Recycle, ideas from the past

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recycling and reuse

Recycling is a highly complex, but also a universal phenomenon, whether studied from today's or from the perspective of past cultures and communities. It is a set of social, economic, political, as well as religious ideologies of a society or an individual. However, a wider understanding of the phenomenon has still been neglected within the scope of social sciences and the humanities. The ways and motivation that drove man in the recent or distant past to repair, reuse and recycle objects and /or materials are deeply rooted in different social spheres, but primarily in man himself. The contemporary definition of recycling refers to the collecting of used, i.e. utilized or discarded, materials, as well as to their transformation into constituent raw materials that are then used to create new products or reusable materials. Collecting, sorting and creating new products can help reduce the amount of waste, replace the need for the original raw material, reduce energy expenditure, and air and soil pollution. In the last one hundred years, people have become highly attached to practicality, availability, fashion, as well as constant technological change, and the increase in mass production has resulted in what used to be unimaginable amounts of waste.

The mission of contemporary recycling practices is to strive towards the reduction of packaging waste, to invest in renewable energy sources, to raise awareness about the negative effects of mass consumerism, to encourage the design of objects that can be repaired, that last longer and are safer, as well as to encourage people to take care of and repair things. All of this includes not only changes in use practices, but also in production, that should, ultimately, have a

significant impact on global economy and politics, and, consequently, have positive effects on society and the environment. Recycling and reuse passed through various phases and had different meanings for society, starting with the industrial revolution, and leading to increased consumerism and the creation of a consumer society. However, in the past, these activities had a completely different meaning, because man's awareness of ecological problems is connected to the contemporary way of life and has become a constituent part of global economic and political events. The reuse of objects is an indicator of cultures that do not discard things, but strive to reuse them, and from that we can learn a lot from the past.

recycling in the past

In the past, recycling was a part of everyday life and was done almost routinely, just like today. It can be said that the phenomenon of recycling is temporally universal, and the reasons for it are mostly based on sustainability, the renewal of resources and raw materials, meaning that recycling was, essentially, of a practical nature. In the past, recycling was not seen as a moral or ethical choice, nor was it brought on by trying to preserve the environment, as it is usually thought of today.

Recycling was directly influenced by changes in technology and the materials associated with such changes. It also occurred when the value of a certain material increased in situation when raw materials or artisans who knew how to process it become less available. Changes in the intensity of recycling a certain material in the past can indicate specific economic situations or cultural transformations.

Although the practical nature of recycling

was of primary importance in the past, just like today, there are numerous examples where practicality partially overlaps with ideological motives and the symbolic re-allocation of individual artifacts.

Despite the complexity of recycling patterns, today and in the past, evidence of this practice can be found in all segments of human society, in both recycling and reusing everyday things made of different materials (pottery, glass, bones, stone, metals, textile, wood), and in the "recycling" of space (structures, cemeteries, sacral spaces, and the like).

materials and packaging

In the past, man used different natural materials, and the most common ones discovered by archaeologists during excavations include: pottery (clay), bone, and stone, while artificial materials, such as glass and metal alloys, appear somewhat less often, depending on the studied historical period. Precisely such durable materials contain traces of use-wear, repairs, reuse or material recycling. The main reason for the frequent practice of repair, reuse or recycling of objects and materials was of practical nature, and the focus was on the maximal usability of raw materials - a consequence of limited resources or their limited availability.

STONE

It is evident that technology of knapped stone extended the duration and usability of some artifacts through sharpening, retouching and recycling. There are numerous archaeological examples of using much older, damaged stone tools that were reused, repaired or retouched

in a completely different context. In some cases the reuse of a discarded artifact occurred after several thousands of years. It is assumed that man consciously collected, chose, and selected such discarded material, aware of the skill and knowledge of his ancestors.

BONES

Finds of animal bones within the remains of settlements from the distant past are mostly the result of food consumption. The availability and the physical, chemical and mechanical characteristics of these mate-

Prehistoric stone axe with a hole for hafting and a damaged axe of the same type transformed into a hammer

rials make them suitable for the production of different artifacts (tools and weapons, decorations, artistic objects, and the like). Apart from that, it is known that certain traditional communities ascribed certain characteristics to them (such as strength, cleverness, aggression, etc.), and, consequently, to their byproducts. The processing of bones, their preparation and transformation into usable raw materials required special skill, and, if assumed they were also ascribed symbolic properties, the fact that many bone artifacts were repaired after being damaged is not surprising.

METALS

Metal is produced from natural raw materials - ores that, in the past, as well as today, have a significant effect on the development of technologies, and economic and political progress. These are non-renewable energy sources, and their stores are drained through unreasonable use, so, apart from controlling their expenditure/use, it was necessary to recycle them. In prehistory, the recycling of metal artifacts (copper, bronze, gold) had a significant impact on the amounts of specific artifacts, and such practices can also largely influence archaeological interpretations (the hidden artifact effect).

Many hoards of bronze finds of the, so called, Urnfield culture (14th-11th cent. BC) were discovered all over Europe. Such hoards contain complete, but mostly fragmented artifacts that were, at a certain point in time, buried (hidden). It is assumed that the metal finds were buried out of practical reasons (artifacts collected as raw materials for re-melting), even though, from today's perspective, it is impossible to completely understand all the reasons behind such decisions that are, in interpretations, often connected to votive offerings made in the past.

