



Article

Costume and Sustainability

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From Past Practice to Future Strategies for an Ecological Costume Praxis

By Sofia Pantouwaki, Ingvill Fosshem and Susanna Suurla

Introduction: Addressing Sustainability in the Field of Costume

Costume for performance has historically developed certain sustainable actions in its creative processes. However, despite its topical urgency, costume scholarship has only now started to address sustainability in relation to the lifecycle of costume from design to professional production in the performing arts. Equally limited information has been systematically collected and disseminated regarding sustainable practices in the field. Through a review of relevant literature and practice that includes international initiatives for 'greener' theatre production as well as evidence from Finland, where the authors are based, this article presents an assessment of ecology-informed current and continuously developing practices in costume ideation, making, and maintenance across the performing arts. We explore the ways in which the professional field of costume (as both design and practice/realisation) has developed to date towards a resource-wise, ethically, and environmentally sensible system of performance making. In so doing, we aim to illuminate how the concept of 'sustainability' is understood in contemporary costume discourse and to propose directions to rethink costume praxis from an ecologically responsible perspective.

'Sustainability' has been defined in the milestone 1987 Brundtland report¹ as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, n.p.). According to the United Nations (UN), sustainable development "calls for concerted efforts towards building an inclusive, sustainable and resilient future for people and planet" by "harmonising" economic growth, social inclusion, and environmental protection.² Over the past decade, the circular economy model has emerged as a prominent tool to achieve a more sustainable development globally at all levels of society and culture. The model is based on three design-driven principles: i) eliminate waste and pollution, ii) circulate products and materials, and iii) regenerate nature.³ We are interested in identifying ways to develop a circular economy approach suitable to costume, understood as "restorative, regenerative, economic *system* change, not just a replacement of a certain material so that it can be recycled" (MacArthur 2021, n.p. emphasis added). We return to the origin of the prefix 'eco' rooting in the Greek *oikos* (home, habitat, place to live) and thus understand 'ecosystem' as the entirety of the surrounding world and 'economy' as the 'management', in other words the 'laws' we set for our place of living; we thus consider circular economy as an ethical quality beyond monetary terms, embracing ecological consciousness as an equal value in making performance and particularly in creating costume. This

1) The report, entitled 'Our Common Future' but nicknamed after the Commission's chairwoman, Gro Harlem Brundtland, was published by the World Commission on Environment and Development, a United Nations initiative. The report has since had significant impact globally.

2) See the UN Sustainable Development Agenda: <https://www.un.org/sustainabledevelopment/development-agenda/> (accessed 26 June 2022).

3) See: <https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview> (accessed 10 April 2022).

shift of approach towards more holistic and environmentally conscious systems thinking as part of sustainable development is imperative for the future development of performance practices: it is necessary to take responsibility and address ecological impact as “an issue that the theatre cannot afford to ignore” (Banks, 2014, n.p.).

Costume practice has largely evolved within budgetary restrictions that have directed costume professionals towards circular economy approaches primarily for financial reasons. Moving towards a more ecological costume creation, there is an increasing need to address the responsibility of the costume practitioners (designers, makers, and wardrobe personnel) not only during, but also after the production has ended, as part of the design and realisation process as a whole. This might entail an internal value clash in the costume practitioners’ work and requires a questioning of established practices that considers holistically the lifecycle of the materials used, their manufacture, management, and storage, including after the performance, off the stage, and during postproduction. To contribute towards this direction, we offer here an overview of current costume actions related to sustainability; identifying the state-of-the-art is crucial for an in-depth discussion of the topic.

The article consists of (i) a concise historiographical review of costume practice in relation to principles of circular economy, (ii) an analysis of the current paradigm shift towards more holistic costume strategies and related professional initiatives, and (iii) propositions for future strategies that open possible pathways for change in the costume practitioners’ mindset towards developing ecologically responsible artistic work frameworks. We altogether propose that a resilient ecosystem of costume practices can be envisioned within performing arts organisations, production companies, as well as in the effort of the individual costume designer.

A Concise Historiographical Review of Costume Practice in Relation to Circular Economy Principles

Circular thinking has been an integral part of established processes of costume practice over the course of centuries. Financial, practical, and other reasons such as lack of production resources have traditionally resulted in the development of practices for recycling, reuse, modification and upcycling of materials and garments for creative use in costume design, proposing a self-organised ecosystem of practice.

