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VALUES

ENERGY CULTURES & BEHAVIOURAL
CHANGE

Design for Temporary and Sustainable Music Festivals

New Values and Informal Educational Systems for Humanizing Energy Transition

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Abstract

Whether today the energy transition is too often expressed with technical-scientific languages and approaches, highly specialised and top-down, appearing hardly comprehensible to common sense, it becomes necessary for the culture of the project to support milder and more suitable strategic levers of action and innovation, to embrace paradigmatic changes from below, certainly more relational, inclusive and qualitative.

In this sense, given their nature as centres of artistic expression and cultural, educational propagation, temporary and sustainable music festivals can take on a dimension of social activism, helping to inspire people towards new environmentally, energetically, and socially preferable trends and behaviours.

In the last decade, in Europe, festival managers, public institutions, design teams of various backgrounds and active citizens' groups, have rethought temporary music events in a sustainable way, fostering and disseminating an awareness of the logic of circularity, water-saving, energy-saving, soft mobility, use of renewable sources, and other interrelated issues. Such festivals, close to individuals, appealing to their personal responsibility, stand as catalysts of good practices for the energy transition, as well as ecological media environments for an autonomous and spontaneous re-education to socio-environmental sustainability. Through the analysis of fitting case studies, this contribution aims to reflect and debate on the role of temporary musical events as accelerators of innovation and as a vessel for new design experimentation, especially in the areas of clean technologies, by an informal educational approach to sustainability.

1. Energy Transition and Informal Education for Cultural Transition

Temporary music festivals more and more often detach themselves from having a purely entertaining role as crowd-gathering event. All over the world, temporary and sustainable music festivals – and the projects associated with them – seem to have embraced their capability to be a large-scale vehicle of diffusion, in fact, given their nature as centres of artistic expression and cultural, educational propagation, such events can take on a dimension of social activism, helping to inspire people towards new environmentally, energetically, and socially preferable trends and behaviours.

Unfortunately, the variety of diverse actors and material flows may have negative environmental impact, in terms of energy consumption, fossil fuel usage, biodiversity loss, CO₂ emissions, waste generation, and dispersal (Getz & Page, 2016). However, as will be discussed, these types of events all enjoy the implicit possibility, and opportunity, not only to become more sustainable in themselves, but even to transmit to the local communities that will be temporarily created, the broader eco-social values inherent in them.

In fact, it has been demonstrated that climate change mainly has an anthropogenic nature (Rahm, 2023), since issues as global warming or economic and social inequalities, are the product of deep-rooted consolidated habits, which continue to be adopted uncritically, and, even more often, the result of a short-sighted and poorly imparted education (Fry, 2020).

Although the term *education* is used as a synonym for *instruction* most of the time – as a term that refers to trans-

missive methodology of knowledge – in this context, we are referring to the concept of *education* according to its more purely etymological connotation of an individual process of construction of meaning. Education, so intended, is structured as a mean to understand our selves, other people, and our interactions with the natural and social environment we inhabit (Mortari, 2020). This ability to comprehend, if properly channelled, can become a substantial generating element for the feeling of care towards the world, which is the basis of ecological thinking (Capra, 2022). The radical change of pace for an ecological transition cannot disregard, therefore, an educational and cultural transition, capable of redirecting the human thought and fuelling the dialectical imagination between speculations on the future and prefigurative experiments in real setups (Fagnoni, 2022). Whether today the energy transition is too often expressed with technical-scientific languages and approaches, highly specialized and top-down, appearing substantially extraneous and hardly comprehensible to common sense (Boffi et al., 2023), it becomes necessary for the culture of the project to support - and intervene operationally - on milder and more suitable strategic levers of action and innovation, to embrace paradigmatic changes from below, certainly more relational, inclusive and qualitative (Crippa et al., 2022).

Temporary music festivals have consequently evolved their identity into a pivotal aspect of, especially, youth culture, playing a significant societal role, inspiring individuals, and fostering the need of a shared vision (McGay, 2015), conscious of the environmental impact and their power to disseminate educa-

tion for counterbalancing and bring it to zero. Empowered by their inherent capacity for communication, such events possess the potential to serve as guiding forces in driving the transition ahead and disseminate a literacy toward environmentally and energy-conscious practices and attitudes (Jones, 2017).

