

SHIFTING TO A NARRATIVE OF FASHION FOR ATTUNEMENT

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Abstract

The fashion industry is a major contributor to the ongoing planetary ecological crisis. In response, many brands have begun to address environmental concerns, driven in part by emerging sustainability regulations that call for interventions in material selection, disposal practices, and labour conditions (Regulation (EU) 2024/1781). While these measures are necessary to mitigate the global environmental impact of the fashion system, they remain limited in their capacity to generate a deeper shift in the meanings and functions attributed to fashion by both individuals and the industry. This article reflects on the possibilities that emerge from understanding fashion as embodied practices (Negrin, 2016; Entwistle, 2000; Ruggerone, 2016; Eckersley, 2008). It asks what it would entail to reconceptualize the fashion system as a site that, rather than producing artefacts often critiqued as polluting commodities, cultivates material practices capable of fostering human attunement with the environment. Drawing on theories of affect (Ott, 2017), particularly as applied within fashion studies (van Tienhoven & Smelik, 2021; Ruggerone, 2016; Sampson, 2018; Filippello & Parkins, 2024) the article examines smart textiles as one articulation of fashion for attunement, focusing on the embodied design approach applied by Dutch designer Pauline van Dongen. While this emerging field holds significant potential, it also reveals important limitations, particularly in its predominantly human-centered orientation. This article instead argues for a broader conceptualization of fashion for attunement, inviting to explore its practices as tools to question and re-configure human-environment relational dynamics.

Keywords: *Attunement; Affect; Smart textiles; Body-environment; Fashion practices.*

INTRODUCTION RE-THINKING FASHION IN THE ECOLOGICAL CRISIS

In contemporary discourses on ecological crisis, fashion frequently emerges as one of the principal culprits: a disruptor of ecological processes, contaminating balanced cycles and natural matrices (Geneva Environment Network, 2025).

The industry is estimated to be responsible for approximately 10% of global greenhouse gas emissions, as well as for extensive water overuse and contamination - particularly through microplastics - and for air toxicity.

These figures place fashion under increasing pressure to respond to the environmental consequences of its practices.

As a system largely devoted to the production of commodities often perceived as unnecessary - acquired and discarded in response to transient trends and individual desires - fashion finds itself at a critical juncture, requiring reflection on its role and meaning within a world marked by widening wealth disparities, persistent social injustice, and the depletion of vital resources.

In response, measures adopted by brands and policymakers have largely focused on transforming modes of production.

Strategies such as circular design, recycling systems, zero-waste patternmaking, and the adoption of so-called 'preferred' materials (described by Textile Exchange as "fiber or raw material that delivers consistently reduced impacts and increased benefits

for climate,” 2023) have become central to sustainability agendas (Remy *et al.*, 2016). In 2022, the European Union’s Strategy for Sustainable and Circular Textiles declared that “by 2030 textile products placed on the EU market are long-lived and recyclable, made as much as possible of recycled fibers, free of hazardous substances and produced in respect of social rights and the environment” (European Commission, 2022). While such initiatives are essential for reducing the environmental burden of fashion, they continue to privilege material inputs and production processes, thereby overlooking the cultural dimensions of materials and the relational dynamics through which fashion objects are engaged and made meaningful.

It has been observed that consumers are likely to persist in cycles of acquisition and disposal regardless of garments’ more sustainable attributes (McIntyre, 2019), underscoring the limited transformative capacity of product-centered approaches alone. However, the responsibility to reconfigure patterns of use in response to fashion’s environmental impact cannot be ascribed solely to individual common sense or consumer choice. Rather, it necessitates a broader reorientation of how fashion is understood and practiced.

Drawing on an analysis of how consumers relate to objects as a way of interrogating their relationship to the environment, the contribution engages with theories of affect within fashion studies to highlight the potential of the sensorial dimensions of fashion practices.

