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Cooperage and woodturning in mediaeval towns from northern Poland

Doctoral thesis' summary

Wooden artefacts discovered in archaeological context are usually problematic in conservation and analyses, often seen as far less informative than metal, ceramic or leather objects. Nonetheless, researchers emphasise that wood was the most commonly used material in past societies. Still, a great number of wooden objects found during excavations have not been analysed and published.

Cooperage and woodturning are two specialized woodworking branches, which developed broadly in middle ages. Although both were practised in Europe from at least 1st century AD, mediaeval towns became the centres in which they achieved its higher level of specialization.

Cooperage is a craft of building vessels from staves, which are bind with hoops. Main groups of coopers' products are small open-topped vessels (bowls, mugs), large open-topped vessels (buckets, pails, tubs) and enclosed containers (barrels, butts). Open-topped vessels were objects of everyday use for preparing and serving food, storing goods, carrying water, dairy production, etc. Their manufacture was easier than barrels', they were often made of fairly cheap and available coniferous wood species – pine, spruce and fir. Barrels, on the other hand, were more sophisticated products, used for storage and transportation of valuable goods like beer, wine, honey or wax, often transported for long distances. Barrel manufacture was far more demanding as the containers had to be durable and watertight. This type of vessel was made of staves which were bend, most commonly of valuable oak wood. Hoops in all mentioned groups of vessels were also made of wood at least until 19th century.

Woodturners produced a variety of objects by cutting, carving and smoothing the solid wood piece on a lathe. Mediaeval lathe was a machine of simple construction, empowered by a craftsman himself or with help of an assistant. The lathe develop a rotation movement on attached piece of wood, with a force that allows it to be cut with a chisel. Two turning techniques were used: spindle-turning (cutting along with the grain of wood) and face-turning (cutting across the grain). The first was practised for manufacturing objects like spindles, handles, candlesticks, chess pawns and furniture elements which are generally slim and narrow. The latter was applied to produce wider and more rounded bowls, lids, cups and plates. Turners used to choose for their products hard and dense wood of ash, maple and yew or decorative but less durable alder and birch.

Activity of crafts in settlement can be identified with presence of complete artefacts or their fragments, unfinished products, production waste and woodworking tools. Collections of late-mediaeval products manufactured by coopers and woodturners, which are useful for reconstructing

the production process, have been found mostly in northern area of present Poland: in Elbląg, Gdańsk, Kołobrzeg, Międzyrzecz, Puck, Stargard, Szczecin, Toruń and that extent of material available for analysis determined the territorial range taken into concern in dissertation. Only one vast collection from southern Poland have been published, from Wrocław in lower Silesia region, which is going to serve as a comparison. Three unpublished collections: from Gdańsk, Elbląg and Toruń have been analysed specifically for the dissertation. During the query not only finished products, but also objects on different stage of manufacture, production waste and woodworking tools have been identified.

Apart from archaeological data, historical sources are useful in reconstructing the mediaeval craft. Documents indicate number of craftsmen and their specialisations, whether they formed a guild or not, also wealth and status of guild's members, prices of manufactured goods and scale of production. A question of gaining wood for craft and forest management is interdisciplinary, combining both historical and botanical knowledge. Reconstruction of manufacturing process must consider technological advance, wood properties and availability of material. Consultation with craftsman working with wood on everyday basis is necessary to understand the process.

Evidence of activity performed by mentioned craftsmen have been found in archaeological material during excavations run in almost every site located in town of a mediaeval provenance in present day Poland. Wood as an organic material usually rarely survive in archaeological context, however it is possible in waterlogged deposits without access of oxygen. Conditions favourable for preserving wooden artefacts occur in fast-growing layers on the tenements' backyards and in latrines, both rich in organic material. Taking into consideration, that any object made of wood, which was no longer in use, could be re-used or burnt, number of wooden artefacts found on archaeological sites is enormous. This indicates that wood was the main material used for producing everyday objects in middle ages.

The main aim of dissertation is to analyse and describe the cooperage and woodturning production in mediaeval town, performed as specialized branches of craft. Analysis are based mainly on archaeological finds with addition of historical sources as well as botanical and technical data about wooden material. Assuming that wood was widely used in middle ages for making everyday objects, research on such products are fundamental for understanding life of people in every social class in the past.

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