

Community Paper

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Research
Directions



Hyperlocal material activism. Biodesign practices for a biocultural and an ecological transition

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The study emphasises the contribution of Biodesign (Myers, 2012) in the radical ecological transition and encourages the use of collaborative biotechnological processes for the development of compatible products with ecosystem dynamics. The focus of the research will be on material design (Karana, et al., 2015) and its ability to contribute to the innovation of territories. In line with the principles of hyperlocal design (Fagnoni, 2022), it will investigate approaches and virtuous experiences that will contribute to the re-activation of specific territorial contexts starting from endogenous resources and knowledge (Cardini, 2022). In a context of erosion of material resources, ideals and communities (Wizinsky, 2021), research and design are exploring directions other than the logic and rhythms imposed by capitalism, moving towards a scenario of rebalancing with the planet.

The contribution aims to critically reflect on the adoption of Biodesign strategies that promote the use of endemic materials (Taranto, Pollini, Rognoli, 2023), such as biomaterials, natural resources, and ecological practices specific for a specific territory.

The proposed thesis argues that the hyper-contextual approach (Fagnoni, 2018, 2022) can be an experimental way of responding to the effects of the ecological disaster and social disruption we are currently experiencing. The hyper-contextual project (Fagnoni, 2022) embraces the place in which the project acts by including the connection to the past and the present, between what can be done and the remains of what has been done, between a probable future and an immutable past. Through this relationship, the hyper-contextual project triggers a cyclical, spiralling relationship, progressively returning to actions and situations in ways and forms shaped by time and attitudes.

In the contemporary context, unconventional practices that integrate nature's biological patterns and metabolic processes (Myers, Antonelli, 2012) are broadly disseminated. Through the adoption of DIY (Do-it-yourself) practices (Rognoli et al., 2015), DIYbio (Do-it-yourself-biology) (Priola, Manfroni, 2024) and distributed learning programmes (Ribul, 2013; Duenn, 2018), many designers collaborate on the development of new biomaterials in self-managed spaces or community Biolabs (Ito, 2016).

In this way, design is reconfigured as an interdisciplinary, distributed, plural and collaborative activity (Mau, Leonard 2004), in which designers are supported by communities that adopt open approaches and can generate significant, small, incremental and diffuse changes (Manzini, 2018).

In these practices, scientific and indigenous knowledge of ecological heritage and related material use practices can provide a reference for designers in understanding local environmental challenges and developing more environmentally and culturally

appropriate solutions.

Through the detailed exploration of the current scenario and the analysis of best practices, the contribution will argue its hypothesis in favour of project experiences rooted within a specific territorial context, reducing the material circuits.

Aiming to provide a reflection on a specific project scenario, the paper will present a selection of projects realised at the Control + Junk Lab Study Centre at the Iuav University of, as peculiar case histories about the Venice Lagoon area.

The research employs an analytical-deductive exploratory approach based on the analysis of experimental approaches.

The study will not only consider formal and functional design aspects, but will also analyse the projects according to the following criteria: use of locally sourced materials, involvement of the local community and prospects of redemption for the area. The comprehension of success parameters may vary depending on the actors involved and the context in which the projects will be implemented.

As projects are currently in the development phase, there is a double onus for impact assessment that separates the design process from the effectiveness of the solution as it evolves in the future.

This contribution aims to provide new research perspectives in this area, oriented to the reactivation of traditional knowledge systems, recognised as depositories of indigenous knowledge of territories and local biocultural practices.

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