Case studies from the emerging design field of smart textiles illustrate how fashion can become a means of reconfiguring human modes of perceiving the world—its ecological processes, climates, and atmospheres—and further explore the notion of fashion as a tool for environmental attunement.

ATTENDING TO BODY-DRESS RELATIONS

Over the past two decades, numerous studies addressing the environmental impact of fashion have examined the body–dress relationship as a key site of inquiry. While some contributions focus specifically on the dynamics between individuals and fashion items from a consumption behavior perspective (Domingos *et al.*, 2022; Luchs *et al.*, 2015; Iannili & Spagnoli, 2024),

others foreground the role of emotional connection in fostering more sustainable practices among wearers (Chapman, 2015; Niinimäki, 2010; Kettunen *et al.*, 2025). The latter strand is particularly relevant to this contribution, as it highlights the affective dimension of engagement with fashion artefacts, emphasizing the sensorial and experiential qualities through which such relationships are formed. These approaches may include practices such as repairing (McLaren & McLauchlan, 2015; McNeill *et al.*, 2020), mending (Valle-Noronha *et al.*, 2025), learning to wear (Valle Noronha *et al.*, 2018), designing for intimacy and passion (Neto & Ferreira, 2020), and cultivating care for durability (Fletcher, 2012; Gwilt, 2021; Errázuriz & Müller, 2022).

What emerges across these studies is an emphasis on the experiential and relational dimensions of fashion: through its bodily practices, fashion appears to be a space able to shape the way we understand and care of the material things of the world.

As sustainability pioneer Kate Fletcher argues, achieving deeper and more enduring change requires a shift that extends beyond material innovation to encompass the ways in which people engage with things (Fletcher, 2012).

In addressing durability as a pathway to sustainability, Fletcher contends that durability “cannot only be promoted as a product-based phenomenon, but rather emerges from individual and collective practices with dynamic implications for our use of materials” (p. 223).

While it remains essential for the industry to produce less environmentally impactful goods, such interventions primarily engage the maker and tend to exert limited influence on cultural values and everyday behaviors.

A related argument is advanced by researcher and cultural studies lecturer Dagmar Venohr, who suggests that systemic transformation cannot occur solely “by changing the design, production, distribution and use of products,” but instead requires a reframing of cultural fashion knowledge “by establishing personal relationships with direct and concrete environments” (2025, p. 76).

Building on these perspectives, this contribution argues that meaningful interventions in the ecological impact of fashion must occur at the level of material culture, engaging with how individuals relate to fashion objects and, by extension, to the environment.

PERSPECTIVE SHIFT

A RELATIONAL AND TRANSFORMATIONAL TOOL

“Dress is something that will morph into my body and into which my body will change when I go out into the world, something that will open up or close down for me possibilities of becoming, of immersing in the flow of worldly practices.”

(Ruggerone, 2016, p. 585)

The visual dimension of fashion has traditionally dominated the discourse on this subject.

As pointed out by scholars who have proposed alternative approaches of inquiry (Entwistle 2000; Negrin 2016; Smelik, 2016; Woodward 2007; Filippello & Parkins, 2024; Lewis & Stasiulyte, 2022; Gork *et al.*, 2025), for a long time, fashion scholarship privileged an analysis stemming from the visual aesthetic hence limited to a dimension that often leaves aside questions of practice and experience. More recently, though, studies have shifted attention from aesthetics to lived experience, exploring what it means to address fashion as an embodied practice (Chong Kwan, 2020; Valle-Noronha, 2017; Sampson, 2018; Robinson, 2024). Within this shift, the work of theorist Joanne Entwistle has been pivotal in catalyzing a reorientation in fashion studies, proposing that inquiry into the complex system of fashion relations should begin with the body. In the introduction to her book *The Fashioned Body* (2023), Entwistle sets the focus by stating that “fashion is about bodies: it is produced, promoted and worn by bodies. It is the body that fashion speaks to and it is the body that must be dressed in almost all social encounters” (p. 1).

From this standpoint, fashion cannot be fully understood without considering the corporeal conditions through which it operates.

