

Wooden Barrels and Textiles. An approach towards a sustainable design

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(Published online 14 March 2017)

Abstract

The article follows a direction drawn within the 2015 – the 4th edition of the Question Workshop, the "Sustainability – Education" [1] presentation. The first article emphasized the sustainable attitudes regarding the Romanian territory, with its specific characteristics and it focused around two different components that define a subjective approach towards sustainable development - the "intrinsic" and the "intentional" approaches found in a rather larger context of Romanian sustainable initiatives. As a sequel to this first article, this paper focuses around a particular sustainable attitude in design – that of re-using materials or components of different objects in order to inspire product design while investigating some less familiar ways of material processing. If we think of the two sustainable systems we defined previously, we are turning around this second type of approach, which is the "intentional" one.

Rezumat

Articolul de față continuă studiul început în cadrul lucrării "Sustainability – Education" prezentată la cea de-a patra ediție, din anul 2015, a Workshop-ului Questions. Lucrarea precedentă a pus în discuție două noțiuni – sustenabilitatea "intrinsecă" și respectiv sustenabilitatea "intenționată"- care descriu perspective de dezvoltare actuale în România. Studiul analizează atitudini particulare privind "designul de obiect" : reutilizarea materialelor sau a unor componente ale diferitelor obiecte, în scopul creării unor noi piese. Direcția dezvoltată în tratarea subiectului vizează perspectiva sustenabilității "intenționale" amintită anterior.

Keywords: sustainability, reusing materials, textiles, wooden barrel, eco-furniture, prototype – object

1. Introduction

In the "Sustainability – Education" [1] article two different components that define a subjective approach towards sustainable development were defined: the "intrinsic" and the "intentional" approaches. The "intrinsic" component emphasizes the main principles of sustainability without a specific target and it can be understood in the context of traditional – base societies, as a type of development of traditional organization of a village or a traditional household. The "intentional" component is mainly a defined attitude that appeared in the second half of the 20th century, as a

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result of technological development and had been emphasized by several economic or cultural driven actions (in the wider framework of Romanian initiatives). In the context of this second type of approach, the subject of the present article focuses around a particular attitude in sustainable design – that of re-using materials or components of different objects in order to inspire product design while investigating some less familiar ways of material processing.

As in architecture, product design has reacted strongly as a way to reach a better quality of life and, in the same time, to maintain the natural environment. Materials, as we already know are one of the main components in the wider discussion around sustainable product design. In the last 20 years a continuous growing number of the so called "green materials" has been developed. Such materials have one or several characteristics of the following: they can be made by means of recycling or re-used material content, they can be made from the waste stream, and they are made from a renewable resource, are natural, non-toxic and can be recycled. [2]

2. Re-using material content. Current trends

Objects made of recycled materials define a very large palette of examples. In order to relate to the two initiatives within the Specialized Design 2 Project- Furniture Design Discipline at the FAUP Cluj, we further discuss the recycled textiles and wooden barrels as two main materials – object of study of the above mentioned projects.

In the early 1980s, the Brazilian designers Fernando and Humberto Campana began to explore unusual materials and pieces of furniture made in cardboard, textiles and ropes, wooden pieces from another objects or aluminium wire. They thus became one of the reference names in the field of product design based on re-using material content. Since their beginning as designers, the Campana Brothers describe exploring the industrial areas in Sao Paulo for these materials. They choose to work with these easily found, low budget materials, materials that, in the context of this approach in product design, acquire specific meanings of the existing social context. "Once discovered, they explore the properties and potential of these materials to create forms. They began experimenting with metals, then with natural materials such as bamboo, wicker, recycled paper, synthetic materials". [3] In the last 35 years their objects, often seen as very controversial, had won prizes across the world and were the first Brazilian designers to exhibit at The Museum of Modern Art in New York, the *Project 66* exhibition in 1998.[4]

