

Beyond Fragmentation: An Integrated Framework of Remake Design Theory for Sustainable Fashion

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Abstract: *Against the backdrop of a global environmental crisis, the fashion industry faces profound sustainability challenges. Remake fashion has emerged as a key solution, yet its theoretical research remains fragmented. Existing theories often focus on singular dimensions, such as material-centric (e.g., Circular Economy), socio-cultural-centric (e.g., Slow Fashion), or business & practice-centric (e.g., Participatory Design), lacking an integrated practical framework. This paper aims to fill this theoretical gap by systematically constructing and arguing for the Remake Design Theory. Through a critical review of existing theories, this study proposes a framework composed of three core pillars: (1) Remake Culture as the philosophical foundation and aesthetic driver; (2) the Remake Design Method as a structured innovation pathway, which includes a four-stage design process and five core principles; and (3) a Business Model as the market vehicle, emphasizing customization and customer participation. The contribution of this theory is its transcendence of the partiality of existing theories. It provides a complete action roadmap from cultural concept and design execution to commercial implementation. Furthermore, it offers differentiated practical guidelines for independent designers, niche Remake brands, and mainstream enterprises, providing a solution with both theoretical depth and practical applicability to advance Remake fashion from a niche practice to a sustainable industrial ecosystem.*

Keywords: Remake Design Theory, Sustainable Fashion, Design Methodology, Business Model

1. Introduction

Against the backdrop of an increasingly severe global environmental crisis, the fashion industry, as the world's second-largest polluter, is facing profound sustainability challenges (Woodside & Fine, 2019). Its linear economic model, characterized by take-make-use-dispose, not only contributes to about 10% of global carbon emissions but also causes staggering resource waste and environmental pollution (Caldera et al., 2022; Huang, 2022). Driven by the fast fashion model, overproduction and overconsumption lead to approximately 92 million tons of clothing being discarded globally each year (Sisodia & Parmar, 2022), resulting in immense economic losses and environmental burdens.

In this context, Remake Fashion has emerged as a key solution. From an environmental value perspective, it effectively prevents materials from entering landfills through the transformation and reuse of discarded clothing, thereby reducing resource waste and conserving natural

resources. It is a direct response and improvement to the current unsustainable model (Colucci & Vecchi, 2024; O'Donnell & Pranger, 2020). From a cultural value perspective, Remake is not just the reuse of materials but also an aesthetic exploration that carries emotions and stories. It extends the life and soul of old items, inspires creativity, and has gradually evolved from a handicraft technique into a design philosophy driven by vintage and second-hand cultural trends, increasingly becoming a part of popular culture (Xue & Huang, 2023).

Although Remake practices are increasingly common and receiving widespread attention, theoretical research on Remake design remains in a fragmented state. A systematic review of existing literature reveals that related research is generally scattered and lacks a systematic framework (Paras et al., 2018). Existing theories often focus on a single dimension. For example, research oriented towards the circular economy emphasizes supply chains, materials, and recycling processes (Caldera et al., 2022), while Slow Fashion theory focuses on culture, consumer ethics, and extending product lifecycles (Jung & Jin, 2014). However, few theories systematically integrate cultural roots, specific design methodologies, and viable business models. Current research mostly remains at a subjective and descriptive level, lacking depth and objectivity. It struggles to provide satisfactory answers to core questions such as "What culture do these design products express?" and "How is their design transformation achieved?" Therefore, academia urgently needs a more comprehensive theoretical framework.

This paper aims to systematically construct and argue for a Remake Design Theory framework. The article will first elaborate on the theory-building methodology adopted, which centers on comparative analysis. It follows a unique path of systematic review—comparative analysis—integrative construction, laying a solid methodological foundation for the proposal of the new theory. Subsequently, this study will apply this methodology to conduct a systematic critical review of existing related theories. By classifying these theories into three major camps—Material-centric, Socio-cultural-centric, and Business & Practice-centric—this paper reveals the fragmented nature and core limitations of current research. Building on this, the paper presents its core contribution. The article will fully elaborate the core of the Remake Design Theory, clearly defining its four-stage Design Process, Core Principles, and Key Elements. Following this, the theoretical framework is further translated into a highly operational set of Practical Guidelines, proposing specific application strategies for Independent Designers, Niche Remake Brands, and Mainstream Brands seeking sustainable transformation. Finally, the article will summarize the core arguments of the entire paper, clarify the theoretical and practical significance of this research, and offer an outlook on future research directions.

2. Methodology

This study employs comparative analysis, a critical analytical technique in theory building. Unlike the comparative method (Lijphart, 1971), which aims to explain differences across macro-cases, the comparative analysis in this study focuses on a systematic discernment of existing theoretical streams, aiming to identify theoretical gaps and provide a solid logical starting point for the integration and construction of a new theory (Miles, Huberman, & Saldaña, 2014).

3. Literature Review: A Critical Dialogue for Building a New Theory

To clearly position the academic coordinates and original contribution of the Remake Design Theory, this section will conduct a systematic, thematic, and critical review of existing related theories. Currently, academic discussions surrounding sustainable fashion and Remake

practice have yielded a wealth of results. However, these theoretical perspectives often exhibit a fragmented characteristic, much like the parable of the blind men and the elephant, where each touch upon one aspect of the problem but fails to depict the complete picture. We classify these theories into three main camps: Material-centric theories, Socio-cultural-centric theories, and Business & Practice-centric models. Through a dialogue with these three camps, we will gradually reveal the limitations of existing theoretical frameworks, thereby demonstrating the urgency and necessity of constructing an integrative theory.

3.1 Material-centric Theories

In the early development of sustainable fashion, theories centered on material played a pioneering role. They successfully shifted the attention of academia and industry from the destructive linear economic take-make-dispose model to a closed-loop, regenerative system of material flow. Among them, Upcycling, Cradle to Cradle (C2C), and the macro-framework of the Circular Economy are the three most representative pillars of this camp.

The common contribution of these theories is that they provide the underlying logical framework and technical pathways for the value reclamation of waste. Upcycling, as a core practice, emphasizes the creative process of transforming waste into new products of higher value. The C2C theory, on the other hand, constructs a more magnificent philosophical framework from the very source of design. As shown in Figure 1, its classic butterfly diagram clearly illustrates two parallel circular pathways: one is for product materials to safely return to the natural biosphere as Biological Nutrients, and the other is to circulate infinitely within the industrial system as Technical Nutrients, revolutionarily proposing the waste = food concept (McDonough & Braungart, 2002).