Entwistle introduces the concept of *situated bodily practice* (p. 4), in which the body functions as the site where fashion (as an industry and social phenomenon) and dress (as individual practice) are entangled and continuously inform one another. Crucially, this body is always already a *dressed body* (p. 6), through which the world is experienced and perceived by the individual, and which is simultaneously shaped by that same world. Dress—in this view, grounded in phenomenological theories (Negrin, 2016)—“works on and mediates the experience of self” (Entwistle, 2000). In this sense, clothing is not an external layer added to the body but a medium through which subjectivity

takes form.

From this perspective, the boundaries between body, dress, and environment become increasingly porous. Rather than appearing as distinct and self-contained domains, these three spaces make sense only in relation to one another.

The fashion object thus extends far beyond its appearance: when chosen and worn, it sets in motion a series of encounters and transformations that unfold between bodies and garments, as well as among bodies, garments, and the places they inhabit. Drawing on non-representational theory as developed by sociologist Nigel Thrift (2008), artist and professor Andrea Eckersley similarly invites attention toward the embodied dimension of fashion and its affective force (2008).

Clothes, in this reading, do not merely signify but actively shape how wearers feel, move, and behave. Along similar lines, Lucia Ruggerone - another pivotal theorist in defining this turn—describes the encounter between body and dress as “a process of becoming in which the reciprocal affordances of human body and dress result in non-predictable transformations of both” (Ruggerone, 2016, p. 581). Taken together, these contributions foreground the idea that the relationship between the dressed body and the world is a porous one (Eckersley, 2008). It is precisely this condition of porosity and openness what Entwistle describes as *leaky margins* (2000) that this article seeks to mobilize in order to ground a reframing of fashion as a tool for attunement. Rather than treating fashion as a closed system of signs, this approach emphasizes its capacity to remain open, responsive, and relational: operation that fashion must undergo in order to retain relevance and meaning in current and future unpredictable times.

In this light, addressing fashion as a way of practicing human–environment relationality may catalyze a broader cultural shift—one capable of challenging entrenched Cartesian dualisms and of understanding matter not as fixed and inert, but as dynamic fluxes and ongoing processes.

AFFECTIVE DIMENSION OF BODY-DRESS-ENVIRONMENT

The notion of affect that has informed the affective turn in fashion studies (Filippello & Parkins, 2024; Ruggerone & Stauss, 2022; Smelik, 2025), and which this article likewise embraces, is that developed by French philosopher Gilles Deleuze and psychoanalyst Félix Guattari. The Deleuzian–

Guattarian definition identifies affect as the variation in a body from one state of affection to another (Ott, 2017, p. 9).

Bodies—whether human or non-human—affect one another through encounter, each altering the other's initial condition. As clearly illustrated by Brian L. Ott in his comprehensive article on affect theory in critical studies, this perspective “requires a view of the body, not as an organic closed system (as in Freud), but as ... a ‘machinic assemblage’ ... radically open to the world” (Labanyi, 2010, p. 225 in Ott, 2017). A pivotal element of this understanding of affect is the emphasis placed on the agency of matter. Indeed, the material world is understood as a continuous process of becoming, in which things encounter, affect, and are affected by one another.

Matter, therefore, is not static or inert but rather alive and vibrant, as further theorized within new materialist thought (Bennett, 2010; Coole & Frost, 2010). Drawing on this conceptualization of affect within the context of new materialism, fashion studies have extended the capacity to affect to garments, interrogating the kinds of affects such materialities generate in their encounters with bodies (Dolphijn & van der Tuin, 2012; Woodward & Fisher, 2014; Smelik, 2018; Valle-Noronha, 2019; Sampson, 2022; Moradei, 2025). In other words, garments can no longer be conceived as passive objects but must be understood as active participants in relational assemblages.

Designer and researcher Julia Valle-Noronha investigates precisely this agency of clothes, arguing that wearable objects “are responsible for disclosing a world—they can direct movements, shape bodies or change the ways one interacts with what is around” (2019, p. 56).

