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Kalina KUKIEŁKO

<https://orcid.org/0000-0002-4256-8871>

University of Szczecin, Poland

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**Contact:** kalina.kukielko@usz.edu.pl

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## Adaptive Fashion. Clothing as a Tool for the Inclusion of People with Disabilities

### Abstract

Based on subject literature and examples drawn from design practice, the article aims to introduce the concept of adaptive fashion, almost absent from Polish popular science discourse and tailoring practice. By analyzing its potential in the context of inclusion, the article demonstrates that adaptive fashion can play a crucial role in integrating people with disabilities, offering them the opportunity for fuller participation in social life. According to WHO data, over a billion people worldwide live with various forms of disability; however, the standard fashion market primarily focuses on the needs of “typical” body types, marginalizing individuals with specific requirements. The lack of tailored clothing can lead to social exclusion and reduced self-esteem, which limits active participation in social and professional life. Adaptive fashion addresses these challenges by providing functional, aesthetically pleasing, and comfortable clothing while allowing users to dress independently (fastening/unfastening, putting on/taking off).

**Keywords:** adaptive fashion, inclusive fashion, inclusion, people with disabilities.

### Introduction

According to the World Health Organization, over one billion people, or approximately 16% of the population, have some form of disability—whether permanent or temporary (WHO, 2023). Clothing is one of the most fundamental

ways of expressing one's individuality and sense of belonging to a group (Simmel, 1980). The typical customer of fashion brands is a representative of the 'standard population,' with a classic body shape (slim, hourglass for women and inverted triangle for men) and a maximum clothing size of 42 or 44 (J.H. Lee, E. Lee, C.H. Lee, J. Huh, J. Kim, 2024). The juxtaposition of these seemingly unrelated facts highlights the existence of a marginalized group of customers in the fashion market—namely, people with various types of disabilities. Although the clothing industry often prides itself on innovation and creating new trends, it still rarely considers the needs of customers whose conventional clothing cannot meet them. (Bhandari, 2023). People whose body shapes do not fit within the 'standards' set by the fashion industry are often forced to choose clothing primarily based on functionality rather than aesthetics. Instead of following fashion trends or personal style, they prioritize comfort and ease of putting on and removing the clothes. As a result, these individuals often forgo wearing the most fashionable or attractive garments in favour of those that meet their specific needs. This issue is significant for many reasons. Firstly, the lack of appropriate clothing can significantly limit the social participation of those affected. The negative consequences may manifest in reduced involvement in community life, a sense of exclusion, and a decrease in self-confidence and self-esteem, leading to a withdrawal from active participation in significant professional and social events—especially when adhering to a specific dress code is required. (Jun, 2024).

On the other hand, an increasingly important aspect of contemporary discourse on inclusivity, equality, and the needs of all members of society is the focus on designing environments, public spaces, and everyday objects to make them accessible to as many people as possible. It also applies to the fashion industry, as reflected in the segment of adaptive fashion, also known as inclusive fashion. This area focuses on designing and creating clothing tailored to the needs of individuals with various types of disabilities. Adaptive fashion aims to provide functional, aesthetic, and comfortable clothing that considers users' requirements and allows them to use it quickly and, most importantly, independently (June 2024).

This article presents the concept of adaptive fashion based on literature and examples drawn from design practice. This topic is almost absent in Polish popular science discourse and local tailoring practice. However, it is worth recognizing, if only due to its potential for addressing the needs and inclusion of people with disabilities.

## **Disability and Fashion**

Although the first attempts at designing in the spirit of adaptive fashion can be traced back to the mid-20th century, it was still virtually absent from the

commercial fashion sector at the beginning of the current century. Adaptive clothing refers to modified or specially designed garments to meet the specific needs of individuals with various types of disabilities or limitations. This type of clothing has been on the market for decades, yet its design is often based on the medical model of disability. This model assumes that disability is an issue whose effects should be minimized as much as possible to enable individuals to participate more fully in society (Twardowski, 2018). In practice, this means that designers working with individuals with disabilities focus more on adapting their functioning to the demands of the surrounding world rather than adapting the environment, including clothing, to their individual and specific needs. (Rana, McBee-Black, Swazan, 2024). For a long time, clothing designed for individuals with disabilities was primarily focused on rehabilitative functions rather than the wearer's appearance. The design and sewing process concentrated mainly on practical aspects of the garments, such as form, functionality, and comfort, often neglecting aesthetics. The main goal was to facilitate daily tasks related to clothing use, such as putting on and taking off, fastening and unfastening, adjusting to body shape, freedom of movement, and selecting appropriate fabrics. Functional and efficiency aspects were prioritized, emphasizing the needs of caregivers who assist with dressing (McBee-Black, 2022). Individuals with mobility limitations, such as those using wheelchairs, blind people, people who are deaf or hard of hearing, or those on the autism spectrum, have had limited options for clothing that meets both their physical and aesthetic needs. This approach limits the potential of adaptive fashion as a functional tool to express the user's personality and identity. True inclusion, meanwhile, should involve creating practical and aesthetically pleasing clothing, allowing individuals with disabilities to fully participate in social life without sacrificing the expression of their individuality and style. Since the mid-1990s, the medical model has increasingly been replaced by the social model of disability, which points out that disability itself is not the 'problem' or 'barrier,' but rather the environment and surroundings that create barriers for individuals with disabilities. Although the process of moving away from the medical model of disability towards the social model is progressing too slowly, there is a growing awareness that removing external barriers—both in physical spaces and in the sector of products and services—creates a supportive and inclusive environment (Cywiński, 2023).