In the last decade, in Europe, with different formats and grades of engagement, festival managers, public institutions, design teams of various backgrounds and active citizens' groups, have indeed fostered and disseminated an awareness of the logic of circularity, water-saving, energy-saving, soft mobility, use of renewable sources, and other interrelated issues (Mancini, 2023).

In terms of design perspective, to diminish environmental impact and instil in the local community a sense of conservation and ecological stewardship, it is imperative to creatively implement environmentally friendly practices, for example envisioning recycling or reuse systems, modular setups and stages, and mitigation of resource consumption and emissions during the entire event production (Vezzoli, 2022). The festival design, however, cannot only be limited to macro-level intervention regarding organizational decisions (Bistagnino, 2011), but needs to involve the community of participants for lowering emissions, requiring greater effort to lower the impact.

Suggesting and giving the freedom of embracing high-efficiency design and technological solutions for energy need, sustainable food and drink consumption, transitioning to digital supports, and promoting upcycling initiatives for

attendee-generated waste, can further improve the impact on environment and create a community of festival goers sharing a set of values inside and outside the festival area. Similarly, advocating for more frequent and substantial solutions to address pressing issues of social innovation, often overlooked, aligns with the principles of “Universal Design” outlined in the Stockholm Declaration of the EIDD. This holistic and innovative approach aims to design products, services, and scenarios that champion human participation, enhance diversity, social inclusion, and equality, ensuring equitable participation opportunities across all societal contexts.

If these strategies were to be thoroughly embraced, they would spawn new scenarios of vibrant ecosystems. Within these scenarios, sustainability, intertwined with cultural, artistic and social dimensions, evolves into a dynamic crucible for experimentation with alternative practices (Galeota, 2023). Consequently, music events, serving as hubs for communal interaction and societal resilience, possess the capacity, among other roles, to discern the latent needs of temporary communities. They can introduce grassroots-level efforts to establish fresh regulatory frameworks, catalysing agile processes of eco-social transformation (Bishop, Williams, 2012). This revaluation has supported popular culture, fostering expansive creativity and public reflection through widespread, dynamic, and inclusive participation. Such festivals, close to individuals, appealing to their personal responsibility, stand as catalysts of good practices for the energy transition, for an informal, autonomous, and spontaneous re-education to socio-environmental sustainability.

This demands having a view on sustainability as a cultural and experiential process, organically emerging from the bottom, rather than a set of imposed objectives from above (Caffo, 2017; Manzini, 2018), channelling the principles of a participatory culture (Jenkins, 2009) into a *meta-design framework* (Fischer, Giaccardi, 2006) requiring an active co-creator pool to lower the barriers and facilitate a coral construction of the entire festival experience (Jordan, 2016; Vannicola, 2018). A coherent and unified design of the event, together with its multichannel narration, creates a media system capable of engaging participants and keeping them inside the experience (Quercia, 2022), making temporary music festival ecological media environments (Granata, 2015), eco-systemically disseminating a circular grassroot and top-down re-education to sustainability. Recognizing ecological values as shared and meaningful is crucial for establishing sustainability as the mainstream vision of eco-social prosperity, rather than merely an alternative one.

2. Aims and Methodology

This contribution initiates a broader strand of research on sustainable festivals and their experience design to foster ecological transition and share literacy about environmentally sustainable practices. By analysing particularly virtuous and fitting case studies, this paper aims to reflect on and debate the role of temporary music events as accelerators of innovation and as a container for new design experimentation. This is particularly evident in the areas of clean technologies, informal educational approaches to sustainability, and local policies. The underlying purpose is to understand how the tools of creative

disciplines can bring about innovations of meaning and provide new models from below of social and operational value, acting on a multiplicity of scales and domains.

European sustainable music festivals were mapped and analysed using a grid of six dimensions derived from the synthesis of the *Criteria Ambientali Minimi* (Minimum Environmental Criteria) (2022), environmental requirements defined for the design of cultural events, such as: energy, transport, water and/or wastewater use, waste and recycling, architecture and design and event set-up, communication and social innovation.

The mapping process facilitated the identification of the most adherent and exemplary events across various countries, encompassing small, medium, and large-scale festivals, while intentionally excluding mega events due to the significant disparity in available resources and means. The festivals chosen for this study were Northside (Denmark), Terraforma (Italy), We Love Green (France), Green Man (Great Britain), Shambala Fest (Great Britain), and DGTL Amsterdam (Netherlands). Employing a qualitative and heuristic approach, the festivals were analysed utilizing both secondary data sources and official communications from the events themselves.