Valle-Noronha's doctoral dissertation focuses on the affective relationship between wearer and garment, while also questioning the role of the designer in making the agency of clothes more perceptible and in shaping specific wearer-worn experiences. Importantly, this perspective reframes design practice as a form of relational orchestration rather than pure formal invention.

Another emblematic work on the mutual affect between the body and the fashion object is the practice-based research on footwear conducted by material culture researcher Ellen Sampson, as presented in *Worn: Footwear, Attachment and the*

Affects of Wear (2022). From the outset, Sampson identifies as central the question of ‘what happens’ between bodies and the things they wear—“how they may work with us, for us and upon us” (p.1)—thereby highlighting that garments, and specifically shoes, affect the body through their interaction while also being shaped by it.

As she notes, “the body-self is affected physically and emotionally through wearing and simultaneously the material of the garment, its meanings and value are changed through wear” (p.36). Within this framework, the garment—understood as the embodied material practice of wearing—extends beyond meanings rooted in symbolic value, social trends, personal aesthetics, or function. Rather, it emerges as a material object entangled with the body, whose affective capacities actively shape how the body perceives the world and itself within it.

Research on the affective qualities of fashion, such as that carried out by Anneke Smelik and Maike A. van Tienhoven (2021), further supports the idea that fashion possesses the capacity to transform individuals through the act of wearing. Consequently, the possibility of changing wearers' habits and behaviors may not reside solely in conscious practices of care for clothes, as discussed in the introduction, but also in the everyday, often unnoticed encounter between body and dress. The act of wearing thus exceeds aesthetic choice or functional necessity and becomes, instead, a moment of “opening up to a process of becoming, a line of flight, the final result of which we cannot foresee” (Ruggerone, 2016, p. 582).

Building on this line of inquiry, the proposal advanced in this article extends the investigation of the affective dynamics between body and garment to explicitly include the environment: the space in which the body-garment assemblage is embedded, yet which is often perceived as external or separate from it.

Accordingly, while it shares the guiding question articulated in Valle-Noronha's doctoral work—“what can fashion do?” (2019, p.33)—here this question is rearticulated as ‘what can fashion do in these times of ecological crisis?’.

It is precisely within this reframing that the possibility of fashion as practices for attunement begins to emerge.

THE URGENCY FOR ATTUNEMENT

The emphasis on the relational and transformational qualities of fashion—emerging from the encounter between body, garment, and environment, as well as from the agency of matter—creates the conditions for articulating a renewed narrative of fashion. In response to this, the proposal to think of fashion as a tool for attunement arises from an urgency to encourage reflection on humanity's position within the world and to imagine more reciprocal relationships with it. Here, the term attunement is borrowed from anthropology and cultural geography, particularly from studies on atmosphere, where it refers to the body's sensorial capacity to tune in to material and immaterial fluxes within an environment. In an essay, professor Kathleen Stewart observes that atmospheric attunements are not secondary consequences of distant causes but rather “the actual affects of modes of living being brought into being” (2011, p. 5).

For the argument developed in this contribution, attunement is therefore significant precisely because it bridges sensorial experience and environment, understood as a constellation of ongoing processes rather than a static backdrop. The emphasis lies on how the *dressed body* engages with spaces characterized by constant becoming. In parallel, cultural geographers Derek McCormack and Sasha Engelmann argue that enhancing the sensorial capacities of bodies is essential “to make the conditions of the present palpable” and thereby to articulate “different forms of ethical–political awareness” (2017, p. 242). Extending this claim, this article suggests that such sensorial amplification may also support the imagining of healthier relationships with the environment and its human and non-human bodies.

