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Research on the Innovative Path and Value Shaping of Product Design under the Influence of New Media

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Abstract: As a composite technical field of interaction, communication and creative generation, new media is reconfiguring the logical structure and value expression path of product design. Products are no longer single-function objects but mediated, emotional and narrative experience touchpoints. Under the collaborative effect of emerging toolchains such as AIGC, AR/VR, social platforms and data-driven approaches, the design process is becoming increasingly intelligent, user perception scenarios are gradually becoming immersive, and the communication mechanism is shifting towards platform discourse orientation. Personalized expression has become a new hub for brands to connect with users. Design has shifted from "creation" to "generating meaning", with its cultural dimension, emotional value and social impact all rising simultaneously, constituting an innovative paradigm for product design oriented towards the future.

The rise of new media has not merely altered the path of information dissemination; it is also deeply reshaping the intrinsic logic of design and the way users perceive it. Product design is moving away from the single-dimensional logic of physical carrying and instead generating a new expression system centered on algorithms, emotions, content, and communities. In the intersection of platform ecosystem traction, visual culture evolution and user role transformation, products have become narrative media, emotional containers and identity symbols. Designers are no longer "single creators", but rather guides in building co-creation mechanisms. Users are no longer "recipients", but drivers of the value chain. Facing the trends of intelligent tools, immersive scenarios and topicized communication, product design is entering the deep water zone of media convergence and value reconstruction.

1. The Transformation of Product Design Paradigms under the Influence of New Media

1.1 The shift in design logic from static materialization to dynamic perception

New media has broken the design logic of traditional products that are "static, closed and presented in one go", shaping products into "dynamic communication fields" that can be perceived, decoded and interacted with[1]. In this context, products are not only the carriers of physical functions but also the composite nodes for information flow, visual symbols and behavioral interaction. Especially in the context of digital display, mobile terminal dissemination and

multimodal perception, the design language of products tends to be adjustable, responsive and capable of multi-scenario migration, building an expression system with "media-like" characteristics. Packaging is no longer the "terminal shell", but the "content preview". Modeling is no longer a "static aesthetic", but a "starting point for dynamic experience". This prompts designers to shift from a single function-oriented approach to a multi-focus on "visual-experience-communication", and the boundaries of design are jointly driven and evolved by technology, context and culture. The product form has transformed from a "manufactured object" to an "interactive carrier", forming a new design cognitive structure driven by media.

1.2 The reorganization of the design ecosystem from one-way output to user co-creation

The traditional design paradigm emphasizes the linear path of "creator - product - consumer", while the new media environment has completely rewritten this one-dimensional production relationship. Social platforms, content generation tools (such as AIGC), community co-creation mechanisms, etc., enable users to no longer be passive recipients of design results, but active participants, disseminators, and even co-creators[2]. This transformation has brought about two levels of structural reorganization: First, the design process has shifted from a "closed-loop internal drive" to a dynamic ecosystem of "external trigger - feedback drive - content evolution". Secondly, the product is endowed with the logic of "open interface" during the formation stage, and participation channels are reserved. User behavior data, emotional preferences, and social interactions have become the core input variables for design optimization, driving the rapid rise of new models such as "crowdsourcing design" and "co-creation and collaboration". Against this backdrop, the value of a product is no longer solely determined by its functionality and aesthetics, but is shaped by the "participation, sharing and cultural belonging" it can evoke, thus forming a production consensus that "design is collaboration".

2. Innovative Paths for Product Design under the Influence of New Media

2.1 AIGC-driven intelligent reconstruction of creative generation and design processes

Generative artificial intelligence technology is reconfiguring the creative generation logic of product design, especially in the early stages of image conception and style exploration in design, and has become a practical and operational efficiency engine. Image generation models represented by Midjourney and Firefly can generate multiple versions of high-quality images based on the Prompt keywords input by designers, and can be directly applied to scenarios such as packaging covers, illustration backgrounds, and styling sketches. For instance, when developing the packaging for a plant essential oil skincare product, designers can input the command "minimalist style + light green tone + plant texture + fresh feel", generating over ten sets of cover drafts in a short time. Then, they can screen them based on visual dimensions such as structural proportion, color conflict, and element distribution, and extract visual features through a manual re-selection mechanism. It will then be handed over to the design team for manual integration and reinterpretation. At the level of image-to-image functionality, designers can also upload the brand's existing LOGO system. Based on this, the command model can perform semantic style transfer to achieve structural reorganization of the old logo or core packaging elements without having to create from scratch. Multiple platforms support iterative input, meaning that designers make local revisions or fine-tuning the structure based on the initial generation, achieving a three-stage closed-loop process of Prompt statement - visual sketch - style fine-tuning. AIGC can also assist in generating structural proposals. For instance, in the modeling of home appliance product shells, designers can input parameters such as size, material, and functional scenarios based on product attributes to generate realistic

renderings, which are used to simulate material performance and lighting effects, reducing the initial modeling trial-and-error costs. In addition, in the team collaboration process, AIGC can be used in the early composition proposal stage to jointly determine the keyword direction with data insight personnel. The algorithm generates a draft visual trend chart, which is then voted and screened by the design decision-making team. Finally, it is handed over to the designers for refinement and implementation, thus completing the closed loop of the chain between "data - creativity - solution". The above-mentioned path has been widely applied in the design teams of fast-moving consumer goods brands, cultural and creative enterprises, and e-commerce platforms, becoming a key tool cluster for building a high-frequency output mechanism[3].