Garments from everyday fashions have been reused as costume on stage over the centuries – for example, in Elizabethan theatre (Jones and Stallybrass 2001). Recycling of old costumes or costume parts or accessories has also been at the heart of costume practice from the early times of theatre making and in certain types of popular theatre such as commedia dell’arte. The radical ‘original practice’ productions,⁴ staged at Shakespeare’s Globe Theatre between 1997-2005, exemplify how historical costume practices can be revisited and integrated into a producing theatre house at the turn of the 21st Century as resourceful to date. ‘Original practice’ at the Globe meant “nothing was assumed to be purchased new” and costumes were made with “no zips, no chemical dyes, no battery powered tools, no electric lights, no sewing machines or irons” (Ross 2022, n.p.) in accordance with methods available in the 1600s. This approach has provoked the Globe’s Wardrobe department “to

4) The concept of ‘original practices’ was established by the Globe’s then Director of Theatre Design, Jenny Tiramani; it involved dressing actors “in handmade clothing based on the evidence of surviving clothes, inventories, wills and pictures contemporary with the production” (Maclaurin 2015, p. 19).

rethink our 21st century learning” (ibid., n.p.),⁵ repositing past costume production methods as valid sustainable options, and affirms the need for costume professionals to learn to think differently.

Restoration, repair, modification, as well as upcycling of existing, used garments for new use has equally been common practice in the creation of costumes over the centuries, still present to date, mainly due to budgetary or other practical restrictions relating to time and available resources. Such restrictions would often affect the aesthetic (visual and material) result of the costume.⁶ Costume maker and academic Madeline Taylor has investigated how the theatre costuming industry in Queensland, Australia has changed over the past three decades in response to developments in the national labour market and fashion industry, problematising that traditional practices of creating theatrical costumes “in dedicated workshops from original designs” (Taylor 2017, p.16) has shifted to “sourced costumes as the primary method of theatre costume generation” (ibid., p. 25) where “designers and costumers have become shoppers, styling costumes from new and second-hand retail fashions, or finding items from existing wardrobe stock” (ibid., p. 16). On the other hand, costume designers may find new design possibilities offered by practices such as upcycling, as shown at the relevant professional workshops during World Stage Design 2013 in Cardiff.⁷ Although such circular practices have been widely used on a global scale, especially in small- and middle-budget productions in independent and established theatres alike, little has been formally investigated to reveal the sustainability value of these traditions.

The R-framework, a concept derived from the “Reduce, Reuse, Recycle” slogan of the 1970s US actions to raise awareness on environmental issues,⁸ has developed since as a tool for rethinking sustainability and circular practices across multiple fields, such as the global textile and fashion industry with which the field of costume has an interlinking and interdependent relationship. Each ‘R’ probes to critically assess material production systems and consumption habits with the explicit aim to keep material resources in circulation for as long as possible and, ultimately, within a circular economy that closes the material loops and takes “account of several lifecycles” (Niinimäki 2018, p.17).

Such an approach is relevant to costume practice: many of the ‘R’s’ that reflect attitudes and actions towards a sustainable living apply to the field of costume design, as indicated in Table 1. The table is based on circular economy strategies proposed by Potting et.al. (2017) and related applications of these concepts in fashion and textiles by Niinimäki (2018), therefrom adapted and expanded in the context of costume practice. ‘R’s of Sustainability’ are commonly used in discourses of waste management to promote actions towards more sustainable choices of living. Some of the mentioned R’s are already well-established practices also in the field of costume – for example

5) Imogen Ross, who has given this account in a webinar (Ross 2022), was co-master of Wardrobe for *The Taming of the Shrew* and *Edward II* at Shakespeare’s Globe in 2003.

6) An example of this are the sumptuous patchwork costumes, made of material scraps, by Romanian designer Doina Levintza whose work began to be known abroad in the 1990s due to the interest in Eastern Europe, long hidden behind the iron curtain.

7) The World Stage Design 2013 costume-focused programme ‘Costume in Action’ curated by Donatella Barbieri with Sofia Pantouvaki included a series of talks and workshops on deconstructing, reconstructing and upcycling costume, enthusiastically received by the participants (see: <http://www.wsd2013.com/whatson/costume-in-action/>, accessed 16 April 2022).