Within fashion studies, a comparable position has emerged in recent work by designer and researcher Todd Robinson. In his analysis of a Driza-Bone coat (2025), Robinson explicitly interrogates the human–climate relationship through fashion, proposing that garments be reimagined as tools capable of “activating and amplifying these material and embodied properties and relations” in order to “offer powerful alternative ways of understanding our relationship to the environment” (2025, p. 15). The case study of the Driza-Bone coat enables the scholar to address the garment's colonial history, and more specifically the ways in which settlers positioned themselves in relation to the

environment. Through close attention to its material properties and design—sturdy fabric marked by prolonged exposure to weather conditions, and the garment's full bodily coverage (p. 14)—Robinson demonstrates how such features sustain a narrative of human–environment separation. He therefore calls for a reimagining of the fashion garment as a means of exposing and reconfiguring these relations.

Within practice-based methodologies, the researcher identifies a site of experimentation in which to critically and creatively reflect on human engagements with climate. Robinson's work resonates with the central concern of this article: the urgency of reframing fashion in ways that can meaningfully engage with the contemporary ecological crisis.

Hence, this contribution aligns with a body of research that foregrounds the entanglements between body, dress, and environment.

Drawing on these insights—how garments shape embodied experience and inform design choices (Valle-Noronha, 2019), how body–shoe–environment relations are porous and mutually influential (Sampson, 2022), and how fashion design can function as a creative site for rethinking traditional human–environment relationships (Robinson, 2025)—it speculates on the potential of understanding fashion practices—from designing and making to wearing—as tools to attune humans to the environment, engage with the current ecological crisis, and ultimately reconfigure the ways humans relate to the world.

ATTUNING TEXTILES

THE LANGUAGE OF AGENCY AND RELATION IN SMART TEXTILES

The design category of smart textiles is among the most animated and sensational within the fashion world. It is striking to encounter jackets that change color as temperatures fluctuate (*Thermosensitive Jacket* by Stone Island), dresses that respond to surroundings (*Flowing Water, Standing Time* by Ying Gao), T-shirts that track health metrics (Ahsan *et al.*, 2022), or textiles capable of charging mobile phones (Birkle, 2022). While some of these garments may resemble costumes from a science-fiction film or appear to offer unnecessary services to the wearer, ongoing research into the integration of technology within clothing has nonetheless revealed an expanded potential in what garments might

do. Beyond novelty, smart textiles foreground action, responsiveness, and performance as defining qualities of dress. Smart textiles are commonly defined as textiles that react to stimuli originating from either the environment or the wearer. They possess an active capacity to sense and respond, enabled by technologies integrated into their structure, whether electronic or mechanical. As such, they are “artifacts that interconnect active functionalities (often electronic and computational-based) as a wearable artifact” (Ruckdashel, 2022, p.1).

These functionalities may take the form of “self-powered smart textiles capable of generating and storing energy from diverse sources” (Dejene, 2025, p. 898), or of climate-adaptive clothing that regulates “body temperature, manage moisture, and protect against environmental hazards across a range of climatic conditions” (Bera, 2025, p. 2). Depending on the technology adopted, smart textiles can be categorized according to their mode of response: passive systems, which do not alter their structure and rely on the intrinsic qualities of fibers (such as UV protection or antimicrobial properties), and active systems, which change shape or function and typically rely on electricity, as in the case of thermoregulation.

At the same time, they may also be classified according to the source of the stimuli to which they respond, whether originating from the body or from the surrounding environment.

Taken together, these classifications point to the defining characteristic of smart textiles: their capacity for response.

As Ruckdashel summarizes, “smart textiles convert stimuli from the environment (temperature, light, chemicals and moisture, pH) or interactions (mechanical force and electromagnetic field) into responses in aesthetic (color, light intensity, fluorescence, shape or form) or physical (mechanical, electrical, thermal, chemical, wetting or moisture transport) properties” (2022, p.1). Whether reacting to heat, cold, stress, sunlight, or moisture, these garments act—they do something. In this respect, smart textiles bring the concept of agency in clothing to its most explicit and demonstrative form.