The discussion section will examine the findings of the analysis, shedding light on festival's sustainability framework employed to disseminate knowledge about eco-friendly practices, re-educating the crowds informally with achievable and replicable solutions to daily needs of energy, intended as material and social necessity.

Through this examination, we aim to contribute to the ongoing discourse surrounding sustainable events and the pivotal role of festivals in driving environmental and social change.

3. New Values and Educational Systems in Temporary and Sustainable Music Festivals

The considered European music festivals have several points of contact, even though each one realizes its festival projects with a distinguishable identity. The common ground on which those events move is being fully independent and free from consumerism to have the chance of offering an alternative vision of society (McKay, 2015) to an engaged and active co-creator crowd. Under the motto “We do want to show you why it is more sustainable to dance with us during DGTL rather than staying at home”, the DGTL Danish electronic music festival suggests the role of environmentally preferable events in boosting the experimentation of new practices, often grassroots.

Each of these festivals concentrated a great part of the effort into transforming themselves in a low-impact temporary event by collaborating with institutions, governments, and providers. Most of them have also been awarded with prizes and awards for the green innovation they move forward, which does not limit to the organizational level, but searches for and actively involves an active and conscious behaviour and contribution, adopting different design and communication strategies.

One of the main issues is the power to make the festival take place, the kiosks function and the stage provide the show. Most of the festivals adopted countermeasures by changing their source by drawing energy from the existent grid and selecting

providers of clean energy, installing led bulbs, generators powered by recycled oils and a system, like in Shambala, or compensation by taxing the cafes and food stands participating to the festival for the used energy, with the aim of active increasing their efficiency and integrate the solution in their service. Attendees, likewise, support the compensation strategy with an energy tax donated to *Ecolibrium* included in the ticket price, to encourage them to offset the emissions of their trip and participation. The event partner, a non-profit organization, employ the donations to renewable energy projects like a 4.2 MW solar farm in Bristol, enhancing the production of clean energy and addressing social issue like local energy poverty and community education. According to the festival statement and report, the donation had the power of increase participant awareness toward the impact of their movement and the solution of energetic and social issues by choosing environmental-attentive partners and providers.

To satisfy the individual need of power, other festivals decided to provide with power banks for smartphones, like in Northside with its supplier Volt, or solar powered stages and charging station, choice made by Green Man and Wild Solar, offering an affordable and achievable solution of integrating renewable energy sources in a daily action.

However, the participants consciousness regarding the impact of their choices passes primarily through the planning of the journey to the festival location. Although transportation is, finally, an individual choice, the festival sustainability strategy involves creating alternative to solo car trips, offering services to guide toward low-impact transfers.

The common ideas are to diminish the use of carbon fuelled cars, sometimes not providing parking spaces near the location, like it happens with We Love Green and DGTL festivals, or implementing compensation strategies. Shambala is responsible for founding the *Ecolibrium* initiative to minimize the impact of festival transportation, which was also adopted during Green Man fest. The attendees will find ride opportunities and parking tickets on the Green Man website, provided by the Go Car Share platform, and *Ecolibrium* will be responsible for donating £1 for each car parking ticket sold with the aim of compensating the CO² emissions and investing in climate solutions, mostly oriented to reforestation and regeneration projects in Asia.

Participants, indeed, are actively involved in resolving global and local pollution problems, which are handled by festivals through suggesting the use of public transports, offering a free shuttle from and toward the train stations (Terraforma, Green Man), Rail&Entry ticket packages (Shambala), train vouchers to be won in competitions during the event or discounts, or even foreseeing the event ending before the last available bus (We Love Green, DGTL).

Bicycles are the most sponsored way to reach the strategic festivals locations by offering services like the organized trips of Green Man and Red Fox Cycling: the company plans group bike rides to and forth the festival on the day before the opening and on the day after the ending, awarding participants with a free beer and a fast-track entry to the area. All the luggage is transported by the Red Fox team in a low-emissions van, giving the chance to appreciate biking through natural routes and pausing with drinks and snacks along the way.

In Northside, alternatively, cyclers will find a bicycle wardrobe provided by Specialized in which the bikes will be repaired, cleaned and personalized, taking the habit home, outside the festival gates, of using the renewed two-wheels mean to move in cities.