2.2 AR/VR builds immersive interactive experiences and product perception scenarios

Augmented reality (AR) and virtual reality (VR) technologies are increasingly being integrated into product design processes to expand users' sensory input and immersive experience. On the AR path, the design team usually selects development tools such as 8thWall or ZapWorks to create web-based immersive experiences based on image recognition or spatial anchor point mechanisms. First, they establish the recognition points of the packaging image through two-dimensional graphics or three-dimensional models and upload them to the platform for cloud modeling and binding. During this process, designers need to complete basic modeling, configure the trigger logic of interactive buttons, implant animation effects, synthesize user navigation voices, and conduct logical node arrangement and trigger path tests in the visual programming interface. Eventually, they generate interactive content with URL calls. Take cultural and creative ice cream as an example. AR packaging cards can be bound to character image models and dubbing scripts. When users scan the code, dynamic character introductions and product cultural backgrounds will automatically appear. Scripts and actions are uniformly scheduled through the platform's built-in tools such as the Timeline editor, facilitating cross-platform adaptation. On the VR path, the construction of virtual exhibition halls mostly uses Unity or Unreal Engine. The development team conducts modular space design according to the product usage scenarios, sets roaming paths, hot information areas, and viewing Angle limit scopes, and deploys controller operation or gesture recognition plugins, such as SteamVR or Meta Quest SDK.To ensure that users can complete the entire experience seamlessly across different platforms, the system should be optimized for cross-platform compatibility.VR is particularly prominent in the display of medium and large-sized products such as clothing, furniture, and automobiles. Users can switch materials, structures, or colors in real time in a 360-degree panoramic environment, while designers need to complete front-end scene modeling, back-end logic programming, and interface deployment and configuration. During the deployment stage, AR/VR content is often embedded into brand mini-programs, independent H5 pages or third-party platform entrances, facilitating seamless connection with product packaging, online shopping guidance, and in-store interaction. Entry activation is achieved through scanning codes, image recognition or sensor guidance, forming an operation chain from "physical packaging recognition" to "virtual content linkage". If the product involves multi-person collaborative browsing or virtual interaction, voice communication plugins and real-time status synchronization mechanisms can also be added to enhance immersion and collaboration efficiency.

2.3 Embedded dissemination on social platforms promotes the topicization of design content

In the information dissemination structure dominated by social media, product design is no longer confined to the integration of functionality and aesthetics, but has gradually been embedded in the platform's dissemination mechanism itself, shifting towards the content logic of "design as a

topic". In actual operation, the design team needs to reverse analyze the communication characteristics from the platform's content ecosystem, and formulate visual trigger points and communication strategies around visual symbols, emotional touchpoints and user interaction behaviors. You can consider Xiaohongshu and Douyin as examples. These platforms prefer content forms that are "topicality + sense of participation + image narrative". Therefore, during the packaging and product appearance design stages, designers need to get involved in the pre-planning of dissemination in advance, including preset "screenshotable dissemination blocks" (such as minimalist illustrations, symmetrical composition, and interesting contrasts). "Social media copywriting placement" (such as personified labels on packaging, funny text, and topic-guiding sentences), as well as "multi-dimensional interactive touchpoints" (such as scanning codes to enter user review walls, linked filters, etc.). When designing the bottle packaging, they actively use Internet buzzwords to categorize them, such as "internal consumption type office worker water", "emo special Water", "socializing type social anxiety water", etc. Combined with peelable sticker label structures and limited edition IP collaboration patterns, when users open them, it becomes a "photo sharing event", and the platform content is an extension of the design. This type of design is usually carried out in conjunction with KOC seeding tasks and hot topic challenges. At the very beginning of visual content creation, the three elements of "short video dissemination storyboards", "script guiding phrases", and "blogger interaction scripts" are taken into consideration. The design team will embed the "content structure" into the design prototype review process. For instance, they will select the packaging version that is "most likely to trigger platform interaction" through a voting mechanism and complete the dynamic visual test of the supporting content before production. In addition, the timeline of hot topics, festival and solar term nodes, and the rhythm of IP collaborations have also been incorporated into the design schedule to ensure that the product appearance content is updated in sync with the platform content matrix[4].