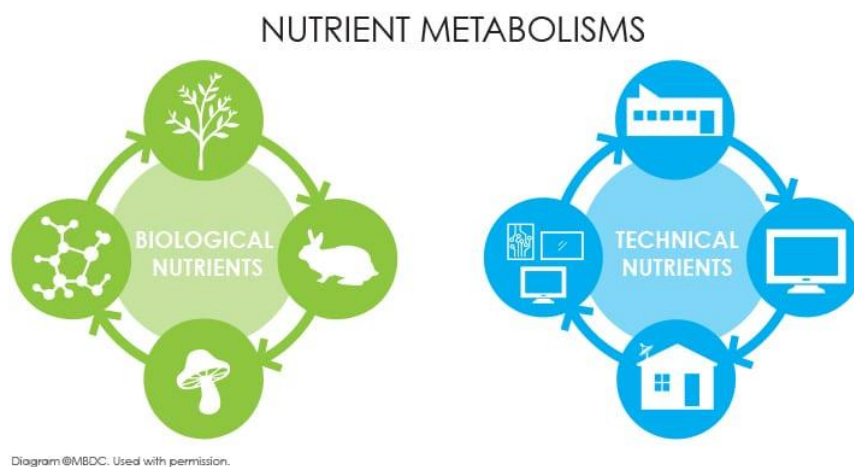


Figure 1: The Cradle to Cradle Theoretical Framework

Building on this foundation, the Circular Economy theory expands it into a complete economic system. As shown in Figure 2, the authoritative circular economy system diagram released by the Ellen MacArthur Foundation further refines this model. It not only includes the technical and biological cycles but also emphasizes multiple inner loops such as maintain/prolong, reuse/redistribute, and remanufacture/refurbish. It aims to eliminate waste from the outset through system design, achieve the continuous utilization of products and materials, and ultimately regenerate natural systems (Ellen MacArthur Foundation, 2017). These three theories together constitute the physical premise upon which Remake fashion is established.

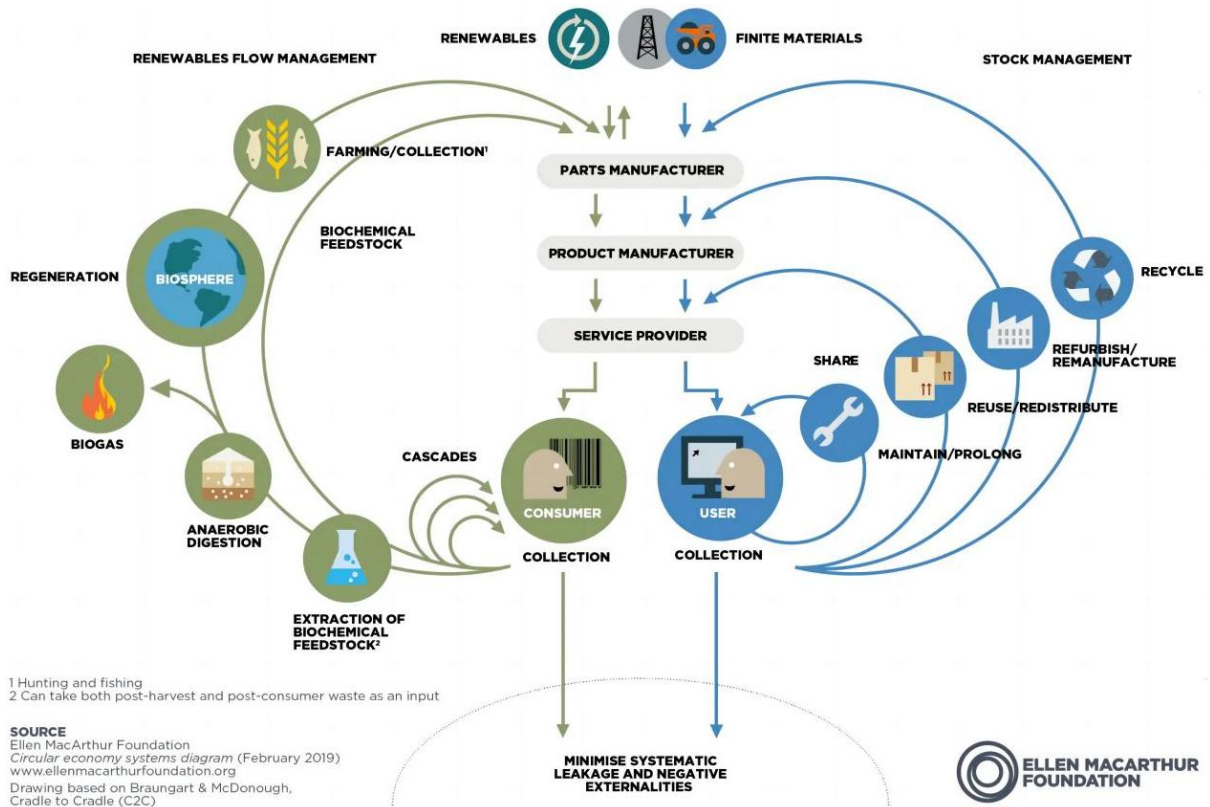


Figure 2: The Circular Economy System Framework Diagram

Upcycling, on the other hand, is typically represented at the operational level through more specific and micro-level flowcharts. As shown in Figure 3, a typical industrial upcycling cycle (using plastic as an example) demonstrates a highly technical workflow: starting from the sorting and material preparation of raw materials, to generating compounds through industrial techniques such as extrusion, and finally processing them into new products (such as foils). This flowchart clearly illustrates the technical logic of converting waste into standardized industrial raw materials, emphasizing process monitoring, validation, and quality control (Friedola Tech, n.d.).