What is particularly relevant to highlight here is not only that advances in smart textiles enable innovative and technically sophisticated garment functions, but also that their development and increasing visibility familiarize wearers with the

idea that material things, in this case clothes, have a quality of livingness that reacts to the body and to the world. The language employed in both academic discourse and popular media—where technologies are said to “turn clothing into living systems” (Peerzade, 2025, p. 1), or where garments are described as ‘dynamic systems’ or even as forms of infrastructure—actively fuels an imaginary of fashion as an agentic entity.

From this overview, two crucial aspects emerge: first, that the agency of garments becomes especially legible within the realm of smart textiles; and second, that garments incorporating smart technologies are fundamentally grounded in the relationality with the wearer and/or the environment. For the ambition of this article to propose fashion as a tool for attuning wearers to the environment, smart textiles appear, at least in principle, to contain many of the necessary elements. Nonetheless, the motivations underpinning the design of such technologically enhanced garments do not necessarily challenge the human position in relation to the world, nor do they automatically catalyze shifts toward more environmentally attuned behaviors.

ACTIVATING BODY-ENVIRONMENT CONSCIOUS INTERACTION

Despite their apparent suitability for attunement, a closer examination of the motivations driving research into smart textiles reveals important limitations. In most cases, these garments are designed with the primary aim of:

1. enhancing comfort (Bera, 2025);
2. adapting to extreme weather conditions (Bera, 2025; Peerzade, 2025);
3. reducing dependence on external power sources (Dejene, 2025).

While these objectives are undeniably relevant, they consistently position the human wearer at the center, directing design efforts toward improving individual conditions rather than reconsidering broader relational dynamics. Even when environmental concerns are taken into account, they tend to remain instrumental and secondary. The third motivation, in particular, occasionally extends to the preservation of natural resources. This is the case, for instance, in prototypes developed by researchers at The Hong Kong Polytechnic University (PolyU), led by Professor Dahua Shou at the School of Fashion and Textiles. Their cooling fabrics are designed

to respond to contexts in which air-conditioning systems are insufficient due to limited access to resources (Adegeest, 2025).

Although such innovations address pressing material and infrastructural constraints, the question remains as to whether these body- or environment-responsive garments genuinely encourage wearers to attune their senses to the atmospheric fluxes of a space.

It can be assumed that a jacket that visibly shifts color or shape in response to weather changes may heighten the wearer's attentiveness to ongoing transformations in their surroundings.

Likewise, wearing a shirt equipped with PolyU's cooling technology may foster greater awareness of the extreme climatic conditions of a given location. Moreover, smart textiles, by functioning as highly sensitive sensorial membranes, can be perceived as extensions—or amplifications—of the wearer's sensory capacities.

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However, as designer and researcher Pauline van Dongen and lecturer and researcher Lianne Toussaint observe in an article emerging from their doctoral research on crafting wearables, “most designers seem to integrate technology into fashion merely to maximize physical performance, efficiency, and productivity” (2020, p. 113), rather than cultivating an enhanced connection with the wearer's body and surroundings.

The work of van Dongen is particularly relevant to this contribution, as it is distinguished by its aim to develop smart textiles not solely to improve individual wellbeing, but to foster a heightened awareness of physical, emotional, and environmental states.

The Issho (2017) denim jacket, for instance, is designed to:

1. stimulate body and environmental awareness,
2. mediate the wearer's experience of their surroundings,
3. support the wearer's emotional state.

These capacities demonstrate the potential of garments to affect the wearer, and more broadly, the capacity of fashion practices to shape and modulate how humans relate to the world.

As such, “a sturdy denim jacket that records, senses, and reacts to touch not only shapes how wearers experience their own body but also affects the way they act, move, and behave in relation to their surroundings” (p.116).

In certain instances, the technologies embedded in garments may even influence how wearers choose to move through space. This is evident in van Dongen's own experience of wearing another of her designs, the *Solar Shirt* (2015).

Integrating solar cells that store energy when exposed to sunlight, the garment is capable of charging a smartphone after sufficient exposure.