8) The ‘3-R’ slogan became part of the cultural lexicon in the 1970s following the first Earth Day in April 1970 and, shortly later, the establishment of the US Environmental Protection Agency (EPA). See: Biba (2019) and <https://www.epa.gov/history/milestones-epa-and-environmental-history>, both accessed 21 June 2022.

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reuse, recycle, re-wear, renew, repair, repurpose. Each of these applies both to existing materials and garments as well as to the design of new costumes with alterability (for example, modifiable sizes, embellishments that can be easily removed, etc.) that extends their usability to multiple lifecycles. Other Rs presented here indicate important emerging approaches for costume practice, especially in the use of raw materials and in reconsidering waste as valuable material (reduce, refuse, replenish, recover, re-invent). The R framework also suggests ethical frames as a driving force for costume design when conceptualised from the start (rethink, respect).

REDUCE	diminish the excessive use of materials; decrease the exploitation of natural resources for costume, considering energy consumption and carbon footprint
REUSE	reclaim existing items turning them into costume, enabling a new use
RECYCLE	salvage materials, entire costumes, individual garments, or accessories to create new designs
REWEAR	rediscover and reconceptualise old garments and old costumes
REPAIR	restore and preserve existing garments, costumes, or accessories
RENEW	modify and reconstruct items to serve a useful purpose once again as costumes
REPURPOSE	upcycle and find new directions for materials and/or garments; rework and combine them to make new costumes
RECOVER	reprocess and remanufacture materials from textile and costume waste
RE-GIFT	donate something bought or offered for further use as costume
REFUSE	resist and reject the use of costume making substances, materials and practices that may cause harm to the wider ecosystem

REPLENISH	regenerate resources and materials to increase their purposeful potential as supplies for costume use
RE-INVENT	re-imagine the use of materials and crafts; revisit traditional skills and local practices for realising new costumes
RETHINK	change the pattern of thinking on the use of resources, materials, garments; reconsider and enhance the sustainability potential of collaborative processes and production structures for costume creation
RESPECT	Value people, the natural, physical, cultural, social, and economic environments as an integral part of costume practice

Table 1: ‘R’s of Sustainability for Costume Practice’ proposed by S. Pantouvaki, I. Fossheim and S. Suurla.

The ‘R’s of Sustainability for Costume Practice’ proposed in Table 1 introduce several convergent approaches and actions; despite the similarities, the use of individual ‘R-keywords’ enables the recognition of concrete activities and ways of thinking that address both the materials used, as well as the practices employed in costume creation. The circular economy’s “focus on ‘all the R’s’ (...) creates opportunities for eco-creativity”, notes eco-scenographer Tanja Beer (2021, p. 77), and allows and inspires “designers to imagine a future as a ‘world of abundance’ rather than one of ‘sustaining limits’” (ibid., p.77-78). Such an attitude can lead to essential value change in the field of costume, identifying ecological costume praxis as more valuable than fast production for people, institutions, and the wider environment. The field is indeed undergoing such a change, as we analyse in the following sections.

State-of-the-art: The Current Paradigm Shift Towards More Holistic Costume Practices

In recent years, a wide range of initiatives have been organised to encourage sustainable practices in the performing arts and particularly in the material dimensions of performance. Aiming towards a sustainability reform, diverse organisations and networks advocate guidelines and assessment strategies, as well as related resources, to support the transition of the performing arts industry towards a more ecological design praxis. They also advance the sustainability awareness of the field through organising workshops, green performance showcases, and other related events.