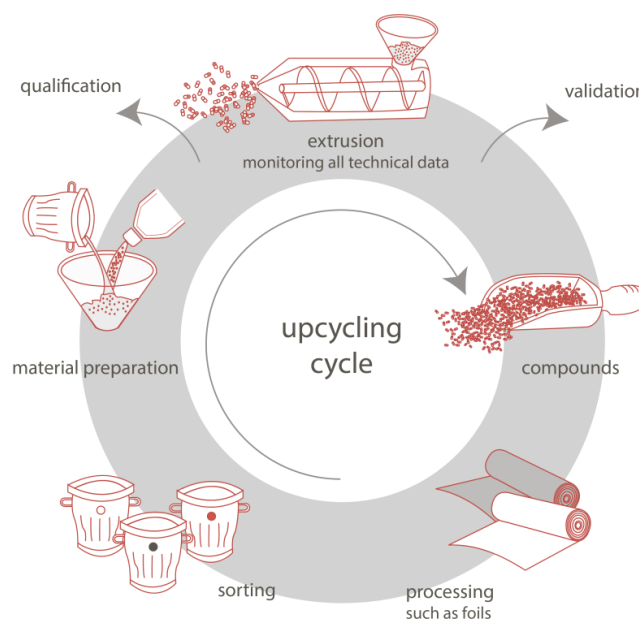


Figure 3: Example of an Industrial Upcycling Cycle

These three theories together constitute the physical premise upon which Remake fashion is established. However, it is precisely this purely technical process, as shown in Figure 3, that reveals the core limitation of Material-centric theories when applied to the fashion domain. In the context of Remake Fashion, the core is not about reducing old garments back into homogenized fiber compounds for industrial reprocessing. Indeed, it is about the aesthetic deconstruction and reconstruction of existing garments—which carry unique histories, cuts, and stories—through creative design intervention. This industrial flowchart is missing the most critical elements of the entire Remake Design Theory: Design Methods and Remake Culture. Therefore, while it serves as a valid example of upcycling, it also conversely proves the need for a more comprehensive theoretical framework that transcends pure material circulation to guide and explain Remake practice in the fashion field.

3.2 Limitations of Material-Centric Theories: The Absence of Cultural and Emotional Dimensions

Although Material-centric theories have made undeniable contributions, their fundamental limitation lies in an underlying tendency toward material reductionism. In these frameworks, clothing is often reduced to its material components—fibers, dyes, accessories—and the core issue is how to technically achieve the most efficient circulation of these physical ingredients. However, this perspective largely overlooks the core attributes of fashion as a cultural product and a social symbol. The value of a Remake garment extends far beyond how much water it saves or carbon emissions it reduces; its true charm is rooted in the narratives, memories, craftsmanship, and aesthetics it embodies (Fletcher, 2013). Treating a Vintage Jacket with the marks of its era as mere recyclable polyester fiber is a profound diminishment of its cultural value. These theories can perfectly explain "how" to close material loops, but they struggle to answer "why" consumers are emotionally drawn to a piece of clothing remade from old items, which may even be more expensive. They reduce complex fashion practices to a logistical problem of material flow, ignoring the cultural drivers, the designer's creative expression, and the consumer's emotional resonance that fuel such practices. Therefore, a theory that only discusses material circulation without addressing cultural Remake is far from sufficient for understanding and guiding Remake Fashion.

3.3 Socio-Cultural-Centric Theories

To compensate for the lack of a humanistic dimension in the aforementioned theories, Socio-cultural-centric theories emerged. Theories in this camp, such as Slow Fashion, Emotional Design, and Craftsmanship, shift the focus from material to people, emphasizing the relationship between fashion and producers, consumers, and the broader society. Slow Fashion, as a direct response to fast fashion, advocates for a more conscious and lasting model of fashion consumption, championing the quality, durability, and the craft and stories behind products (Fletcher, 2010). Emotional Design, particularly its concept of Emotional Durability, further explores how to establish deep and lasting emotional connections between people and objects through design, thereby extending product lifespans and resisting the throwaway culture (Chapman, 2005).

These theoretical concepts are vividly embodied in the practices of contemporary Remake designers. The work created by Japanese designer Yuya Kobayashi through his art project RIFATTO (Instagram: @rifatto_handmade) serves as an excellent example (see Figure 4). In his profile, Kobayashi describes his work as a record and investigation of Remake and fabric processing experiments, which reveals the core of his creation—a research-based, exploratory practice. This experimental spirit is fully expressed in his modern interpretation of the

traditional Japanese Boro style. Boro is a technique born from farmers mending and reinforcing clothing, imbued with an aesthetic of frugality and pragmatism.