In an article co-authored with Anneke Smelik and Lianne Toussaint, van Dongen notes that the *Solar Shirt* “made her particularly aware of her urban surroundings and guided her choice whether or not to move into the sunlight or stay in the shade” (Smelik *et al.*, 2016, p. 299).

Drawing on this example, the authors advance an embodied approach to wearable design, emphasising the importance of engaging the sensorial dimension of the body in order to intervene in body–dress–environment dynamics and foster a more attentive relationality.

This study is significant insofar as it provides concrete support for the argument that fashion can shape the relationship between the *dressed body* and the environment and, as this paper proposes, can function as a tool for attunement.

To conclude, the case study of Pauline van Dongen's design practice within the field of smart textiles is exemplary in the way it critically reconsiders the role of technology in fashion.

Her work addresses the pervasive lack of attention, awareness, and sensitivity toward both the body and its surroundings. While garments such as *Issho* and the *Solar Shirt* point to ways of integrating embodied experience into fashion design, this approach can be extended further to explore what fashion can do—and what it might become—in the context of the current ecological crisis.

It is here that the proposal to conceive fashion as a set of practices of attunement emerges as a concrete and generative direction for inquiry.

CONCLUSION

This article has proposed a reframing of fashion as a relational and experiential practice, rather than merely a system of production or a generator of aesthetic and symbolic value.

While contemporary sustainability initiatives—such as circular design, recycling systems, and the adoption of preferred materials—are essential for reducing the environmental burden of the industry, they largely operate within a human-centered framework.

These strategies focus on production efficiency, resource management, and material substitution, but often leave untouched the deeper cultural and perceptual patterns that drive overconsumption, disengagement from environmental processes, and the framing of garments as disposable commodities. By contrast, situating fashion as a tool for attunement foregrounds its potential to engage wearers in active, embodied, and affective relationships with garments, bodies, and environments.

Drawing on the concepts of the *dressed body* (Entwistle, 2023), *situated bodily practice* (Entwistle, 2023), and the *affective capacities of clothing* (Ruggerone, 2016; Valle Noronha, 2019; Sampson, 2022; Robinson, 2025), this article emphasizes the transformative potential of fashion to mediate perception, behavior, and sensorial awareness, extending its relevance beyond representation. Smart textiles offer a vivid illustration of this potential. Their capacity to sense stimuli from the wearer or the environment, and to respond through color change, thermoregulation, or energy generation, renders the agency of garments immediately legible.

By amplifying the wearer's sensory engagement with atmospheric and material fluxes, such garments can encourage environmental attunement and heighten awareness of ecological processes. Examples like Pauline van Dongen's *Isshō* (2017) denim jacket and the *Solar Shirt* (2015) demonstrate how wearables can guide movement, enhance awareness, and influence decision-making in real time, transforming the wearer's perceptual and bodily relationship with urban and natural environments.

At the same time, this analysis underscores a critical limitation: these technological interventions remain predominantly oriented toward human-centred goals—comfort, adaptability, and efficiency—and, while they may

heighten awareness, they do not explicitly seek to cultivate a more reciprocal or ethically engaged relationship with the environment.

Indeed this article advances a distinct contribution by proposing a shift in the narrative of fashion towards practices that actively attune humans to the environment.

While existing studies and design practices address the relationship between body, dress, and environment, they have not explicitly conceptualised attunement as a central framework, nor have they foregrounded its potential to reconfigure human–environment relations beyond awareness alone.

By positioning fashion as a relational and affective medium capable of shaping perception, behaviour, and orientation, this contribution articulates attunement as a potential conceptual and practical approach within fashion studies.

Future research and practice may further investigate how attunement can be embedded across material choices, design processes, and modes of wearing, extending these principles beyond technological innovation to encompass broader relational and experiential engagements. In doing so, fashion can be repositioned not merely as a domain that responds to the ecological crisis, but as an active site for cultivating more responsive, situated, and transformative ways of inhabiting the world.

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