The sustainability literacy for DGTL pass through the gamification of CO2 calculation: the partnership with SkyNRG led to the development of a free tool to calculate the travel emissions to reach the DGTL festival area, available in two different versions, one for visitors and one for other festivals organizers, artists, and fans all over the world. The game-alike feature is broadly known as effective in motivating and engaging, especially in informal learning (Alsawaier, 2018).

A great effort is also implied in tracking the impact of water usage. In each festival report, saving water appears to be a relevant goal, for which organizational and cooperative solutions are developed.

All the festivals drive the crowds toward drinking refillable tap water, sometimes with free stations and always selling refillable drinking bottles, as in Northside, which have more than a water saving role, being reusable outside the festival context and stating the belonging to the festival group and values.

Shambala and Green Man share the partnership with FRANK, a non-profit organization which provides filtered chilled water, and reusable bottles if needed, during the festival by the purchase of a wristband for illimited refills. The earnings support the WASH (water, sanitary and hygiene) campaigns of the organization in countries like India, Nepal, and Kenya, where water scarcity and pollution prevent the public access to drinking and sanitary water.

Most of the water during events is indeed dispersed for sanitary use, for which event organizers adopted shared innovative solutions by installing composting toilets, saving tons of water. Even though compost loos cannot be reproduced in urban routines, their usage helps increasing consciousness toward the litres of sanitary water employed with home devices. Alternatives are possible, used and working during these events, even installing both dry and watery toilets, as DGTL decided to, although the attendees attention is always driven on the importance of water: watery loos are to be used only in case of need and do not employ drinking water, but exploit the flow of the JI river past the festival site, raising the need for a dedicated design project to take the most from the land and give it back without spoiling the area.

Dry toilets, on the other hand, try to resolve both the water and organic waste issue, by transforming urine and feces into reusable materials. Compost loos have the advantage of not using water nor biocide chemicals, which means reducing pollution and consequent sewage treatment, diminishing, in addition, the costs of transportation. The transformation of organic waste into compost creates a circular system, as it is then given to local farmers, benefitting the social community around We Love Green, Green Man, Shambala and DGTL areas. The transformation of urine, full of nutrients, it is considered precious for the soil fertility and helps saving drinkable irrigation water.

Festival goers are not only directly involved in producing compost, but also of taking care of their maintenance by keeping them clean with sawdust to avoid bad smelling and break down (Fig. 1).



Figure 1. DGTL, compost toilets with volunteer attendant, 2023. (<https://dgtl.nl/sustainability/>).

The change triggered by individuals is also explained on site by volunteers, WaterAid ones in Green Man, re-educating crowds toward sustainability and circularity.

Toilet waste is just a part of the output produced during the event days. Every festival chose to introduce reusable, biodegradable, and recyclable tools to reach the goal of zero grams production of waste per person, as DGTL and Shambala suc-

cessfully managed to, and often ban straws, disposable plastic bottles and envelopments.

The most adopted solution is to actively involve participants in sorting waste. Northside installed eye pleasing trashcans, as part of a complex redesign of their waste management infrastructure, in partnership with local start-ups, with the participation of attendees and their co-design action of the system, shaped on the temporary event needs. The aim is to “facilitate a change of attitude towards disposal of goods [...] encourage guests, staff and volunteers to take a stand on recycling and bring behavioural change back home after the end of the festival” (Thim, 2013).

Green Man share the same aim by providing differently coloured plastic bag to festival goers, asking for wisely separating waste, both recyclable and non-recyclable, also pushing cooperation between strangers by sharing rubbish bags and filling them to the top. Some dropping points are arranged all over the campsites and stewards are always available for assistance. Shambala designed and tested during the years different waste management schemes to keep achieving the zero-waste purpose. Under the “we’re only as strong as our people” motto, the festival asks to be part of the Recycling Exchange scheme. At the festival ticket purchase, a £20 Recycling Deposit is charged for every order to support the material needed for the recycling activity. At the entrance, attendees will be provided with two bags of different colours for dry recyclables and other kind of waste, which are to be returned when full to the exchange points. In that moment, the deposit is refunded or can be used to buy limited edition festival merchandise, made by sustainable partners (Fig. 2).



Figure 2. Shambala Festival, the Shambala Recycling Exchange area, 2023. (<https://www.shambalafestival.org/>).

Another waste issue regards food leftovers and unsold meals. DGTL dedicated its effort to transformation, introducing a 24-hour composting machine to the food court, which are processed along with cane sugar cutlery. Unsold meals are, instead, gave away to “Pay what you feel” cafes (Shambala) or given to charities (We Love Green), even though the main warning is to avoid food waste by adopting a responsible behaviour toward consumption.