As social media developed and more people openly discussed their experiences with disability in the context of dressing, the need for commercially produced, functional, and fashionable clothing became increasingly apparent. Initially, these were small, specialized brands that created custom clothing or produced limited runs. Today, adaptive fashion is in a phase of rapid development but faces several challenges that require innovative solutions. One of the main issues is ensuring that clothing is affordable for a broad audience. High produc-

tion costs, related to the need for customization and specialized materials, make it generally more expensive than standard clothing. As a result, many individuals with disabilities still have limited access to such products.

## Runway of Dreams and Tommy Hilfiger

A turning point for adaptive fashion in the mainstream fashion industry was the collaboration between the Runway of Dreams Foundation<sup>1</sup> and the Tommy Hilfiger marked brand. In 2016, Mindy Scheier, founder and president of the foundation and the mother of a boy with muscular dystrophy, partnered with this iconic clothing giant, resulting in the first widely available line of adaptive clothing for children—Tommy Adaptive<sup>2</sup>.

The media recognized the launch of this collection as a groundbreaking event that drew the fashion industry's and its customers' attention to the need for adaptive clothing. The collection includes garments with simpler fastenings tailored to the needs of wheelchair users, those with prosthetics, and individuals with sensory sensitivities. The design process was based on in-depth research and consultations with individuals with disabilities, which allowed for developing solutions that genuinely improve their quality of life. Scheier focused her work on this group of customers due to her personal experiences. As the mother of a child for whom dressing independently is very challenging, she encountered difficulties finding stylish and functional clothing for him. She realized that this issue affects not only her son but also many other individuals with disabilities around the world. Leading clothing brands have long ignored the needs of this community, excluding it from their product offerings. Scheier also observed this exclusion in the United States, where individuals with disabilities represent the most significant minority, yet their needs remained unmet for a long time.

To fully understand clients' challenges with various limitations and types of disabilities, Scheier used her fashion design experience to conduct comprehensive research. Her goal was to identify specific issues related to clothing and dressing and persuade the fashion industry to make changes to address this critical, often overlooked group's needs. In her research, Scheier focused on indi-

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<sup>1</sup> The goal of the Runway of Dreams Foundation is to support the inclusion of individuals with disabilities in the fashion and beauty industries by promoting social awareness and encouraging positive change. The foundation's initiatives not only emphasize the value of diversity but also actively challenge existing stereotypes. It pays particular attention to the need for creating products and collections characterized by adaptive and universal design, which allows individuals with disabilities to participate more fully in social and cultural life. <https://www.runwayofdreams.org/> [access: 14.09.2024].

<sup>2</sup> The Polish page for the Tommy Adaptive line: <https://pl.tommy.com/tommy-adaptive> [access: 14.09.2024].

viduals with various disabilities—physical, cognitive, neurological, visual, and auditory. After conducting her research, she realized that most individuals with disabilities, regardless of the type, face similar difficulties in finding suitable clothing and in the dressing process. These challenges included physical and functional aspects of clothing, leading to daily discomfort and frustration. Based on her research findings, Scheier developed three critical innovations in adaptive clothing design to increase the ability to dress independently. These innovations include magnetic closures that eliminate the need for traditional buttons and zippers; adjustable pant legs, sleeves, and waistbands for a perfect fit; and the introduction of additional entry points, such as openings on the sides and back, which significantly enhance the ability to put on and take off clothing independently. Thanks to these innovations, Scheier not only made life easier for many individuals with disabilities but also initiated an essential shift in the perception of fashion as a field that should be accessible and inclusive for everyone, regardless of physical or cognitive limitations (McBee-Black, 2022).