2.4 User profiling drives personalized customization and situational expression strategies

Against the backdrop of product design gradually shifting from "unification" to "personalization", the user profiling system has become an important underlying logic driving customized design. In the design process, the platform usually builds behavioral portraits and interest models based on dimensions such as users' browsing preferences, purchasing behaviors, interaction frequencies, and content tags, and hierarchically outputs users as visual decision-making bases through data management platforms (such as CDP systems). The design team sets product element variable items based on data tags, including packaging color, graphic style, copywriting language, structural modules, etc., and then conducts visual design reconstruction in combination with front-end configurable components. For instance, in the custom stationery products launched on e-commerce platforms, once users select their style preferences of "retro", "neutral", or "minimalist", the system will automatically match three sets of cover templates and provide functions such as text embedding, decorative symbol selection, and color adjustment. After users operate, the finished product images will be generated in real time. Clicking "Confirm" will generate a custom order. The design backend is equipped with a mechanism for the connection between template generation logic and product output parameters, achieving seamless integration among the design front-end, algorithm middleware, and production back-end. In more advanced applications, some brands have introduced AIGC capabilities, directly translating user-input keywords into image content or copy structure. For instance, when a user inputs the three words "hope, Light, spring" on a custom greeting card platform, the system calls the generation model to generate a set of illustrations and poetic copy with corresponding emotional styles. Designers can automatically generate PDF formats or print out specifications after review in the background, simplifying the path between creativity and

implementation. In addition, to enhance the sense of context in the customized experience, designers will also set a three-dimensional reference axis of "time point + cultural scene + user identity", such as combining "festival nodes + family users" and "seasonal change points + white-collar women" to generate multiple sets of customized recommendation schemes, and dynamically adjust the display logic of the customized menu in combination with the content trends of short-video platforms. The system should realize a continuous chain of expression, from data acquisition to scene translation.

3. Analysis of Value Shaping in Product Design under the Influence of New Media

3.1 Media embedding facilitates the reconstruction of brand cultural value

After the intervention of new media in the design system, products are no longer merely carriers of brand culture, but have become communication nodes for the generation and reconstruction of culture. Through the symbolic interpretation of packaging visual elements, designers encode cultural information such as regional, ethnic, and traditional symbols into the product's appearance, endowing it with a clear cultural stance and identity orientation. For instance, by using illustration techniques to recreate intangible cultural heritage craftsmanship, folk elements and local stories, the dormant cultural images can be awakened. And through the narrative spread on social media, these designs can become touchpoints that evoke users' cultural resonance and sense of belonging. In this mechanism, the product serves as the guide of cultural narrative, while users become the active participants in cultural expression. The cultural dimension constructed by a brand is no longer a one-way indoctrination. Instead, it is constantly activated, translated and reorganized through the "cultural interface" of products in a media environment that is "transmissible - shareable - identifiable", thereby building a dynamic cultural co-creation value system[5].

3.2 Interactive experience enhances the emotional value stickiness of users

In the high-frequency interactive field constructed by new media, what product design carries is no longer merely physical functions, but an emotional guidance mechanism. The interaction link is systematically embedded in the design logic, prompting users to constantly trigger emotional fluctuations and emotional connections during the process of using, browsing and sharing. When designers plan the product structure, they guide users to complete the emotional binding with the product through the process of "participation - response - re-participation" by preset feedback mechanisms, personalized response interfaces or immersive participation scenarios. For instance, the dialogue feedback, situational guidance or ritualistic Settings of characters in AR packaging all contribute to generating highly sticky perceptual paths. Products are gradually becoming medium objects for users to express emotions, build identities and maintain social relationships, possessing perceptible, memorable and accumulative emotional values. The formation mechanism of this sticky value is based on the extensibility and repetitiveness of the experience chain rather than the short-term satisfaction generated by one-time consumption behavior.

3.3 Design visualization promotes the re-recognition of social values

In the digital communication ecosystem, product design is increasingly endowed with the visual expression function of social issues, becoming a carrier of value positions and a symbolic response to social situations. Design language is no longer merely a choice of form or aesthetics, but rather a path of expression that actively responds to macro demands such as environmental sustainability, cultural diversity, and public issues. Designers embed concepts such as gender awareness,

ecological protection, and local identity into the product symbol system through image narrative, interactive installations, and discourse strategies, making the product a "media label" for users to express their social attitudes. When users purchase or use it, they also complete consenusion-based participation in this position, thereby expanding the public influence radius of the design. For instance, the design language of recyclable packaging and the visual system of public welfare co-branded products both stimulate public awareness of issues through visual operations, break the functional boundaries of traditional design that only serve commercial and aesthetic purposes, and endow products with higher-dimensional social participation value.

4. Conclusion

Product design with the in-depth participation of new media has long broken through the traditional "form-use" logic and evolved into a composite mechanism that integrates algorithmic generation, interactive experience, platform dissemination and personalized expression. Design is no longer the shaping of objects, but the dynamic arrangement of relationships, situations and cognition. When the medium becomes the interface and the user becomes the co-creator, the product also becomes the generation field of cultural significance and social value. Future design should continuously address the tension between technological evolution and value translation, seek flexible structures between creativity and context, and drive products from information symbols to the deep construction of recognition mechanisms.

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