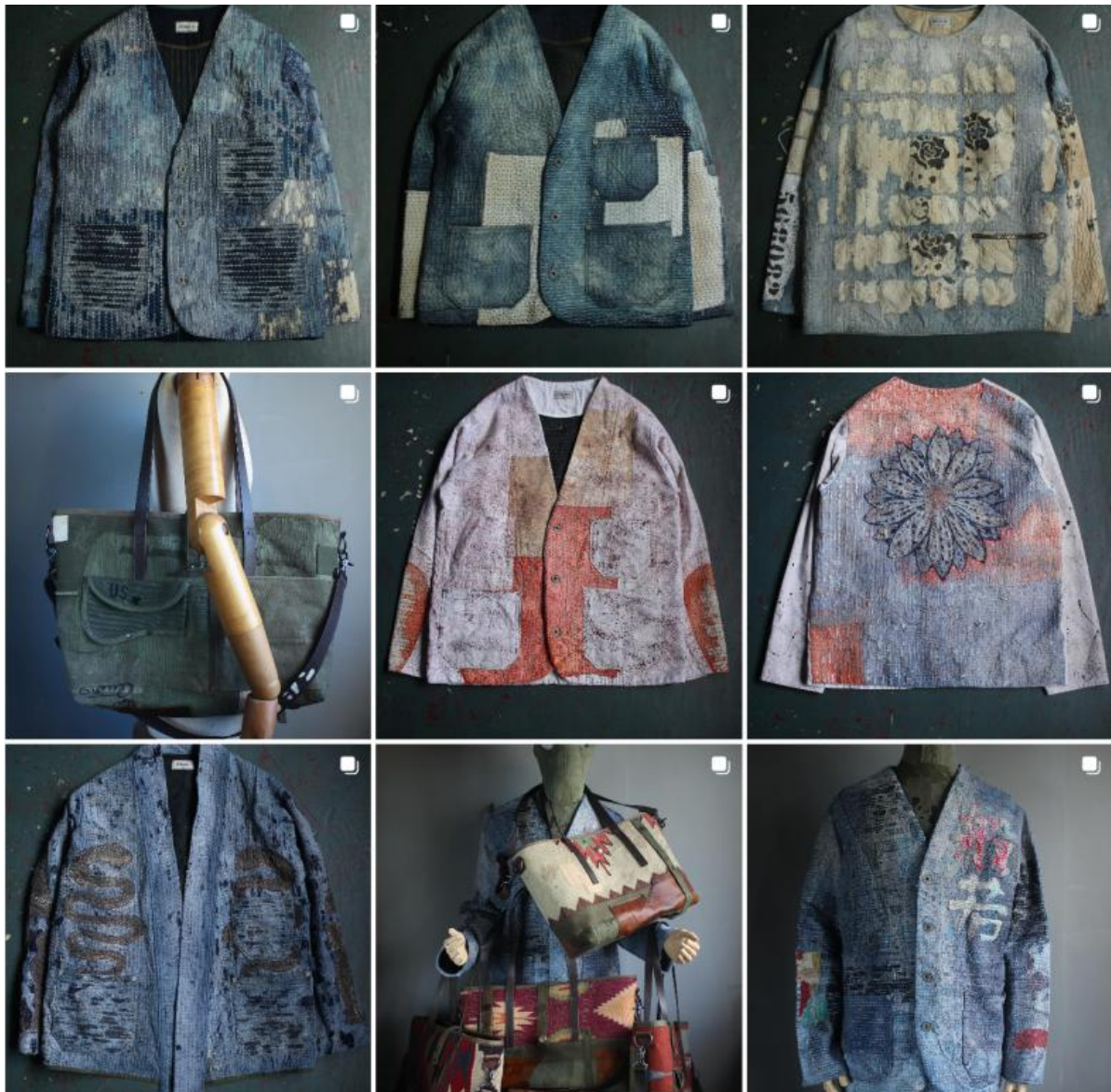


Figure 4: Boro-style Remake works by Yuya Kobayashi (RIFATTO)

In every piece by RIFATTO, the meticulous stitching and complex patchwork craftsmanship demonstrate a strong spirit of artisanship. These visible traces of handwork are not merely decorative but also a form of narrative, materializing the garment's history and the designer's invested time and concentration into tangible textures. This is precisely the practice of Emotional Design: by infusing deep cultural meaning and irreplicable uniqueness, an emotional bond is established between the garment and the wearer that transcends material function, thus imparting it with Emotional Durability. RIFATTO's practice also perfectly interprets the philosophy advocated by Slow Fashion—the value of a garment lies not in its newness, but in the craft, story, and cultural heritage it carries. By integrating traditional art forms into modern design, this approach not only revives traditional skills (Craftsmanship) but also brings new inspiration and possibilities to contemporary fashion. These time-consuming, dedicated, and unique works stand in stark contrast to the mass-produced, homogenized, and disposable products of fast fashion. These Socio-cultural-centric theories greatly enrich the

connotation of sustainable fashion, elevating the discussion to philosophical and ethical heights. They provide the soul for Remake fashion—explaining why Remake practice possesses a cultural appeal and emotional value that transcends the material level. They remind us that a successful Remake garment should not only be environmentally friendly but also be cherished and passed down.

3.4 Limitations of Socio-cultural Theories

While theories in this camp profoundly depict the ideal picture of "why to do it", they appear relatively abstract and vague regarding the specific pathways of "how to do it" and "how to commercialize it". Slow Fashion offers a beautiful vision but does not provide a systematic design process for designers to follow. Emotional Design reveals the importance of the human-object relationship, but how to translate the intangible concept of emotion into a series of operable design principles and techniques remains a significant challenge. These theories excel at critique and advocacy but are lacking in providing structured, replicable practical methodologies.

For a specific Remake designer or brand, what they need is not just conceptual guidance like create products with stories, but more importantly, a complete design system that can guide them from inspiration, material sourcing, deconstruction, and reconstruction to the final product presentation. Furthermore, these theories often carry a sense of idealism and inadequately explore how to translate these noble concepts into sustainable business models within a harsh commercial environment. They depict a desirable destination but fail to provide a clear map to guide practitioners through the jungle of reality.

3.5 Business & Practice-centric Models

The third camp of theories focuses on concrete business models and practical strategies, attempting to address the shortcomings of the aforementioned theories in commercial application. Models such as Co-design/Participatory Design and Mass Customization, for example, provide important insights into how the fashion industry can balance individualized demand with mass production and how to involve consumers in the value creation process (Sanders & Stappers, 2008; Pine, 1993). These models are particularly important for Remake fashion because Remake practice itself is inherently highly customized and personalized. Inviting consumers to participate in the process of remaking old clothes is not only an effective business strategy but also a way to deepen emotional connections.

A typical case of applying participatory design to Remake practice is a handbag redesign project conducted through a collaboration between a Korean company and a renowned fashion school in Seoul (Lee, 2018). As shown in Figure 5, the project established a communication and feedback loop between the school and the company. Students participating in the project first acted as consumer researchers. Through interviews and peer discussions, they conducted in-depth analysis of the brand's deadstock inventory, even simulating actual user scenarios to explore the underlying reasons why these products were not chosen by the market.

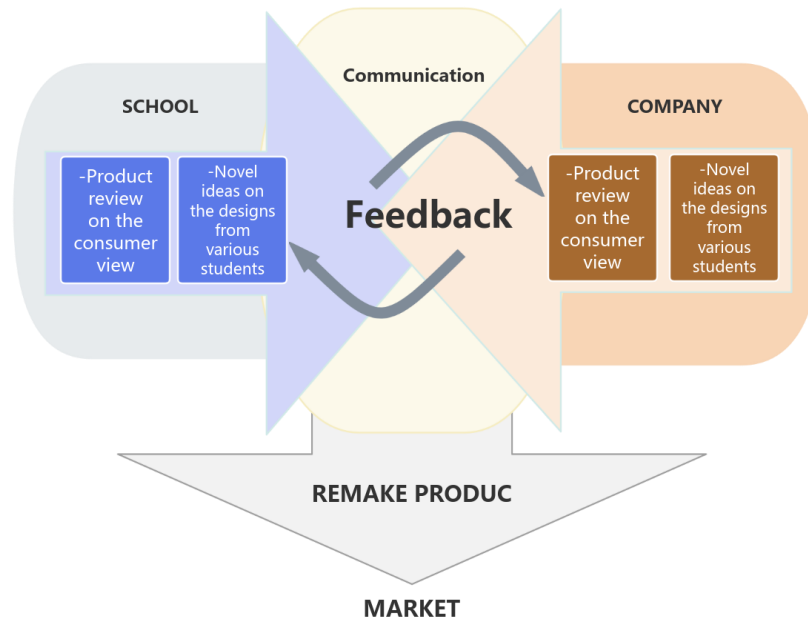


Figure 5: Korean School-Enterprise Cooperation Handbag Remake Design Process

Building on this, the student designers further engaged with real consumers in the Remake decision-making process, gathering valuable information on how to improve the design and give the products new life. Ultimately, they jointly completed the rebirth of these bags. This case vividly demonstrates the essence of participatory design: it breaks the traditional design model of companies working in isolation (behind closed doors), integrating external, diverse perspectives (students and consumers) into the front end of the design process. This process not only brought new inspiration for product innovation but also ensured that the final Remake products could more accurately meet market demands by allowing consumers to participate directly in value co-creation.