Tommy Hilfiger has continually introduced innovations in its production processes to design and manufacture adaptive clothing. Following the success of the children's line, the offering has also been expanded to include adult models. With the growing social awareness of the need to include individuals with disabilities, other mainstream brands such as Target, Nike, and Zappos have recognized the potential of such initiatives and introduced their adaptive clothing collections. As a result, the adaptive clothing market has become one of the fastest-growing segments in the fashion industry. Although still considered relatively new, it demonstrates tremendous growth potential. Estimates suggest that by 2026, its value could reach around \$400 billion, highlighting the significant impact of adaptive fashion on the entire industry's future (McKinney, Eike, 2023).

## **Adaptive Fashion**

Creating adaptive clothing is thus a global trend in fashion that includes a previously marginalized community. The global fashion market is increasingly recognizing the need to address the everyday challenges faced by individuals with disabilities concerning clothing and to design and produce garments that facilitate independent dressing and undressing while ensuring comfort throughout the day. Clothing should, therefore, be designed to meet the individualized and personalized needs of individuals with disabilities. It should handle varying perspiration levels and be antibacterial, odourless, and resistant to high and low temperatures. Safety is also considered a key aspect in designing such clothing, especially for individuals who use wheelchairs. However, clothing should also support the user on a broader level than merely providing comfort and ease.

Addressing the need for a sense of attractiveness, self-expression, belonging, and social integration is equally important. Therefore, adaptive clothing should be designed to resemble other fashionable garments widely available in stores (McBee-Black, 2022).

Designing clothing for individuals with disabilities requires specialized skills and knowledge. There is a wide range of disabilities, and designers must understand how each affects their clients' clothing needs. It includes, for example, atypical body shapes or the need to remain seated. Cognitive disabilities, in turn, require understanding sensory issues related to materials, seams, or labels. Designing clothing for individuals with disabilities requires specialized skills and knowledge. There is a wide range of disabilities, and designers must understand how each affects their clients' clothing needs. It includes, for example, atypical body shapes or the need to remain seated. Cognitive disabilities, in turn, require understanding sensory issues related to materials, seams, or labels (McKinney, Eike, 2023). One concept explaining why individuals with disabilities are marginalized in mainstream fashion is the suggestion that designers still do not fully understand their needs and expectations. As a result, they often ignore or fail to appreciate the potential for adapting specific designs to meet these requirements.

Furthermore, due to a lack of knowledge about the specific needs of 'non-standard' bodies, they create clothing that can be uncomfortable or difficult to wear (e.g., due to too-short zippers, small buttons, or bulky seams) (Lamb, 2001). It is, therefore, a complex process that depends on three key factors: the designer's approach, the product's purpose, and the end user. Paradoxically, the latter is often overlooked, which can lead to a mismatch between clothing and the actual needs of individuals with disabilities. It highlights that inclusive design requires more than just the intention to create clothing for people with various limitations. This process must include the active involvement of individuals with disabilities, who can provide valuable insights into their actual needs and challenges. In this way, design can become more informed and effective, addressing the real needs of users and creating clothing that genuinely enhances their comfort and functionality in everyday life (June 2024).

One solution to this problem could be incorporating diversity into the educational process for future designers. Design students should be encouraged to develop inclusive ideas that address various body types and consider how different individuals might perceive their clothing designs. It can help them create apparel that is more inclusive and accessible to a broader audience (J. H. Lee, E. Lee, C. H. Lee, J. Huh, J. Kim, 2024). There is a growing demand for fashion design curricula and courses more inclusive of traditionally marginalized groups. Particularly important are those that teach students how to handle the complexities of designing clothing for individuals with disabilities and address needs related to ageing. Several leading academic institutions have significantly changed

their programs in response to this need. For example, New York's Parsons School of Design offers a course in collaboration with the non-profit organization Open Style Lab, which focuses on the needs of individuals with disabilities<sup>3</sup>. An increasing number of people are also questioning existing norms in fashion, leading to a growing interest in addressing the needs of marginalized groups. Diversity, inclusivity, and equality are becoming more frequently discussed in everyday conversations, making it essential to include individuals with disabilities (June 2024).