A prominent example of the advancement of industry-wide standards for sustainable performance making from the so-called ‘Anglo-Western perspective’, includes the ‘Theatre Green Book’, a joint initiative across the UK theatre industry that brings together theatre-makers and sustainability experts “to create a common standard for making theatre sustainably” (Theatre Green

Book 2022, n.p.).⁹ The first volume of the Theatre Green Book sets standards for sustainable production making and includes a section specific to designing and making costumes, where it provides advice for sustainable practices on sourcing, making/altering, maintaining/cleaning and disposing of costumes as well as sustainable suppliers for costume materials.¹⁰ The Theatre Green Book is linked to change-making initiatives including Julie's Bicycle,¹¹ Creative Carbon Scotland,¹² The Sustainability in Production Alliance (SiPA),¹³ Ecostage,¹⁴ and Albert,¹⁵ whose respective websites further contribute as insightful resources for sustainable production in the performing arts, and whose activities continue to push the ecological agenda of the field. Also UK based, the artist-led network 'Staging Change', is committed to communicating the importance of environmental action in the theatre and entertainment industry.¹⁶ The 'Broadway Green Alliance' (BGA) in the US is another industry-wide initiative offering toolkits and advocacy programmes to implement environmentally conscious practices.¹⁷ Likewise, the Australian Production Design Guild (APDG) hosts an ongoing Green Conversation platform, APDGreen, to "encourage, educate and improve environmentally conscious practices" (APDG, 2022, n.p.) with the aim to build an Environmental Sustainability resource specific to the wider production design community.

While some of these initiatives are generated from within the professional industry offering open-access resources, a growing number of private companies offer consultancy services for 'greener' practices in performance design as well. For example, Los Angeles based Ecocet is an environmental production resource for the creative industries that implements Zero Waste practices.¹⁸ In Canada, Écosceno promotes eco-design and eco-responsibility in the performing arts by offering training, consultancy, and re-circulation of materials through an online shop.¹⁹ These activities and resources are rooted in shared ecological values for sustainable practices in live performance and screen productions; however, a careful look at their actions and toolkits reveals limited reference specific to costume production.

9) The Theatre Green Book offers three open-access volumes on 'Sustainable Productions', 'Sustainable Buildings', and 'Sustainable Operations', developed in collaboration with sustainability experts Buro Happold, and addressed to producers, directors, designers, production managers and production staff (makers and suppliers).

10) See: <https://theatregreenbook.com/sustainableproductions-toolkit/costumes/> (accessed 17 April 2022).

11) A London based charity that supports the creative community to act on climate change and environmental sustainability (<https://juliesbicycle.com/>, accessed 17 April 2022).

12) A Scotland based initiative connecting arts and sustainability towards a transformational change (<https://www.creativecarbonscotland.com/>, accessed 17 April 2022).

13) A community of live production professionals creating a framework for a sustainable future; according to SiPA's website, advocates are still required for the area of costume (see: <http://sipa.global/advocates/>, accessed 1 July 2022).

14) An online community of performing arts practitioners that embeds ecological thinking at the centre of the creative process, offering a platform for the exchange of knowledge (<https://ecostage.online/>, accessed 18 April 2022).

15) An initiative that supports the film and television industry to make a positive environmental impact (<https://wearealbert.org/>, accessed 18 April 2022).

16) Staging Change hosts workshops, discussions and offers practical tips to support theatre makers responding to the climate crisis (<https://www.stagingchange.com/>, accessed 18 April 2022).

17) See: <https://www.broadwaygreen.com/> (accessed 18 April 2022).

18) See: <https://www.ecocet.la/> (accessed 19 April 2022).

19) See: <https://ecosceno.org/en/> (accessed 15 April 2022).

Systematic initiatives focusing on sustainable costume practices are therefore only gradually emerging. For instance, the Society of British Theatre Designers (SBTD) hosts a ‘Sustainable Costume Group’, described as a collective of practitioners who meet online to discuss “how to proactively change how costumes are designed and made in the theatre industry” (SBTD 2022, n.p.). Many actions have been initiated by individual costume designers who aim to empower the industry – which largely relies on the freelancers’ efforts and thus lacks institutional support – to move towards more ecologically responsible ways of working. As an example, ‘Conscious Costume’ is a project founded by US based costume designer Kristen P. Ahern, offering resources, consultation and costume rental for companies and individual designers. Similarly, Irish costume designer Sinéad Kidao has created The Costume Directory, an open resource of clothing, textile, and haberdashery suppliers and brands who prioritise sustainability, environmental responsibility, and fair trade. The Directory also provides links “to co-operatives, individual artisans and weavers across the world” who sustain “traditional crafts in local environments” (Kidao 2019, n.p.). In Estonia, costume and set designer Reet Aus has adopted a sustainability ethos into her professional practice by using no ‘new’ materials in her work, sourcing existing materials and ‘upcycling’ them to become costumes (Romer 2021).

