1. Mapping the three cases onto the EDGDF framework

| Case design element                                                                                                           | Framework construct         | Key theoretical anchors                                        |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------------------------------------|
| Emotion-first pipelines: Sky designed backwards from wonder, companionship, and gratitude; garments as instruments of feeling | Emotional narrative depth   | Extended self; narrative processing; cultural meaning transfer |
| Structural-metaphor mechanics: Animal Crossing's slow tailoring and player-authored custom designs as care made wearable      | Gamified interaction        | Gamification need satisfaction; VR fashion app research        |
| Stage-based identity models: Nikki's stylist journey (collector–translator–author); Sky's novice-to-elder progression         | Stage-based personalisation | Customizability; avatar personalisation; self-congruence       |
| Culturally grounded emotional structures across US, Chinese, and Japanese origins                                             | Cultural grounding          | Self-construal; ethnic-inspired design consumption             |
| Emotional digital assets: capes, ability outfits, and tradable design codes kept, displayed, and circulated                   | Emotional digital assets    | DF/NF distinction; digital extended self                       |

## 5. Discussion

### 5.1. Theoretical implications

The EDGDF framework contributes to fashion-technology research in three ways. First, it extends self-determination-based accounts of digital fashion and gamified fashion experiences by adding emotional narrative as a design antecedent: need fulfilment is retained as the motivational engine, but the framework specifies one systematic way in which the content of an experience — not only its mechanics — can be engineered to activate autonomy, competence, and relatedness. Second, it adds an affective dimension to the DF/NF distinction: if emotionally meaningful digital garments come to be perceived as ownable possessions, emotional narrative may be a mechanism that moves digital fashion along the spectrum from disposable content toward valued digital asset. Third, it brings culture explicitly into fashion-technology theorising: by treating culturally specific emotional structures as design material, the framework connects the interdependent-self and ethnic-inspired-design literatures to metaverse consumption.

## 5.2. Managerial implications

For fashion brands, the framework suggests that digital fashion strategy should invest in emotional narrative as seriously as in rendering quality: a digital garment with a story the consumer recognises as their own may outperform a visually superior but meaningless one. For game-industry collaborations, structural metaphors offer a concrete design vocabulary for making fashion gameplay emotionally consequential rather than cosmetic. For designers and platforms, stage-based personalisation implies segmenting digital fashion offerings by consumers' psychological states, not only demographics. Finally, for the Chinese fashion and cultural sectors, the framework identifies a pathway for cultural communication: culturally grounded emotional narratives, encoded in digital fashion and experienced through play, can carry Chinese cultural meaning to global consumers in an experiential rather than declarative register — a form of cultural output consistent with the global circulation of Chinese game and fashion content.

## 5.3. Limitations and future research

This paper is conceptual, and its propositions await empirical testing. Survey-based studies could validate the proposed effects using established need-fulfilment and engagement scales; experiments could manipulate narrative depth and structural-metaphor mechanics; and social listening of the kind used to distinguish DF from NF could test whether consumers spontaneously attach emotional and ownership language to narrative-rich digital fashion. The cases are analysed from published documentation rather than proprietary design records, and they are cases of success; comparative analysis of failed or rejected emotional designs would sharpen the framework's boundary conditions. Future work should also examine boundary conditions — for instance, when emotional narrative risks feeling manipulative — and how emotional digital assets behave in secondary markets.

## 6. Conclusion

Digital fashion research has explained what digital garments are and which attributes make them adoptable, but has said less about what makes them meaningful. This paper has argued that emotional narrative is a designable antecedent of consumer engagement in gamified digital fashion, and has specified the Emotion-Driven Gamified Digital Fashion framework: emotionally deep, culturally grounded narrative, delivered through structural-metaphor gameplay and stage-based personalisation, fulfils the needs for autonomy, competence, and relatedness, driving engagement, digital fashion adoption, and the value of emotional digital assets. Sky, Nikki, and Animal Crossing demonstrate that such pipelines already operate at global scale — that emotion can be translated into forms that are wearable, playable, and worth keeping. For an industry searching for the soul of digital fashion, emotion may be the interface it has been looking for.

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