Reusable bottles are a must in every festival, even though the organizers tried to keep the drink experience the same, by only making small changes. Both DGTL and Green Man preferred to let attendees purchase reusable cups for a little price, that can be used during the festival and handed in to the

bar for cleaning and replacing. The returned ones get washed and reused year by year. They can be also kept as event souvenir and reused at home, bringing away the habit of avoiding single use plastics.

Overall, Shambala introduced the Material Flow mapping for finding weakness in the waste management chain, receiving feedback for the festival community. A similar idea was implemented by We Love Green, that expanded its scope by creating an online recycling platform, where the sourcing materials needed for the festival set-up are put back into market to enhance circularity. They are destined to other events and companies, and every year needed material are collected among local industry leftovers.

The festival keeps great attention to welcoming participants in a sustainable designed setting, also involving artists that, in a past edition, held a scenography workshop which outcome was an eco-co-designed creative scenography ad art pieces made by recycled plastic.

Most of the events' stages are developed with designers specialized in upcycling and reuse, sometimes in-house like at Northside, who developed a storage facility in which build, prepare and repair the festival elements foreseen in the "assembly for disassembly" model.

DGTL and Terraforma partnered with designers to structure stages and other temporary buildings using old construction materials the first, with Nachtlab agency who invented a modular stage with light and mirror components from scratch to be reassembled in different layouts, or natural materials the second. The studios behind the Italian festival designed the

iconic Alpha stage (Fig. 3) and the workshop area with wood, involving students from the Politecnico di Milano in renewal activities every year, holding workshops and co-creation activities to come up with minimal impact set-ups and upcycling ideas for excess materials, building useful festival utilities like benches and tables.

From 2022 is in use a new stage made from wood recollected after an extreme storm that cut down hectares of forest, with the aim of using low impact materials and helping locals collect and manage the high amount of lumber (Colturri, 2019), giving an example of community and environment safeguard through possible uses of such raw material.



Figure 3. Terraforma Festival, the Terraforma Alpha Stage, 2023. (<https://www.terraformafestival.com/>).



Figure 4. Shambala Festival, Shambala camping tents provided by Vintents, 2023. (<https://www.shambalafestival.org/>).

Shambala offers to its community the experience of sleeping in camping tents provided by partners like Vintents, which produce upcycled and repaired tents from the '70s, and Camp-light, which dedicates to save and recondition tents from other events (Fig. 4). The underlying message to repair and not to discard reparable items gets transformed into a tangible and pleasant experience to be broadly replicated.

Partners proved to play a significant role in festival organization, realization and external communication, generating effects far beyond the re-eco-education of attendees. The network of start-ups, schools, universities, and governmental departments let the festivals promote sustainability in their territory.

Northside created a sustainability model with WorldPerfect to internalize and disseminate eco-practices, including workshops with stakeholders, like employees, participants, Aarhus city officers and local companies, from which a Northsiders group was formed, in charge of holding meeting to rethink the festival. One of the ideas that came out is placing Trash-Talkers in some strategic points of the festival area to instruct on the recycling activities with easy to remember catchphrases upon the waste bag colours and their use.

Workshops are held also during festival, as The Think Tank Lab of We Love Green in which festival attendees discuss about ecological issues with activists, artists, scientists and educators; or the Village Positive Initiatives that welcomes innovative companies and no-profit committed to sustainable development with the task of raising festival-goers awareness about the challenges of eco-citizenship; or, finally, the Start-Up Lab to help starting doing business under the sustainability ethos becoming a changemaker.

Terraforma idea of dissemination pass through activities, events, panels, resulting in the Terraforma Journal and in a series of “Simposio”, an occasion of discussion about the union of sustainability and artistic practices. One of the outputs has been the restoration opera of the event location, Villa Arconati, giving back life to an abandoned area, reliving the historical Labyrinth, reinstating the local flora. The project followed with the reforestation of the camping area, designed by Space Caviar, aiming at involving territorial stakeholders and citizens in returning to an eco-normality of the land and help neutralizing emissions even during the festival days.