Turning to Finland, the professional performing arts field has entered a transition phase instigated by environmentally conscious practitioners and increasingly becoming more organised, led by state-funded institutions as well as independent production companies. While there are no existing industry-wide sustainability standards, several Finnish performance companies employ environmental management systems in their operations.²⁰ Moreover, the performance industry related company MyStash offers consultancy as well as currently piloting a nationwide circular economy service with key stakeholders in the field (MyStash 2022). The Finnish National Opera and Ballet (FNOB) has also been purposely developing their design and production methods to increase material efficiency and storage and logistical practices so that each individual item is traceable, thus extending the lifecycle of sets, costumes, and other materials (Laine 2020). The development of new ways to increase reuse of resources is currently underway also at FNOB Costume and Wardrobe (Tenkanen 2022). According to FNOB Head of Sustainability, Tapio Säkkinen, the best way to achieve environmental responsibility is through conscious sustainable choices that account for the afterlife of the production at the design phase. Such ecological policies need to be included in the frameworks that guide performance design, for example, by introducing a carbon footprint budget in the planning of each production (Tenkanen 2022). Additionally, the Finnish Trade Union of Theatre and Media (Teme) has proposed that ecological responsibility be included in the collective labour agreements that guide the work contracts of the field²¹ – a turn which indicates that the field is determinedly and visibly moving forward. Further to this transition, individual Finland-based costume designers, particularly from the younger professional generation, employ sustainable practices, exploratory processes of reuse, recycling, and upcycling, as well as natural, biobased, and biodegradable materials in their artistic work (Pantouvaki, Fossheim and Suurla 2021).

This ongoing shift towards sustainable and ecologically responsible performance design approaches is also evident in the curatorial direction of global professional events such as World Stage

20) E.g. EcoCompass (<https://ekokompassi.fi/briefly-in-english/>, accessed 19 April 2022), a management system that offers tools for companies to create their environmental programs.

21) This discussion has been raised in *Meteli*, the union magazine (e.g. in Laine 2021; Saveljeff 2019).

Design (WSD) 2022.²² The concept of *ecoscenography* introduced by Tanja Beer (2014; 2021) is featured as a main theme to this international assembly of contributors, that includes dedicated ecologically sensitised costume designers and researchers. Ecoscenography raises awareness of performance design as ‘not only measured by its aesthetic outcome, but also by how it relates and contributes to social, environmental, economic and political systems beyond the theatre’ (Beer 2014, n.p). Considering WSD’s significant influence as an international platform for debating current performance-making practices, we anticipate thought-provoking ecocritical ideas to emerge from this event in relation to sustainable costume praxis.

Altogether, the global stage “has increasingly adopted more conscious decisions in the use of eco-friendly costume materials for small- or large-scale productions” (Pantouvaki, Fossheim and Suurla 2021, p.202). This has led to a growing interest in ecological thinking in costume practice and scholarship, informed by circular economy as well as new materialist approaches, and inviting a reconsideration of resources, processes, and more-than-human actors in the creation of costume. As noted by Beer (2016, p.163), “acknowledging that materiality and environments are mutually dependent in making beings, things and places, and recognising humans as part of nature’s system, rather than a separate entity” is essential in orienting costume design towards ecology-informed practices. This evidences the necessity of a conceptual shift in designing and producing costume by applying theories of materialism in order to express explicit ecological concerns through the practice itself.

Future Strategies for a Sustainable Costume Praxis?

The prominence of sustainability has increasingly become an expectation at all levels of cultural production and distribution. In conceptualising *ecoscenography* as a necessity from within the practice, Beer suggests reconsidering the ways scenography is produced, not only in the use of materials but also by revising our models of collaboration. This corresponds fully to the actions and initiatives presented in the previous section, pertaining also to costume production, and is indicative of the relational systems involved in costume design.

