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PARTICIPATORY REUSE OF MATERIALS AS AN EDUCATIONAL PROCESS OF SHARING KNOWLEDGE AND CREATING COMMUNITIES**Maria Dimitriou-Tsaknaki***

ABSTRACT

In this essay, having as a basis the correlation of technical, ecological and social problems and the relationality of the human, we focus on participatory reuse of materials, which we present as an educational process of sharing knowledge and creating communities while proposing new relationships between people, nature and technology. Specifically, we study the implementation of a participatory material reuse process in the Scopeli project, a cooperative market in Rezé, France by the architectural organization Atelier Fil (Nantes, France). For this study, part of Atelier Fil's research on participatory reuse is used but an attempt is made to integrate this into a wider framework of ecological, social theories, theories of commons and more specifically of educational commons. As a methodological tool, we use the circular practice-research model in order to present material experimentations in interdependence with theoretical searches. Research on participatory reuse belongs to the research fields of ecology theory, circular economy, participatory democracy and educational commons. In the case of participatory reuse, the 'common' is the knowledge, the know-how, the construction and the space, a set of material and immaterial conditions.

***Maria Dimitriou-Tsaknaki** Thessaloniki, Greece (+30) 6943233107,
riamadimtsak@gmail.com

MuseumEdu 8 / Spring 2024, pp. 251-259

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The study and assessment of the process is leading to conclusions about the usefulness of participatory reuse in terms of the production of collective and shared knowledge as common, the construction of a collective body, i.e. the creation of a community, the relationship between human and non-human, the procedure of an architectural project and the role of the architect. We recognize the educational character of participatory reuse with the equal management of knowledge on the part of the architect and the participants, as well as its inclusive characteristics of gathering, involvement and contribution of different people in a collective project, as main features of the process. On the occasion of participatory reuse, a new culture of material and social relations is outlined through processes of sharing knowledge and creating communities. The research was conducted in collaboration with Atelier Fil, architecture, urban planning and research agency in Nantes, France.

Keywords: participatory reuse, circular economy, participatory democracy, educational commons, shared knowledge as common

Introduction

This essay focuses on participatory reuse of materials which is studied and evaluated as an educational process. It focuses on part of the research on participatory reuse carried out during my collaboration with Atelier Fil¹, from March to July of 2022. In this essay we examine a project of Atelier Fil: an application of participatory reuse process in a construction project. As a methodological scheme for the analysis, we choose the cyclic practice-research model.

Atelier Fil is an organization of architecture and urban planning, which aims to develop project-related research. In particular, it develops methodologies and protocols while studying the process of their application in order to feed the research anew. Atelier Fil deals with the ecological and social dimensions of architecture such as construction with natural materials, reuse of materials, participatory reuse, and organization of educational workshops. For this study, we utilize Atelier Fil's existing research on participatory reuse and attempt to integrate it into a wider framework of ecological theories, social theories, theories of commons and, more specifically, theories of educational commons. In the case of participatory reuse, the 'common' is the knowledge, the know-how, the construction and the space, a set of material and immaterial conditions. At the same time, a new culture of material and social relations is outlined through processes of sharing knowledge and creating communities while the educational character of the whole process is highlighted.

The modern condition as an ecological and social question

Astrid Schwarz and Alfred Nordmann in their article 'The political economy of technoscience' refer to technoscience as those which 'appear to adopt a principle of non-conservation, innovation or infinite renewal, as exemplified by the ambition to expand resources like 'space' and 'matter' (Schwarz & Nordmann 2011: 318-319). They discuss how technoscience tries to overcome a delimited whole, by observing the practices of technoscience from an environmental perspective, i.e. the relationship between technoscience and nature. Specifically, they talk about the ambivalence of pointing out the limits and simultaneously trying to transgress them.

Indeed, an ambivalence arises between the accelerating speeds of technoscientific developments, the ever-reviving innovations and the way in which the physical and moral existence of the environment and the bodies are deteriorating at every moment. Bernard Stiegler (1952-2020), French philosopher and political theorist, commenting on the modern condition referred to a generalized state of 'disruption' (Stiegler 2019a). According to Stiegler, this disruption concerns the current state of knowledge, which, for him, is related to the automation of the relationship between man and technics. In

this light, he recognizes the Anthropocene as a dangerous condition, not only for the life of the planet but also for collective memory and thought (Stiegler 2019a).

This correlation of technical, ecological and social problems, as a critique of the system of political economy, leaves room for an interdisciplinary approach to multiple crises while at the same time pushing us to search for processes that propose new relationships in the contact of humans, nature and technics. In particular, Stiegler's analysis can be used as a tool for the critical study of processes such as for example the participatory reuse of materials and objects in a construction project, which is going to be discussed in this essay. Research on participatory reuse belongs to the research fields of ecology theory, circular economy, participatory democracy and educational commons.