An example of a leading design competition for sustainable furniture is the Green Furniture Award based in Sweden. The objects of furniture that are chosen to participate at this competition are analysed by the choice and sourcing of the material, the production methods used in order to create the object, the efficient use of materials, the possibility of recycling and the aspects regarding the social responsibility. [5] For example, the project that won the 2011 competition consists of a seating object made of used textiles covering a metal frame as a mesh. As the designer described, it brings into attention a story of the individual by using his worn textiles. It is made by using "T-shirts from friends together with other textiles such as grandma's curtains, the favourite but now worn out jeans etc., melt together visually to form a colourful symphony of one's personal history".[6]

In both of these examples we are looking at some objects less conventional but made with some of the most familiar materials – which are textiles. We can see that through creative ideas and by exploring non-standard methods of composition of these materials – these used textiles lose their insignificance and acquire a certain value.

In the following example the aspect of social responsibility regarding the process of designing using

recycled materials is emphasized. San Patrignano is a rehabilitation community, self-describing as "a home, a family for young people who have lost their way". [7] The community is a Non-Governmental Organization (NGO) that welcomes hundreds of people and operators, volunteers from dozens of countries from all over the world in a therapeutic programme based on education and rehabilitation for young people with drug addictions.

"Barrique: The Third Life of Wood" was a project that has been created as a collaboration between designers and architects - including designers like Chiara Ferragamo, Angela Missoni and Daniel Libeskind - and patients following a therapeutic programme at San Patrignano. The objects created using the recycled oak from the old oak wine barrels were first exhibited at the 2012 Milan Furniture Fair and were further exhibited in the U.S., in Boston, New York, Washington. [8] The objects that were created by both the residents and designers or architects included different types of seats or benches, tables, objects for playing. But, the most important aspect that must be enhanced is that the work with recycled materials is a subject that aims towards certain aspects of social reintegration - the actual built object is not only an object which is intended for a certain user, it becomes a tangible toll for social reintegration.

3. Textiles and wooden barrels. Initiatives within the Furniture Design discipline

In the last two years (in 2015 and 2016), two different approaches determined by external initiatives (one initiated by Antares Romania and the other by The Ratiu Family Charitable Foundation - within a wider collaborative project with the Faculty of Architecture and Urban Planning Cluj), represent the subject of two contests organized within the Specialized Design 2 - Furniture Design Discipline.

In 2015 Antares Romania and the Furniture Design Discipline launched the 4th edition of the Antares Competition dedicated to the FAUP students. The theme of the project was to imagine an object or an environment by using new forms of composition and use of materials resulted from the production process of Antares seats. Thus, the reuse of materials resulting from an industrial production process was an opportunity for exercising the individual creativity and a re-integration exercise of materials within new objects, new forms of expression of the materials. More specifically, students had to imagine new forms using textiles with different colours and textures resulting from the cutting off of chairs` upholstery; ecological leather; sponge (used in creating the softer parts of the backrest and seat) - in form of flat or small pieces; cardboard tubes (the carrier of textiles); metal frames used as a skeleton for seats. The first phase of the project was a school project; in the second phase of the competition six projects / teams of students were selected to build their projects at 1/1 scale, at the Antares furniture factory.

In one of the projects students imagined a multifunctional object made of modules - each module has its own individuality of a different texture of the same material (Fig. 1). In the second project a partition wall (Fig. 2) was imagined using the recycled frames of one of the most common type of chair that Antares Romania produces. Two chairs (one designed for a woman and one for a man) were made by knitting strips of sponge covered with textiles (Fig. 3) and an origami castle used as playground space for children at the kindergarten was imagined by another team of students (Fig. 4). One other team imagined a seating area which could be used at a kindergarten – a seating area for reading – one larger seat for the kindergarten teacher and the others for the children (Fig. 5) and the sixth team imagined a chair made of cardboard and a bicycle wheel used as a seating (Fig. 6).