Packaging (paper/cardboard, plastic, wood, metal, glass, textile) includes everything

that, in relation to a product, has the function of protection, transport, use, and informing, and that must, before or during content consumption, be placed aside or discarded, thereby becoming waste. The main difference between packaging today and in the past is not only in the choice of material, but primarily in the multiplicity of storage. In the past, provisions were saved and stored in ceramic vessels, while certain food items were kept in wooden chests, textile bags, woven baskets, stone vessels, or in the ground.

Roman-age repaired vessel made of copper alloy

Traces of multiple repairs on a prehistoric ceramic vessel

POTTERY

Pottery, i.e. ceramic vessels, is the earliest and the longest-lasting material used for storing, transporting and thermally processing food. Due to the function and meaning ascribed to ceramic vessels by individuals and societies, repairs were recorded on vessels dated to all periods of human history. The frequent use and transporting affected their lifespan, and broken and damaged vessels were repaired in settlements regardless of

the high level of pottery production. Evidence of repairing is seen through subsequently perforated holes near the breaks that were then tied together with organic materials such as rope and leather, or with iron or lead rivets. Sometimes the fragments were glued together with lime, bitumen or birch resin in order to fixate the vessel body, thereby making the vessel suitable for some other use. Apart from that, broken ceramic vessels were reused for different purposes, so that modified and additionally processed fragments appear in archaeological and ethnographic contexts as spindle whorls, weights for fishing nets, pendants, game tokens, tools used for processing pottery or leather, spoons, warmers, substrate used to transfer embers, or as moulds used to produce new vessels. As building material, they are found as parts of the bases of hearths or bread and pottery kilns, but were also used to produce ceramic tesserae for flooring and mosaics, while crushed fragments were used to prepare water-resistant mortar.

GLASS

Glass is an artificial material made of natural raw materials (obtained by melting basic raw materials: quartz sand, soda and limestone), and was invented in prehistory. In the past, the practice of recycling glass was probably accepted due to technological and economic reasons such as raw material shortage, the reduction of production costs, or the demand for specific products. The recycling of glass intensified with increased production during the Roman period and the Middle Ages, and, even today, Roman glass is highly valued and reused for the production of jewelry and other items. Glass from the latest periods of prehistory was recycled in a similar way, thereby attesting to human awareness of the value of resources and the continuity of its use.

Roman-age balsamarium in the process of recycling and renewed production

symbolic "recycling"

There is a list of examples where artifact reuse became part of a ritual or was purely symbolic. In the past, such activities took place on daily basis, and are still a part of the contemporary lifestyle and relation to artifacts. In these processes, the main role was played by artifacts that most often did not belong to the period in which they acquired their symbolic meaning, i.e. their "manufacturing date" is probably a lot older, making the artifacts some kind of memorabilia. The reasons for their safekeeping, that is, their symbolic use, are never easy to explain, just like the connection between man and artifact or what it symbolizes. The reuse of

an object does not only include the change of its function, but can also reflect the social identity and status of its owner, as well as the social, economic or symbolic meaning that the item held for the individual and/or the community. In that sense, the meaning of an artifact is not static, but gets transformed with the change of its context of use. In every new situation where an artifact acquires a new meaning (new function), new relationships develop between man and artifact.

POTTERY

There are no artifacts that have been found as often, and under as many different circumstances as ceramic vessels or their fragments, as attested to by a series of ethnographic and archaeological sources. According to this data, the vessel represents a personification of the human body made from the soil, as indicated by terms used to describe its parts (e.g. neck, shoulder or vessel body), and their life expectancy is a metaphor for the life cycles of man. In that sense, the vessels reflected continuity and identity, and symbolized the birth of life, whereas broken vessels symbolized death.

AXES

According to ethnographic sources, accidentally discovered prehistoric stone axes (folk expressions: *stone arrows, arrow stones* or *arrows*) from northwestern Croatia were ascribed supernatural powers, especially for the protection from lightning, the healing of cattle, the prevention of disease, misfortune and maleficent spells, and were placed into the thresholds, walls and attics of houses. Similar customs were recorded across Europe, and there is evidence that such practices of "recycling" stone axes, followed by their symbolic reuse, are a lot older and can be traced back to the Bronze Age.

the transformation of structures

Stone is one of the oldest and longest-living materials that were recycled. The exploitation of stone, as well as processing and transport, require great costs and tremendous effort, so the reasons for re-using older stone monuments are primarily economic. In a sense, Roman age cities on the Adriatic became stone queries during the Late Antiquity and younger historical periods. Stone monuments are often found displaced from their original position, and building material that was primarily used to construct utilitarian and sacral architecture is secondarily used for different construction purposes (spolia).

the transformation of space

The transformation of space essentially represents the continuity of man's impact on the environment. Such effects changed with generations, cultures and natural conditions. Man's awareness of his own transiency, his ancestors and past cultures is especially visible and long-lasting once its mark is left on the environment. Such occurrences can be viewed as the systematic use of the same area, be it for the same, or some other purpose. In these examples, the reasons for "recycling" are highly complex, and enter different spheres of the human conceptualization of both the material and the spiritual, but, this time, in a given landscape.

Even though, in the past, recycling was of practical nature, same as today, examples where practicality partially overlaps with ideological motivation and the symbolic re-allocation of specific artifacts cannot be neglected. Despite the complexity of recycling practices, the evidence seen on archaeological artifacts represents potentially very valuable records on the different spheres of life from the past.

Plate bridge made out of standing tombstones (stećci)

IMPRESSUM

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Figure on the back
Prehistoric tumulus with subsequent interventions, presumably of military character (from the First World War)

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