Participatory Reuse

The Western system of knowledge created the bipolar product-garbage, dressing material nature with symbolic dimensions. For the authors of the book 'The Design of Scarcity' the apparent abundance of production of goods hides the underlying production of scarcity (Goodbun et al. 2014). The ways of organizing inorganic matter determined both our relationship with the planet and the social sphere, both the ecological and the social condition.

Reuse, reutilisation, and recycling are modern cases, tendencies that disrupt the balance of management of artificial matter by proposing a transformation of linear time into a more circular one. Reuse is different from recycling and reutilisation because, even if an item's use changes, the basic form of the object is maintained (Huygen 2008). In architectural practice, reuse is chosen as an environmentally conscious process, while participation is used as a different way of organizing and implementing a project. Key differentiating parameters between participatory projects are the initiatives left to the participants for redefinition of constants, i.e. the openness to possibilities, the freedom of involvement of everyone from whatever position they approach knowledge, thereby including the inclusive nature of the process and the orientation of the educational character for 'experts' and 'non-experts'.

We are wondering whether reuse, apart from being an ecological practice, can be an educational process alongside participation. Can material reuse approach the social problem in addition to the ecological one? Could the practice of participatory reuse claim knowledge, know-how, space and construction as commons?

Scopeli project

The project that is going to be studied is the renovation of an industrial building, which functioned as a fitness center, in a cooperative supermarket named Scopeli, in the area of Reze (2017-2019). People from the Scopeli cooperative were the owners of the space. Participatory reuse was proposed as a method of minimizing environmental impacts and, at the same time, as a process of involving a group of ‘non-experts’ in the conception and the construction of the space. The architects of Atelier Fil, together with other professionals, accompanied the participants in all phases, from the collaborative conception to the chantier participatif [participatory construction site].

The project started with regular meetings in order to determine needs, desires and make proposals for the design of the space. At the same time, educational events were taking place in order to familiarize the participants, as a group, with the practice of reuse and co-construction. The project continued with the phase of diagnosis of resources, a collective process of tracing, a first contact with materials and objects. It was essentially about searching and recording available matter into and around the building. This phase was followed by the evaluation of the materials and objects found with the criterion of whether they were useful for the design. After that it was the phase of selective deconstruction of these that were evaluated and were finally selected. Then, the construction began as a series of participatory selective deconstruction sites, craft workshops and participatory construction sites where the collected materials were prepared to be fabricated. They were selectively disassembled and repaired in order to make the desired structures.

My research on participatory reuse began after the end of the project, so for the research conducted, I used archival material (photographs, diagrams), I studied the project methodology, and I participated in discussions with the architects of Atelier Fil about the role of participants, “non-experts”, and the educational character of the process.

From the study of Scopeli’s example, we reached the following conclusions. Primarily, we notice that participatory reuse is more than the combination of reuse and participation. It is clear that one practice supports the other while at the same time they are forming a hybrid, a variation of the classic process of making an architectural project. We come to conclusions concerning 5 thematic directions: the production of collective and shared knowledge, the construction of a collective body, the relationship between human and non-human, the project as a process, and the role of the architect.

1. The production of collective and shared knowledge

Initially in a participatory reuse initiative there is an incentive that helps people get involved. People met, collaborated and participated in an ecological action, in an action of reuse. It was useful that a context was prepared for them, that helped them to come

into contact with each other as well as with the project. In this light they could find their place within it and overcome insecurities or hesitations due to ignorance. It was thus easier to contribute to a common project.

Reuse as management of existing artificial matter appears to be an accessible process. The phases of diagnosis of resources, selective deconstruction and storage in particular required manual work that could be assimilated by people who have not been involved in construction before. For these phases the participants needed the accompaniment of experts in order to be informed about the construction methods. However, the tasks did not require specialized skills but mostly patience, time and trials. When someone is looking for something that can be reused, they enter the process of imagining what is in front of them in a different way. Reuse did not constitute an automated process as participants thought about the materials and adapted and varied the process. People were invited to learn about the technique of reuse and make decisions.

Participatory reuse can be an educational process. Beyond the familiarization with the practice of reuse and the development of individual skills, its educational role concerns the familiarization with coexistence, contribution and involvement in something common, the creation of collective knowledge. Knowledge is created while escaping the unique human body, Stiegler points out (1998). As long as participatory reuse was practiced as an educational process, knowledge escaped the specific professions of the architect or craftsman. It was shared among those who managed to be there as participants. They were trained in the co-management of knowledge and know-how so that gradually the mediation of "experts" will be not necessary.