3.6 Limitations of Existing Business & Practice-centric Models

Despite the strong practicality of these business models, their fundamental problem lies in their genericity. They are general business strategies applicable to multiple industries, not integrated solutions tailored for Remake fashion. Directly applying the mass customization model to Remake fashion may overlook core constraints such as the non-standard nature of its raw materials and the uniqueness of its craftsmanship. Similarly, if participatory design is not deeply integrated with the specific cultural narratives and design methodologies of Remake fashion, it risks becoming a superficial marketing gimmick. These models address a part of the business model, but they are disconnected from the cultural soul and design skeleton of Remake fashion. They provide a commercial engine, but they fail to explain how this engine should match the unique body (design methods) and navigation system (cultural philosophy) of the Remake fashion vehicle.

In summary, Material-centric theories provide the physical foundation but lack humanistic care, Socio-cultural-centric theories infuse the soul but lack practical pathways, and Business & Practice-centric models build partial commercial frameworks but fail to deeply integrate with the core of the other two. Existing theories are like scattered puzzle pieces—each brilliant on its own, but collectively failing to assemble a complete blueprint that can comprehensively guide Remake fashion practice. It is precisely this structural gap in theory that calls for the birth of a new theoretical framework capable of organically integrating culture, methodology, and business. The Remake Design Theory proposed in this paper is a direct response to this call,

aiming to provide an integrative solution for the field of Remake fashion that possesses both theoretical depth and practical guidance.

4. The Remake Design Theory

The review in the previous section clearly revealed that current academic theories surrounding Remake fashion exhibit a structural fragmentation, ultimately pointing to a clear conclusion: academia urgently needs a new theoretical framework that can organically integrate cultural roots, design methodology, and business practice. In response to this profound academic call, this study systematically constructs and formally proposes the Remake Design Theory. This theory aims to provide a systematic and integrative solution for the field of Remake fashion, one that possesses both theoretical depth and practical guidance, to fill the aforementioned theoretical gap. This section will comprehensively elaborate on the Remake Design Theory.

To systematically expound the Remake Design Theory, its complete theoretical framework is first presented, as shown in Figure 6. This framework diagram intuitively illustrates the core argument of this theory: successful and sustainable Remake fashion innovation does not stem from a breakthrough in a single dimension, but from the dynamic synergy and interaction of three core constituent parts.

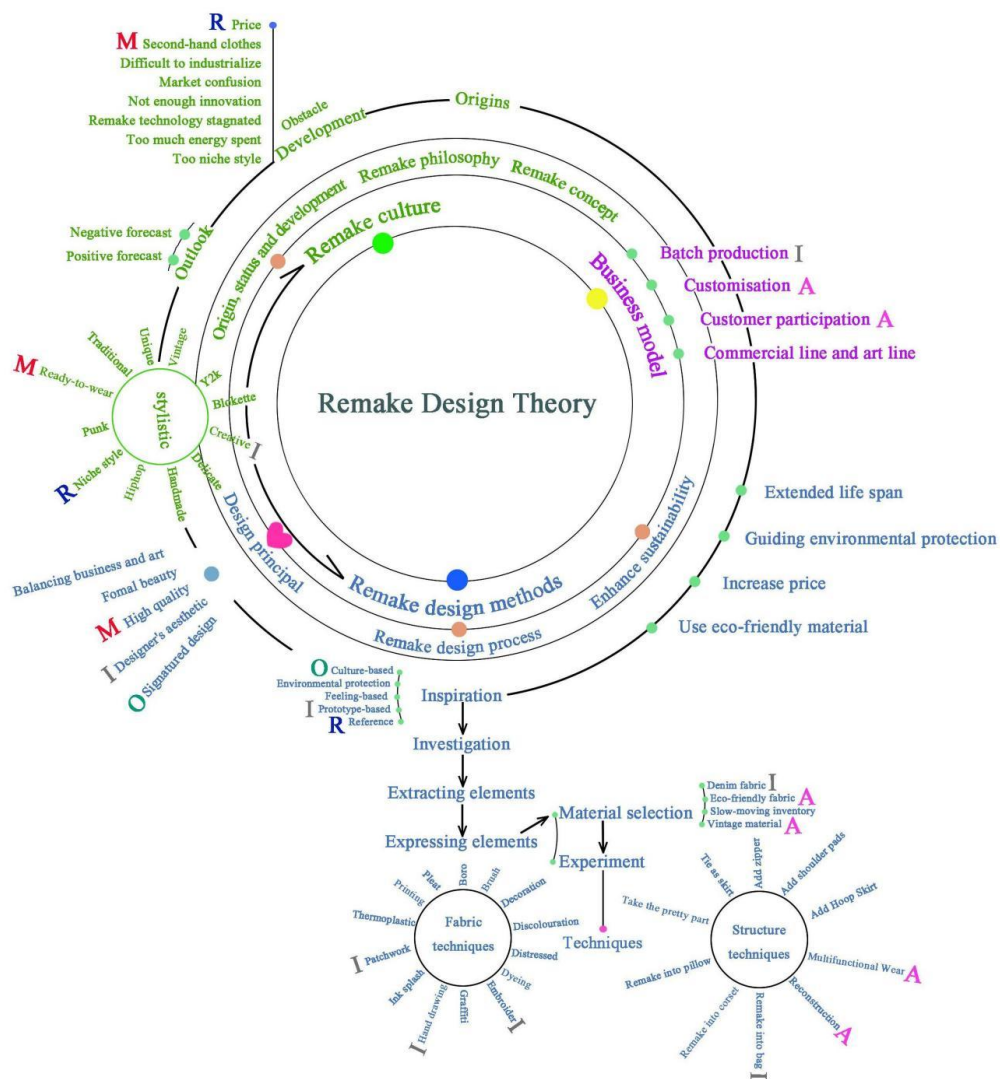


Figure 6: The Remake Design Theory

As shown in the Figure 6, the Remake Design Theory systematically integrates the cultural, methodological, and business dimensions into a cohesive, interdisciplinary framework. For enhanced readability, these three indispensable components are marked in different colors in the diagram: Remake Culture (green part), serving as the theoretical philosophical foundation and aesthetic driver; the Remake Design Method (blue part), serving as the structured innovation pathway; and the Business Model (purple part), serving as the market-oriented vehicle.