Designers, directors and producers, manufacturers/makers, suppliers, wearers/performers, and audiences constitute the wide eco-system of costume practice. We thus find it useful to explore a systemic approach in order to address the complexity of the interconnected challenges and opportunities that we face when dealing with such a wide network of actors involved in costume. Reforming ecology thinking in this context requires a lengthy development process and a transition phase that entails “a slow but radical transformation of existing structures” (Beer 2021, p.128). We suggest that adopting a systems thinking frame that offers concrete tools to develop ideas for what a vision of the future might be has the potential to lead the field of costume to long-term transformative change. For example, the ‘Three Horizons Framework’ (Sharpe 2020) offers a model for thinking future transformation, drawing attention towards systemic patterns rather than individual actions and events. This frame provides a practical tool for how change can happen by directing the shift from established patterns and practices (horizon 1) to the articulation of a potential future (horizon 3) via transition activities that evoke innovative solutions (horizon 2). This middle transition phase (horizon 2) is essential for value change to happen and requires deep reflection and active engagement with philosophical approaches that are rediscovered and rethought.

22) See: <https://wsd2021.ca/scenofest/> (accessed 29 June 2022), especially the ‘Middle Sister’ theme of Ecoscenography.

We therefore propose certain ethical strategies for a sustainable costume praxis that may stimulate costume practitioners to critically reconsider their design approaches and processes, thinking from a more ecologically sensitised position. As our earlier work discusses (Pantouvaki, Fossheim and Suurla 2021), such strategies have both ideological and practice implications that need to be further investigated.

An ethics of care approach. The relational ethics of care, introduced by Carol Gilligan (1982), focuses on relationships as interconnected, interdependent, and with mutually affective responsibilities. When mobilised, such an approach can sharpen the costume practitioners' attention to "engage responsively and with care" (Gilligan 1982, n.p.) with oneself, each other, materials, and the world.²³

Radical empathy. Understood as an active practice, radical empathy "offers a way to engage with others' experiences that involve discarding the assumption that we share with them the same modal space of belonging in the world" (Caswell and Cifor 2016, p.31). Such an approach can direct costume towards deeper engagement with other people and society, as well as between human and non-human actors.²⁴

Ecosomatics. Connecting bodily ways of knowing with environmental awareness, *ecosomatics* offers an ecological model to reframe our thinking about somatic approaches to costume creation (Pantouvaki, Fossheim and Suurla 2021). When used as a lens for costume, *ecosomatics* can be employed to mindfully examine the "interrelationships between bodily sensations (soma) and the ecologies the body lives in (the environment, the natural world at large)" (ibid., p. 205).

Extramaterialism. Elizabeth Grosz's (2017) articulation of *extramaterialism* examines how socio-cultural meaning is constructed through the interdependence of ideality and materiality. This philosophical notion opens new perspectives on the analysis of the material dimensions of costume, enabling costume practitioners and researchers to identify materiality as "locatable, changeable, meaningful, and capable of being spoken about" (Grosz 2017, p. 251), moving toward more conscious material engagement.

Costume Thinking. Sofia Pantouvaki proposes *costume thinking* as a frame "for critical thinking through costume" deriving "directly from its practice" (Pantouvaki 2020, n.p.). Then, costume design is understood as an ecocritical conceptual process that can be employed "beyond an artefact-centred approach in the context of social, philosophical, political and ethical environments and ecosystems" (Pantouvaki, Fossheim and Suurla 2021, p. 205), serving as an analytical tool in support of ecologically informed performance-making through costume.

These philosophical approaches can have a direct impact on future costume practice: "As the shift in ecological thinking deepens, so does the potential for ecological practice" (Beer 2021, p.129). This affirms that the thinking involved is as important as the actions.

Central to the ecological reformation of professional costume practice, academia – as both pedagogy and research – acts as a platform for rethinking and hands-on experimentation with potential to significantly impact reframing costume design towards a systemic change. Allowing space and time for such experimentation and re-directing costume practice from a result-driven approach that focuses on the final performance, to one that considers the process as the locus for

23) For example, costume can turn to local and traditional practices of circularity to apply the relational and holistic systems thinking that fosters resilience and respect between people and nature.

24) The authors wish to thank MA Costume Design student from Aalto University, Hilla Ruuska, for the thought-provoking dialogue on radical empathy and ethics of care as frames for costume practice.

new praxis is crucial. Only such an approach will enable new visions of sustainable, ecologically sound performance-making strategies through costume. Reconsideration of costume as a catalyst beyond performance can provoke social, environmental, and broader value change in a longer horizon.

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