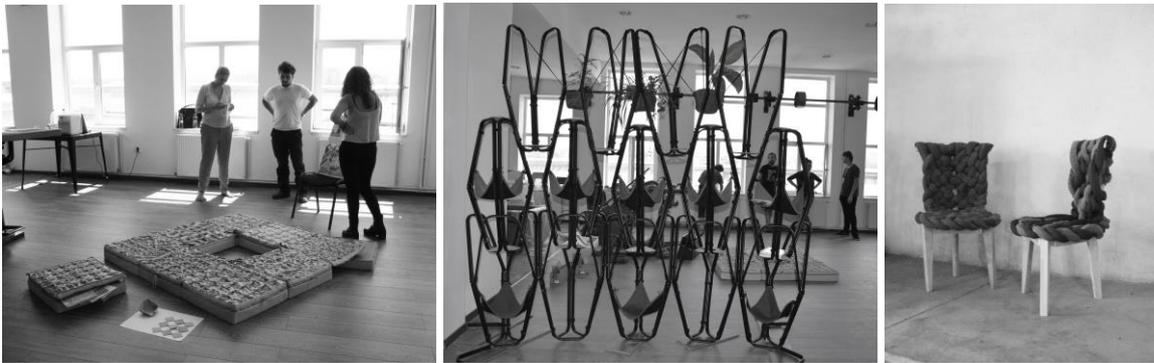


Figure 1. Arch. students Adelina Muntean, Maria Sas – A multifunctional object made of modules

Figure 2. Arch. students Oana Vaida, Ciupercă Emilian - Partition wall

Figure 3. Arch. students Sara Gal, Valentina Honceru - Two chairs (one for a woman and one for a man)



Figure 4. Arch. students Theodora Oniță, Bölöni Botond – Origami castle

Figure 5. Arch. student Larisa Bucătariu - Seating area for children

Figure 6. Arch. students Laura Ghiurtz, Sebastian Ciobanu – Chair made of cardboard and a bicycle wheel

The 1/1 realization, in all of these cases was a great opportunity for students to verify certain details and real proportions experienced before in small models, and, in the same time, a valuable experience of working with specific tools and real materials. The second contest, one initiated by the Ratiu Family Charitable foundation was an exercise to find new forms and expressions of the wooden elements of the beer barrels at the Beer Factory in Turda. Although the industrial activity ended at the beer factory in Turda in 2000, the aim is to bring the place back to public attention through numerous cultural projects that are taking place here under the patronage of The Ratiu Family Charitable Foundation, in collaboration with various foundations and local institutions. [9] The main goal of the project is the shaping of a new image of the site, adapted to the current requirements of the local community and the cultural development of the area. The objects that were imagined followed two main directions – functional objects for the exterior (seating areas, lightning objects) or installation-like objects / used for creating a certain atmosphere or character of the place. These last types of objects created certain compositional or functional directions in the existing site. All of these objects had to be imagined in relation to an outdoor area in the proximity of the entrance of the former factory, objects that emphasized the memory of the place by using these wooden barrels.

4. Conclusions

Based on these two recent experiments, certain conclusions can be emphasized. From the students` perspective, the real advantage, or gain, is the 1/1 realization – an important step where they can

feel the relation with the material and the real scale of the object. In the meantime, this phase can be seen a verifying step for all the details and solutions in the project. Other benefits are the creative solutions in relation to very particular materials – these particular materials had determined in most cases very interesting solutions. One can thus notice how important is to explore non-standard methods and processes, forms to which usual, familiar materials can relate.

From a point of view of technical realization, this experimental approach requires a great effort. As in the case of Antares Competition - the manufacturing process, the creation of a prototype-object comes with a very consistent and non-economic manufacturing process that cannot relate in most cases to a current technological process. Even though the material has a very low cost, this large and sometimes innovative workmanship results in outstanding solutions, but unproductive from a producer's perspective. These prototype-objects can be used in different scenarios – for example the decorative partition wall remained at the Antares showroom as a permanent object in the exhibition – but they will not go further into a series production.

If within the example in San Patrignano - Italy the effort was directed towards solving a social problem, in the first examples (the Green Furniture Award and the ideas of Fernando and Humberto Campana) the artistic component of the objects was emphasized. In the solutions developed at the Specialized Design – Furniture Design Studio, the work with particular recycled materials is a very useful exercise from a teaching perspective. It can be observed that an experimental approach led to several unusual solutions regarding the materials - the way in which these materials can adopt unexpected forms.

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