The essence of the Remake Design Theory is that these three dimensions do not exist in isolation; rather, they are mutually defining, mutually reinforcing, and indispensable. As the theory posits, culture provides inspiration and value for design, the design method transforms cultural concepts into high-quality products, and the business model ensures the final implementation and sustainable development of both culture and design.

4.1 Remake Culture

In the integrated framework of the Remake Design Theory, Remake Culture constitutes the theory's starting point and philosophical foundation. It systematically answers the Why of Remake practice, infusing design with profound value connotation, emotional resonance, and aesthetic direction, thus directly responding to the critique in Section 2 regarding the lack of a humanistic dimension in pure Material-centric theories. The construction of this dimension is not only based on a systematic review of existing literature but also refines four logically progressive core parts through a grounded theory analysis of designer interviews: Remake Concept, Remake Philosophy, Origin-Status & Development, and Stylistic Expression.

The Remake Concept and Philosophy are the ideological core of this dimension. It defines Remake not merely as a technical means of waste utilization, but as a cultural stance embodying sustainable ideals, a spirit of cherishing objects, personalized expression, and resistance to fast fashion consumerism. This philosophical foundation endows Remake products with an added value that transcends their physical attributes and serves as the emotional cornerstone for building brand narratives and connecting with consumers.

This part is grounded in reality, conducting a critical examination of Remake's developmental trajectory from its origin to its future, rather than just idealistic advocacy. This critical examination reveals a series of complex realistic obstacles: from the consumer side's high price perception and cognitive resistance to second-hand clothing, to the industry side's limitations in production scaling and inconsistent product quality, and further to the market side's innovation bottlenecks and barriers of niche stylization. These deep-seated challenges also lead to a contradictory divergence in the academic and industry discourse on its future prospects: one group is full of confidence due to rising environmental awareness and personalized demand, while the other is pessimistic about overcoming these obstacles in the short term. It is this profound insight into the industry's complexity and this dual-dimensional examination that ensure the Remake Design Theory is a theoretical tool grounded in reality, not a detached ivory tower.

Stylistic Expression is the most intuitive and diverse external manifestation of Remake Culture, transforming abstract cultural concepts into concrete visual language and aesthetic experience. Through grounded coding analysis of the interview texts, this study extracted a vibrant collection of styles. Its scope ranges from styles rooted in tradition, such as handmade, traditional, and vintage, to the rebellious punk style, and further to hip-hop and Y2K styles closely linked to contemporary youth culture. Additionally, it includes styles that emphasize

artistry like creative and unique, a refined style focused on texture, and a ready-to-wearized style that balances market demands.

This diverse stylistic spectrum proves that Remake is not a singular aesthetic paradigm but a dynamic system capable of accommodating and integrating different cultural trends. Each style represents a unique value proposition and consumer identity, collectively forming the rich and fascinating charm of Remake Culture. The Remake Culture dimension, through its systematic elaboration of concept, philosophy, developmental context, and stylistic expression, provides a profound value foundation and a rich aesthetic direction for the entire Remake Design Theory framework. It establishes the soul and purpose of the design. However, for cultural concepts and aesthetic styles to be transformed into tangible, high-quality physical products, they must rely on a systematic, operable design methodology. The next section will detail the theory's second core pillar—the Remake Design Method—revealing how to translate these cultural concepts into concrete, successful Remake works.

4.2 Remake Design Method

If Remake Culture provides the "Why" (the soul and foundation) for the theory, then the Remake Design Method constitutes the "How" (the skeleton and core). As the most content-rich and operational part of the Remake Design Theory, it aims to provide a structured, replicable practical pathway to transform abstract cultural concepts into high-quality, market-appealing physical products. This methodological system is the direct result of systematically coding and refining the practical experiences of dozens of frontline designers, possessing a solid practical foundation. It is primarily composed of three major sections: Design Principles, Design Process, and Enhancing Sustainability.

The Design Principles are the guiding philosophies and value judgment criteria that run through the entire Remake creation process, acting as the "philosophical compass" for designers navigating countless choices. This study extracted five core design principles: first is the overarching Balancing Business and Art to ensure the work's artistic nature and market viability; next is the commitment to the product itself, namely Pursuing Formal Beauty and Ensuring High Quality; finally is the shaping of brand identity by Integrating Designer Aesthetics and ultimately Forming a Signature Design. Adhering to such high-standard, systematic design principles is the cornerstone of Remake fashion's success; their importance is far more critical than any single style or material.

Unlike impromptu creation, successful Remake practice follows an interconnected, systematic path composed of four core steps, ensuring both scientific rigor and creativity in design. This process begins with Inspiration Sources, where the designer captures the creative spark from material stories, cultural phenomena, or specific aesthetics. This is immediately followed by the Research and Analysis stage, validating the inspiration and deepening the design direction through in-depth information gathering. Building on this, the designer Extracts Elements, distilling the most representative core design language from the research findings. Finally, in the Expression Transformation stage, these abstract concepts are materialized into tangible works through two key dimensions: first, through Material Selection, favoring narrative-rich carriers like denim, eco-friendly fabrics, or vintage materials; and second, through Design Experimentation, flexibly applying techniques like deconstruct-reconstruct and multi-functional design at the structural level, while applying rich crafts like Boro, embroidery, and patchwork to the fabric, greatly enhancing the work's visual hierarchy and artistic value.

Enhancing Sustainability is not an independent step but a core objective that permeates all the principles and processes mentioned above. This goal is achieved through multiple strategies: at the product level, by prioritizing deadstock and eco-friendly fabrics in the Material Selection stage and extending its physical lifespan through the High Quality principle and durable craftsmanship; at the value level, by conveying the philosophy of cherishing objects to consumers through the design's inherent storytelling and visible handmade traces, and ultimately enhancing product value with unique design and high-quality craftsmanship, guiding consumers toward less but better sustainable consumption.

The Remake Design Method, through a set of clear design principles, a systematic four-step process, and a consistent sustainability strategy, provides Remake practitioners with a solid, operable skeleton. It strongly demonstrates that Remake is not just an environmental act, but also a rigorous, professional design discipline. However, for a meticulously crafted work to truly realize its social and commercial value, it must enter market circulation. The next section will detail the theory's third core pillar—the Business Model—to explore how to build a sustainable commercial vehicle for these high-value Remake works.