Finally, also Shambala and Green Man invest most of the received donations and effort into valorising the hosting territory, by opting for local suppliers and collaborating in improving the nearby communities of young people, mostly to guarantee education and sports access, and scientific, artisanal, and sustainable productive companies. In fact, an environmentally preferable attitude also passes through the care for communities and minorities. Almost all the festivals celebrate diversity, as the Shambala stage flags co-chosen with participants to support causes state, and, alongside, build equals interactions by adding informative pages to their websites regarding inclusivity and cultural appropriation. Likewise, DGTL considers equality and safety a collective effort, “free from harassment, racism, homophobia, transphobia, ableism, and sexism”. In case of need, the Awareness Crew is available to support visitors stemming harming behaviours. Accessibility has a central role for all the festivals, listing services for an easy access to the areas, for handling hearing and seeing problems, interpreters, and dedicated stewards for granting an equal enjoyment of an environmentally and socially preferable event.

4. Conclusion

All the analysed temporary music festivals place the energy transition and, therefore, the cultural transition at the centre of their activities. This identifying character is not the consequence of normative impositions from above, but rather the product of a collective awareness, with grassroots countercultural and nomadic historical roots (Bottinelli, 2015). Hence, temporary festivals stand as simulacrum of communities

of people, mostly young, who make responsible individual choices shared within a tangible, open and active community, capable of humanizing the messages and values of energy sustainability, making them simpler, conveyable, and transferable to other contexts. The design practices inherent in them are all dimensioned to a *human* scale, transforming attendees in a participatory crowd, which co-creates each sustainable act of the festival and, in turn, shares and adopts such practices and behaviours outside and beyond the temporariness of the festival, in the individual daily experience. This study evidences that the energy transition, in this kind of festival, is not only inherent to the environmental preservation and the optimization of re-cycling and up-cycling actions among waste, water, and energy, but rather in a broader idea of care – indeed necessary and experiential – which also passes through accessibility and for all kinds of diversity, whether physical, mental, or gender (Roe, McCay, 2021). In this regard, each festival analysed reflects, albeit in its own way, on the common goal of generating a sense of shared responsibility toward the environment and society, to continuously educate a generation in need to be increasingly aware of and committed to promoting environmentally and socially preferable lifestyles.

The role of design, once again, remains crucial in promoting change and facilitating innovation, this time within temporary music events. The designer's goal is to design *socially interactive* systems that not only directly engage users and facilitate informal education about the energy transition, but also leave a lasting cultural and behavioural imprint after the festival is over.

From this perspective, design intervenes in both key aspects of the energy transition, i.e., the technical, outfitting, product, and *infrastructure* features, and the more relational one as educational, sociocultural and *superstructure* aspects (Manfra, 2022; Tironi et al., 2024). The roles of designers, local producers, stakeholders, and users are therefore revised and innovated through shared responsibilities and sometimes overlapping areas of expertise, expressing themselves from time to time in nuanced and fluid identities, such as the promoter or facilitator, the researcher, the tester, the co-designer or co-user, destined to converge toward a completely open and grassroots idea of the sustainable temporary event.

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References

- Alsawaier, R.S. (2018). The Effect of Gamification on Motivation and Engagement. *The International Journal of Information and Learning Technology*, 35(1), 56–79. <https://doi.org/10.1108/IJILT-02-2017-0009>
- Bishop, P., & Williams, L. (2012). *The temporary City*. Routledge.
- Bistagnino, L. (2011). *Design sistemico. Progettare la sostenibilità produttiva e ambientale*. Slow Food Editore.
- Boffi, M., Crippa, D., Di Prete, B., Inghilleri, P., Rainisio, N., Rebaglio, A., & Sergi, I. (2023). *AAA Humanizing Energy. Progetti e lessici per la transizione energetica*. ENEA - Agenzia Nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile. <https://www.pubblicazioni.enea.it/le-pubblicazioni-enea/edizioni-enea/anno-2023/aaa-humanizing-energy.html>
- Bottinelli, S. (2015). The Discourse of Modern Nomadism: The Tent in Italian Art and Architecture of the 1960s and 1970s. *Art Journal*, 74(2), 62–80. <https://doi.org/10.1080/00043249.2015.1095540>
- Caffo, L. (2017). *Fragile Umanità. Il Postumano Contemporaneo*. Einaudi.
- Capra, F. (2022). *Le relazioni della vita: i percorsi del pensiero sistemico*. Aboca.
- Colturri, F., (2019, July 25). Terraforma Festival Mixing Electronic Music and Design Installations with an Impressive Low Impact Policy. *Designwanted*. <https://designwanted.com/terraforma-festival-2019/>
- Crippa, D., Di Prete, B., Rebaglio, A., Ratti, L., & Cason Villa, M. (2022). L'exhibit design verso una transizione ecologica. *MD Journal*, 14(2), 198–209. <https://mdj.materialdesign.it/index.php/mdj/article/view/277>
- Fagnoni, R. (2022). Design in allerta. *MD Journal*, 14(2), 12–23. <https://mdj.materialdesign.it/index.php/mdj/article/view/261>
- Fischer, G., & Giaccardi, E. (2006). Meta-Design: A Framework for the Future of End-User Development. In H. Lieberman, F. Paternò, & V. Wulf (Eds.), *End User Development* (vol. 9, pp. 427–457). Springer Netherlands. https://doi.org/10.1007/1-4020-5386-X_19
- Fry, T. (2020). *Defuturing. A New Design Philosophy*. Bloomsbury.
- Galeota, A. M. (2023). Gli spazi temporanei dell'ascesi. Piccole utopie situate e giochi a tempo nello spazio pubblico. *Officina*, 42(3), 38–45.

