

4th International Symposium

The Multiple Lives of Glass

Historical perspective on recycling (Antiquity-1960)

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Le Ramasseur de verre, 1907, AD Hérault 2 Fi CP 1203 Béziers



Stock de verres brisés d'un atelier de mosaïque ©S.Lagabrielle

Overconsumption and the promotion of disposables have made our societies aware of the major need to recycle (Monsaingeon). But what does the term 'recycle' actually mean? According to *Recyclage*, the French Academy defines "the action of processing a substance or product that has already been used in order to allow its reuse." Both raw material and a product, glass opens the field of possibilities. In the very process of its manufacture, glass requires the addition of broken glass, that is to say, the "recovery of raw materials" (recycling), and, as shaped glass, it undergoes a "lateral recycling" (lateral cycling; reusing), which implies a possible change of hands, without alteration of form or function (Schiffer, Smail et al.). But alongside these two lives, the glass object can be "recovered" and give rise to other uses not originally envisaged which, most often, involve a change in form and substance. Indeed, it allows, in a more unexpected ontological cycle, the practice of 'a different use or repurposing' (Schiffer, Smail et al., Hay, Chini).

If current European regulations take glass recycling into account, and if glass is indeed recognized in people's minds, the history of glass recycling deserves a comprehensive specific study that highlights its recycling qualities, both early (cullet/cullet enters the production chain from the very beginning), infinite, and lateral. In the past twenty to thirty years, pioneering and decisive work in archaeometry has advanced knowledge of glass recycling during Antiquity and the Early Middle Ages, and beyond, whether in the Near and Middle East, in the West (Freestone, Ceglia, Pactat), in Africa, or in the Indian Ocean (Dussubieux, Craig, Schibille). They emphasized the originality of the blue glass circuit (Whitehouse, Velde, Gratuze, Billegaray), as well as the mastery of recycling in Venice (Verità & Biron). Rich articles, most of them old, have, for their part, provided information on the domestic and inventive reuse of bottles and flasks in the New World and on the organization of their collection by industrialists, from the 18th century to the mid-20th century (Busch, Stuart). In this type of practice, the case of Europe has only been superficially addressed.

Also, several new perspectives could be considered to examine the multiple lives of glass, regardless of the orientation and type of production envisioned (precious glass, colored glass, containers, common or high-quality glass, glazing or stained glass...).

- The study of compositions encourages both a confrontation with the "recipes" and treatises of the time, as well as the identification of spatial-temporal markers and the detection of periods of transition. Attention will be given to the proportion of recycled glass and its impact on fuel management, on the quality of crucibles, the rendering of colors, the homogeneity of the glass...
- To contextualize the areas and circuits, we will focus on the circulation of broken glass, which involves the organization of a collection, a maritime, river, and land route, regulations and taxes (duties, tolls, etc.), and economic management (transaction costs, market value, etc.). We will take into account the various actors in recycling (large landowners, religious or secular institutions, craftsmen, etc.).
- Storage locations deserve detailed analysis, whether it concerns a cargo, an urban or rural area, a public/religious complex, a workshop, or a domestic dwelling. Inside the premises, much information can be collected about the type of storage (in bulk, amphora, barrel, basket, etc.), the volume occupied, its weight and nature (lamp, dishware, glazing, mosaic, etc.) and its possible sorting (size, color, quality, etc.).
- The reuse of bottles and flasks (wines, beers, spirits, sodas, medicinal potions...) has been observed at various discovery sites (industrial, commercial, domestic, maritime, colonial sites...). The marks provide evidence of initial use (stamps, labels, wear marks...) and inform about the type of objects recycled, whether they were reused individually or through an organized deposit system, and also about their users (activity, social level, gender... of the holder). They can reveal a time of economic tension and more autonomous organization.
- In the latest studies on the history of architecture, glass has been barely or not at all considered (Arnoux 2024; Bernardi & al, 2018 and 2024). However, the archives do mention "new glass" and "old glass," which implies the involvement of craftsmen, changes in size, reserved secondary locations, a certain value, or, conversely, a downgrade of the reused glazing.
- For certain glass objects, reuse can become "enhancing." This is demonstrated by archaeological discoveries of funerary vessels, holy water flasks, reliquaries, smoothing tools with prophylactic virtues, the preservation of "beautiful stained-glass windows"... Any sign of wear, breakage (Chinni), any addition of mounting elements, lids, and other devices on the artifact unearthed or on the object preserved in church treasuries (George) are all indications that add to the interest of the discovery sites and textual sources.
- Finally, musical glasses (Benjamin Franklin's Glass Harmonica, 18th century; Cristal Baschet from the 1950s...), silvered glasses from collectors, or other original artistic creations, do they attest to a "recycling that transforms replaceable and replaced objects into irreplaceable objects" (Demoule).

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