4.3 Business Model

If Remake Culture provides the soul and the Remake Design Method constructs the skeleton, then the Business Model is the flesh and blood, the vehicle that breathes life into the theory and allows it to operate in the real world. It systematically answers the critical questions of For Whom and How to Sustain, directly responding to the critique in Section 2 that some theories are overly idealistic and lack market application pathways. The construction of this dimension is also derived from in-depth analysis of designer interviews and supported by consumer research data. It aims to provide a set of flexible market-oriented strategies adapted to Remake's characteristics, the core of which lies in balancing the product line and deeply tapping into the unique value of customer participation and customization.

Facing the inherent challenge of Remake being difficult to scale production, this theory proposes a dual-track product line balancing strategy. On one hand, the brand can use its one-of-a-kind Art Line to carry its core creative expression and craftsmanship pinnacle, thereby building brand image and consolidating industry status. On the other hand, it can reach a broader consumer base through small-batch, more standardized Commercial Line to ensure the brand's healthy cash flow and market viability. Through this dynamic balance, Remake brands can effectively respond to market demands and achieve commercial sustainability without sacrificing their creative core.

The most core innovation of this theory's business model dimension is its advocacy for transforming the limitations in the Remake production process (such as the non-standard nature of raw materials) into its most unique market advantages. This assertion is strongly supported by this study's empirical analysis—in the Kano model, both Customization and Customer Participation were identified by consumers as highly attractive attributes. Brands can encourage customer participation by opening workshops and other forms, transforming consumers into brand co-creators, thereby enhancing the product's emotional value and brand loyalty. At the same time, by offering customization services, it not only perfectly solves the problem of non-standardized raw materials but also directly responds to the consumer's deep-seated need for personalization and uniqueness, creating a high-value-added experience that the traditional fashion industry cannot rival.

5. Discussion

Following the systematic elaboration in the previous section on the internal composition of the Remake Design Theory, its three core pillars, and their synergistic relationship, this section will shift from the theory's construction to an in-depth discussion of its academic value. This section aims to place the Remake Design Theory within a broader academic context, engaging in a direct, critical dialogue with the existing theories reviewed in Section 3 to highlight its unique integrative advantages and original contributions. The core objective of this section is to specifically demonstrate how the Remake Design Theory effectively responds to and overcomes the structural gaps caused by existing theories respective focus on material, socio-cultural, or business & practice dimensions. To achieve this goal, this section will first conduct a direct comparative analysis to highlight the superiority of the Remake Design Theory as an integrative framework; subsequently, it will systematically elaborate on the theory's theoretical contributions and practical implications at both the academic and industrial levels. Finally, in the spirit of rigorous academic reflection, this section will discuss the limitations of this study and, based on them, propose potential future research directions, aiming to provide valuable references for the subsequent development of the field.

To specifically demonstrate the integrative advantages of the Remake Design Theory compared to existing theories, this section will conduct a direct comparative analysis, systematically showing how it responds to and transcends the theoretical limitations described in Section 3. To make the structure of this theoretical dialogue intuitive and clear, the following table (Table 1) will serve as the core analytical tool for this section. It systematically compares the Remake Design Theory with existing theories across multiple key dimensions, thereby laying the foundation for the in-depth discussion that follows.

Table 1: Comparative Analysis of Remake Design Theory and Existing Theories

Comparative Dimension	Material-centric Theories	Socio-cultural-centric Theories	Business & Practice-centric Models	Remake Design Theory
Core Focus	Material flow, technical efficiency	Consumer ethics, cultural value	Generic business processes	Systematic integration of culture, methods, and business
Design Guidance	Relatively macro, principle-focused	Relatively abstract, concept-focused	Process-focused, lacks design core	Provides a specific, operational four-step design process and principles
Business Consideration	Focuses on supply chain and closed loops	Often idealistic, model is ambiguous	Solves partial problems, but is disconnected from design	Embedded, flexible business model deeply integrated with design culture
Explanatory Power for Remake	Explains material source, but neglects why it is attractive	Explains why it is attractive, but neglects how to do it	Explains how to sell, but neglects the cultural soul	Provides a comprehensive, integrative framework that explains why to do, how to do, and how to sustain

As shown in the Table 1, the Remake Design Theory achieves a fundamental transcendence in its core focus, moving from a single dimension to systematic integration, thereby avoiding the blind men and an elephant limitation of existing theories. The perspectives of existing theories are often reductionist and partial. Material-centric theories, represented by the Circular Economy, undeniably focus on material flow, technical efficiency, and closed-loop systems.

They precisely answer the question of how materials circulate, but their vision is consequently restricted, reducing the complex Remake practice to a physical process problem while ignoring the cultural value and emotional resonance that drive consumption. In contrast, Socio-cultural-centric theories, represented by Slow Fashion, focus on consumer ethics, cultural value, and emotional connection. They profoundly explore why Remake is attractive, but their focus also leaves them struggling to provide concrete, operable design methods and business pathways. Finally, Business & Practice-centric models, represented by Participatory Design, focus on generic business processes and customer interaction. Although they provide market-oriented tools, these tools themselves lack a deep integration with Remake's unique culture and design core.

In contrast, the Remake Design Theory, through the configuration of its three pillars, fundamentally provides a holistic and integrative analytical perspective. It does not simply add the three dimensions together but rather posits that without understanding Remake's cultural roots (e.g., Boro style), it is impossible to formulate a matching design method (e.g., handmade patchwork); and without a systematic design method, any business model will be a river without a source'. It is precisely this emphasis on the interdependence and synergy among culture-method-business that enables the Remake Design Theory to offer an unprecedented, more comprehensive theoretical explanatory power, surpassing the single-focus limitations of existing theories.

On the level of design guidance, the superiority of the Remake Design Theory is particularly prominent, as it directly responds to the common dilemma of ambiguous practical pathways in existing theories. Material-centric theories, represented by the Circular Economy, often provide design guidance that is macro-level and principle-based (e.g., eliminate waste from the source), but they fail to offer a creative process for a single product from inception to completion. Cultural theories, represented by Slow Fashion, while providing profound philosophical concepts (e.g., create products with emotional connection), offer guidance that is too abstract. They fail to provide designers with a replicable, structured operational path, making it difficult to translate concepts into concrete, high-quality design outputs.