2. The construction of a collective body

Participants formed a collective body which intervenes. This body should not be perceived as indivisible. Additionally, '(...) we should recognize their multiplicity, beyond the established dualism that heteronormativity imposes' mentions Bampatzimopoulou (2018) proposing a feminist approach to the politics of the commons. People of different ages, genders, and physical conditions could participate in Scopeli's meetings. A community that appeared, acted, dismantled and fabricated was created. The multiplicity of the participants shaped the process.

There was a regular assembly from which decisions were taken with the participation of experts in the role of members. However, the moments of construction were moments open to variation and adaptation of decisions. Tasks were shared with collective responsibility, fatigue and insecurity could be communicated, pauses could be made, roles could be changed so that everyone could find their place in the process. The participants engaged in a collaborative process in which they themselves were called upon to manage difficulties and overcome issues. Paraphrasing Judith Butler, in the case

of participatory reuse we could perhaps speak of the performativity of the identity of the collective body through the very action in physical space and the construction common (Butler 2015).

3. The relationship between human and non-human

Participatory reuse suggests the meeting of people but also the interaction of human and non-human (physical or technical) appearing as symbiotic contact, as interdependence. Technique, as a system, affects human presence at the same time that human thought gives to technique the improbable, the incalculable, mentions Stiegler (Bilmes 2019b). The bodies of the participants were defined by the contact with the materials, by observing and studying them, by their transformation into something new.

Reuse appears as a circular economy practice that interferes with the idealized linear time of the industrial economy. According to the logic of reuse, the lifetime of materials and objects is extended and the amount of waste is reduced. At the same time, participatory reuse favors the search for materials in nearby parts of the project so that no long distances are crossed for transport. In addition, participants are usually people from the area (in Scopeli's case the people of the cooperative). Therefore, they were able to adapt the logic of reuse to local dynamics and get in touch with local networks. A development of a local economy synchronized with the biosphere, was thus favored, in which people participated by developing ecological reflection which they transformed into action while at the same time managing the socio-ecological commons.

4. The project as a process

Participatory reuse favors the involvement of people in the development of a project and the creation of a complete picture of it. Participants were invited to engage with reuse as a holistic process that permeated the project from planning to implementation of decisions.

The final product was not determined only by the decisions of the experts since non-experts were also involved in decision-making, planning and action in the site. The experts indicated some phases, but without strictly defining their limits. The adaptability of the project timeline was necessary since, as mentioned above, participatory reuse is not an automated process, there are many possibilities that arise due to its open nature.

At the same time, the meeting of people with the environment (physical or technical) seemed to be able to overcome the spatial and temporal limits of the project. In the case of Scopeli the participatory nature of the whole initiative (Scopeli coop) helped the

process of participatory reuse and vice versa. The Scopeli community gained knowledge in both technical and organizational issues and therefore now they can self-manage the space and construction. Remembering the moments of meeting and collective action perhaps created the space to look for new moments. The building itself and its space appears as a support, an aid to memory.

5. *The role of the architect*

The involvement of the architect in a participatory reuse process required a differentiated view in the classic process of planning, constructing and managing the economy of a project. The architect's work in a participatory reuse project seemed to react to the generalized automation or proletarianization of knowledge (Stiegler, 2013). The architect's desire for trial with an unpredictable process disrupted their way of working and collaborating. Architects were also trained in a process of unlearning. Decisions about the project could not be made automatically as the architect, at every phase of the project, was based on the needs, desires and decisions of the participants. Participation and reuse determined a development and an outcome that could not be fully known, fully predictable or planned. The architect thought synthetically, while analyzing new cases, contingencies and data.

These improbable bifurcations (which cannot be formed by simple calculations) enrich reality in a way that cannot be reduced to simple algorithms. ('Bifurcate' 2020)

Towards a new culture of material and social relations?

Participatory reuse of materials relates social to ecological claims. It is based on the philosophy of commons and seeks to overcome inequalities by overcoming power relations, regarding the production and variation of knowledge and space. In this essay, participatory reuse was presented as an environmental and social action, as an educational process of sharing knowledge about the artificial and human world, as a useful example of an effort of overcoming discrimination towards the handling of knowledge as a common and less as a definitive and immutable solution. Through continuous reflection, in theory and practice, participatory reuse could be exercised as experimentation towards a circular and more common economy.

Based on the experience from Scopeli, participatory reuse seems to presuppose and suggest the production of a new material culture, a new culture of social relations, a new socio-technical system of knowledge. It suggests another culture of making, the elaboration of a new ontology (Haraway 1991).

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¹ <https://www.atelier-fil.fr/>