Different types of disabilities come with different clothing needs, so they should always be approached individually, with empathy and sensitivity. Depending on the user's preferences, clothing can conceal or highlight a disability, supporting the process of self-acceptance and social acceptance. Properly designed and constructed clothing can significantly reduce dependency on others, minimize the risk of pressure sores in bedridden patients, and prevent back and shoulder injuries and skin irritations. Adaptive clothing design employs a range of unique solutions to enhance the wearer's comfort, safety, and independence. These include, among others: (1) Replacing buttons with zippers, Velcro, or magnetic buttons—traditional buttons can pose challenges for individuals with limited manual dexterity. Therefore, adaptive clothing often incorporates modern solutions such as long zippers, Velcro, or magnetic buttons. These innovative fastenings are easier to handle, providing users with greater independence and comfort during daily dressing and undressing; (2) A central back opening to facilitate dressing—specially designed openings in the central back area aim to make the dressing process easier. These openings allow for easier putting on and removing clothing, especially for individuals using wheelchairs or those with limited upper-body mobility. This solution eliminates the need for excessive fabric stretching, significantly improving the comfort and functionality of the clothing; (3) Flat seams to prevent pressure sores and skin irritations—flat seams are used in adaptive clothing to minimize the risk of irritation and abrasions. These seams are gentler on the skin and do not cause discomfort, which is especially important for individuals with sensitive skin or when traditional seams are bothersome or painful for the user; (4) Extended back length to accommodate seated wheelchair users—adaptive clothing often features an extended length at the back. This design prevents the fabric from riding up and exposing the back, significantly improving comfort and aesthetics, as well as providing additional protection and warmth during daily use; (5) Elastic waistband for added comfort and security—elastic inserts in the waistband provide not only a perfect fit but also additional comfort and security. This detail is crucial as it allows for a customized fit to the user's individual needs and facilitates ease of putting on and taking off the clothing; (6) Special seams, fabrics, and fastenings—adaptive

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<sup>3</sup> <https://parsons.edu/openstylelab/course-description/> [access: 14.09.2024].

clothing features carefully selected materials and innovative design solutions, such as these unique elements. These thoughtful details not only enhance the aesthetics of the clothing but also ensure high functionality and comfort. As a result, this clothing supports individuals with various health needs, improving their independence and comfort in daily use (Bhandari, 2023).

Thanks to such innovations, adaptive clothing addresses specific needs, supports a sense of independence and enhances the everyday comfort of individuals with disabilities.

## **Conclusion**

The above considerations show that adaptive fashion extends beyond functionality, comfort, and aesthetics. Its significance in shaping perceptions of individuals with disabilities and promoting equality and integration is invaluable. Adaptive fashion meets aesthetic and practical needs and becomes crucial in building a more open and inclusive world.

One of the most important aspects of adaptive fashion is its ability to raise awareness about the lives of individuals with disabilities. Through its growing presence in fashion shows, advertising campaigns, and photo shoots featuring models with disabilities, adaptive fashion is gaining increasing recognition in the media and popular culture. These initiatives help to break down stereotypes and build a more diverse representation of society, leading to greater acceptance and understanding of people with disabilities. Instead of focusing on their limitations, adaptive fashion highlights the full participation of these individuals in social life, their interests, passions, and unique styles. Adaptive fashion thus becomes a tool for changing social narratives, showing that everyone has the right to self-expression and enjoy fashion, regardless of the shape and ability of their body. As more brands integrate inclusivity into their strategies, consumer awareness of the needs of individuals with disabilities is growing. Adaptive fashion serves an educational role, facilitating an understanding of accessibility and equality in fashion. Incorporating topics related to adaptive fashion into design school curricula will help educate future designers to be aware of the diverse needs of their clients and to create suitable clothing for them.

Adaptive fashion represents a significant step towards a more equitable and balanced world. With continuous innovations, increasing social awareness, and the engagement of the entire fashion industry, we can create a reality where everyone, regardless of their level of ability and specific needs, can feel beautiful, comfortable, and confident in their clothing. It is a vision that inspires and motivates action.

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## **Moda adaptacyjna. Odzież jako narzędzie inkluzji osób z niepełnosprawnościami**

### **Streszczenie**

Artykuł, oparty na literaturze przedmiotu i przykładach zaczerpniętych z praktyki projektowej, ma na celu przybliżenie – niemal nieobecnej w polskim dyskursie popularnonaukowym i powszechnej praktyce krawieckiej – idei mody adaptacyjnej. Analizując jej potencjał w kontekście inkluzji, pokazuje, że może ona odgrywać kluczową rolę w integracji osób z niepełnosprawnościami, dając im szansę na pełniejsze uczestnictwo w życiu społecznym. Według danych WHO ponad miliard osób na świecie żyje z różnego rodzaju niepełnosprawnościami, a mimo to standardowy rynek mody koncentruje się głównie na potrzebach „typowych” sylwetek, marginalizując osoby o specyficznych wymaganiach. Brak dostosowanych ubrań może prowadzić do poczucia wykluczenia społecznego oraz obniżenia samooceny, co ogranicza aktywne uczestnictwo w życiu społecznym i zawodowym. Moda adaptacyjna odpowiada na te wyzwania, oferując ubrania, które są jednocześnie funkcjonalne, estetyczne i wygodne, a przy tym umożliwiają użytkownikom samodzielne ubieranie się (odpinanie/zapinanie, zdejmowanie/zakładanie).

**Słowa kluczowe:** moda adaptacyjna, moda inkluzyjna, inkluzja, osoby z niepełnosprawnościami.