The Remake Design Theory, however, successfully operationalizes these abstract concepts through its detailed Remake Design Method pillar. The five core design principles it proposes (e.g., Balancing Business and Art and High Quality) provide designers with a value benchmark for decision-making. More critically, it's clear four-step design process (Inspiration → Research → Extraction → Expression) offers designers a structured creative map from the germination of an idea to the final product presentation. This process is even detailed down to specific Material Selection (e.g., vintage materials and deadstock) and Design Experimentation (e.g., deconstruct-reconstruct, embroidery, and patchwork techniques) within the Expression Transformation stage, providing clear guidance for designers creations. This comprehensive guidance, from macro-concepts to micro-practices, is absent in existing theories. It truly achieves the leap from theory advocacy to practice empowerment, providing designers with concrete, effective tools rather than just directional slogans.

Similarly, in terms of business consideration, the Remake Design Theory also achieves a fundamental transcendence from disconnected to deeply integrated, providing a truly tailored and viable market-based path for Remake practice. Existing theories each have their shortcomings in business consideration. Material-centric theories, while concerned with the supply chain, often have a vision that stops at the closed loop of material recycling, inadequately exploring how to make Remake, as an end-product, achieve commercial success

in the fashion market. Socio-cultural-centric theories, conversely, often carry an idealistic tint; they profoundly articulate the value of Remake but fail to provide clear, realistic pathways to convert these noble concepts into sustainable business value. The fundamental problem with business models like Participatory Design lies in their Genericity. They are like external plug-in generic tools that can be applied to any industry but fail to deeply integrate with Remake's unique cultural value, non-standard raw materials, and special craft processes, easily leading to a mismatch in application.

In stark contrast, the Business Model pillar of the Remake Design Theory is endogenous; it is not an isolated module but rather grows naturally from Remake's culture and design methods. This is perfectly embodied in the theory's advocacy for Customer Participation and Customization as core business strategies. This proposition is not unfounded but is strongly supported by the empirical evidence from this study's consumer research—the Kano analysis results show that both of these are highly attractive attributes. The Remake Design Theory's business model directly transforms the limitation of non-standard raw materials from the design method into the unique market advantage of customization; at the same time, it cashes in on the storytelling and uniqueness from the cultural dimension through the experience of customer participation. This high degree of coherence and deep integration between the business model and the cultural and design core is something other theories have failed to provide. It ensures that the commercial practice of Remake is not a dilution of its cultural soul, but rather an amplification and extension of its value.

6. Conclusion and outlooks

6.1 Main Conclusion

Currently, discussions surrounding Remake fashion are mostly focused on its environmental ethical value and scattered creative practices, having not yet formed a systematic framework that possesses both theoretical depth and practical guidance. The limitation of existing theories is that they often fail to effectively integrate design processes, business strategies, and consumer preferences. This causes practitioners to rely heavily on personal intuition in practice, lacking a scientific basis and replicable paths to success. A significant theoretical gap exists, especially in how to expand Remake from niche creation to an industrially viable model with commercial sustainability.

The Remake Design Theory proposed in this study precisely fills this critical gap. Its core contribution lies in being the first to construct a multi-level, comprehensive practical guide spanning from individual designer creation, niche brand operation, to mainstream enterprise transformation. This theory not only proposes a standardized four-stage design process, placing sensory creativity within a rational analytical framework, but more importantly, it is based on empirical research, internalizing consumer preferences as the core driving force for product strategy and business model innovation. By providing differentiated and highly operational strategies for independent designers, Remake brands, and mainstream enterprises, this theory successfully elevates Remake from a design technique to a complete, self-sustaining business ecosystem. It provides a solid theoretical foundation and a clear action roadmap for promoting the fashion industry's transformation toward a future that is more creative, responsible, and market-resilient.

6.2 Theoretical and Practical Implications

For independent designers and artisans, the Remake Design Theory provides a scientific process to systematize creativity. Designers should follow the four-stage path of Inspiration

Generation, Research & Analysis, Element Extraction, Element Expression to transform intuitive creation into in-depth, logical, systematic design. For example, after being inspired by a batch of old denim jackets, a designer can study the Japanese Boro craft and market trends, extract core elements like patchwork aesthetics and decorative stitching, and finally create a deconstructed jacket that merges tradition and modernity. Concurrently, by balancing art and business, pursuing high-quality craftsmanship, and applying signature techniques popular in the market (like deconstruction and embroidery), designers can effectively build a highly recognizable personal brand, closely integrating environmental concepts with market value.

For fashion brands specializing in Remake, this theory offers a systematic strategy for building market competitiveness. At the product level, brands must satisfy must-be attributes like quality and style, while creating unique appeal through attractive attributes such as vintage aesthetics, customization services, or eco-friendly materials. The core of the business model lies in shifting consumers from passive buyers to active participants, deepening user engagement through experiences like design workshops or co-design projects. Operationally, a dual-track strategy of running an Art Line and a Commercial Line in parallel is recommended. The former elevates the brand's profile with limited-edition handmade series, while the latter ensures cash flow with commercial ready-to-wear collections. This, combined with brand narratives centered on sustainability and craftsmanship, achieves a robust balance between creativity and commerce.

For mainstream fashion brands seeking sustainable transformation, this theory provides a low-risk, high-impact integration roadmap. Brands can start by launching a Remake Capsule Collection using deadstock fabrics or recycled garments as an entry point, testing the waters with market-preferred styles like vintage or multi-functional design. To ensure the transformation is authentic and not merely marketing, brands should integrate the four-stage design process into their core product development system, achieving a design-driven, in-depth change. Furthermore, they can enhance consumer participation by introducing interactive services like garment refurbishment or DIY kits. By leveraging their scale advantages to optimize costs and conducting educational marketing campaigns to eliminate consumer bias against second-hand materials, brands can systematically integrate the Remake concept into their brand, achieving meaningful and scalable sustainable development.

6.3 Future Outlook

Looking ahead, advancing the Remake Design Theory from concept to maturity requires systematic deepening and expansion on multiple levels. First, deep integration with cutting-edge technologies like artificial intelligence, 3D scanning, and blockchain will be a key engine for innovation, aiming to solve the core challenges of scaled production by enhancing design efficiency and supply chain transparency. Building on this, the systematic optimization of the reverse supply chain—by constructing efficient collection and processing systems and developing advanced recycling technologies—is the fundamental guarantee for ensuring Remake transitions from small and beautiful to industrialization. Concurrently, the theory's globalization depends on adaptive research in cross-cultural contexts, requiring in-depth exploration of its adjustment strategies in different cultural spheres to expand into international markets. Finally, the realization of all this still relies on the guidance and incentives of environmental policies, such as Extended Producer Responsibility, and the elevation of Remake into a widely recognized fashion lifestyle through continuous consumer education, thereby jointly constructing a complete ecosystem that supports this model's progression from a niche market to the mainstream.

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Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this study.

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