Getz, D., & Page, S. J. (2016). Progress and Prospects for Event Tourism Research. *Tourism Management*, 52, 593–631. <https://doi.org/10.1016/j.tourman.2015.03.007>

Granata, P. (2015). *Ecologia dei media: protagonisti, scuole, concetti chiave*. FrancoAngeli.

Jenkins, H. (2009). *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. MIT press.

Jones, M. (2017). *Sustainable Event Management: A Practical Guide*. Routledge.

Jordan, J. (2016). Festivalisation of Cultural Production: Experimentation, Spectacularisation and Immersion. *Journal of Cultural Management and Policy*, 6(1), 44–55. https://www.encatc.org/media/2658-2016encatc_journal_vol6_issue14455.pdf

Ministero della transizione ecologica. (2022). Criteri ambientali minimi per eventi. In *Piano d'azione nazionale sul Green Public Procurement*.

Manfra, M. (2022). Design adattivo, mitigativo, concertativo. Approcci al progetto per la tutela della risorsa idrica in agricoltura. *MD Journal*, 13(1), 18–33. <https://mdj.materialdesign.it/index.php/mdj/article/view/242>

Mancini, M. (2023). A Sustainable Approach to the Planning, Organization, and Management of Big Events in the Music Entertainment Industry. In T. Walker, C. Cucuzzella, S. Goubran & R. Geith (Eds.), *The Role of Design, Construction, and Real Estate in Advancing the Sustainable Development Goals. Sustainable Development Goals Series* (pp. 187–207). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-28739-8_10

Manzini, E. (2018). *Politiche del quotidiano: progetti di vita che cambiano il mondo*. Edizioni di Comunità.

McKay, G. (Ed.). (2015). *The Pop Festival: History, Music, Media, Culture*. Bloomsbury Publishing USA.

Mortari, L. (2020). *Educazione ecologica*. Laterza.

Quercia, G. (2022). Transmedia Seriality. In S. Leonzi (Ed.), *Transmedia Studies. Logiche e pratiche degli ecosistemi della comunicazione* (pp. 233–239). Armando Editore.

Rahm, P. (2023). *Le style anthropocène*. Head - Haute Ecole d'Art et Design.

Roe, J., & McCay, L. (2021). *Restorative Cities: Urban Design for Mental Gealth and Wellbeing*. Bloomsbury Visual Art.

Thim, M. (2013). WorldPerfect: A Case of Sustainability in Business Communication. *Nachhaltigkeit in der Wirtschaftskommunikation*, 24, 351-359. https://doi.org/10.1007/978-3-658-03452-8_18

Tironi, M., Chilet, M., Ureta Marín, C., & Hermansen, P. (Eds.). (2024). *Design For More-Than-Human Futures. Towards Post-Anthropocentric Worlding*. Routledge.

Vannicola, C. (2018). *The ProSEv Strategy. Designing the Product Service Event*. Forma.

Vezzoli, C. (2022). *System Design for Sustainability in Practice: Methods, Tools and Guidelines to Design Sustainable Product-Service Systems Applied to Distributed Economies*. Maggioli.

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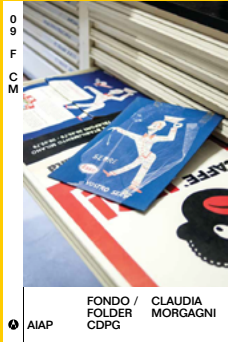
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