

Tracing the Trigger of Social Change in the Medieval Town through Imported Food, Objects, and their Biographies

ABSTRACT Quantitative analysis of imported artefacts and ecofacts is a method often applied to study trade networks and cultural contacts of the medieval town. Even though such studies may be indicative, they fail to reveal the societal impact of such networks. We suggest expanding the quantitative analysis with a contextual analysis using the concept of object biographies. A contextual approach will allow us to assess to what degree cultural contacts influenced and changed the everyday lives of town dwellers. The argument is explored through a case study based on the archaeological record of Odense in Denmark covering the period c. AD 1000 to 1500. The analyses show that the increase in imports in the fourteenth century is an expression of increased connectivity, mobility, and cultural exchange in the north-west European and Baltic region. It also shows that it was influential enough to change the social practices related to table culture and hygiene measures.

KEYWORDS Archaeobotany; urban archaeology; Denmark; import; object biographies; medieval; trade networks.

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Introduction

The presence of imported artefacts or ecofacts in the archaeological record is tangible evidence of patterns and processes related to networks and interaction on an interregional scale (Knappett 2013, 4). The imported artefacts are not just an expression of commercial contact. They also indicate cultural contact through which other aspects such as language, ideas, beliefs, values, norms, and practices could be transferred or translated into being part of local daily practices, standards, and lifestyles (Gaimster 2014; Jennings 2017, 15, 60; Mehler 2009, 89; Roslund 2007, 136–39). Thus, changes in patterns of imported goods and changes in practices may reflect a change in cultural influences.¹ Whether this change of cultural influence reflected in the imported goods actually made a difference in the daily lives of people and their worldview can only be studied in the patterns of interaction between the objects and people — in the way people would use the imported goods. To fully understand this relation, it is necessary to perform a close contextual analysis that involves artefacts, ecofacts, and structures as well as their cultural biography. A contextual analysis will shed light on the role of objects as new ideas, norms, and practices are introduced and consolidated.

- 1 See also Dillian and White 2010 and Schortman and Urban 1987 for reviews of theories and models of social processes related to trade and exchange.



Figure 2.1. Prospect of Odense c. 1593. After Braun and Hogenberg, *Civitates orbis terrarum*. The excavated area is marked with a circle. Public domain.

Through the archaeological context and analyses of the object assemblages, it is possible to study how artefacts were manufactured, distributed, put into use, maybe reused, and finally discarded. This biographical approach highlights the interplay between human and object. Alternatively, as Igor Kopytoff (1986, 67) has put it: 'Biographies of things can make salient what might otherwise remain obscure'. Where a classic *chaîne opératoire* approach mainly focuses on the technological and functional aspects of artefacts, the biographical approach offers an opportunity to study the material in its social and cultural context and the cognitive dimensions related to their life cycle. It allows us to explore the practices related to objects and the transformation that these go through in their life history. Artefact biographies offer a methodology that will structure the reconstruction of the processes and dynamics related to the biography of the object and nuance the understanding of the social role of objects.

Imported artefacts and ecofacts are often analysed and discussed separately.² In this study, we will combine the analysis of artefacts and archaeobotanical remains since they are both essential elements in people's everyday lives and often appear in similar daily practices such as eating, dining, or preparing food. A combined study will provide a broader view of trade and cultural networks.

Food in archaeological contexts can provide information on past subsistence, but it can also be informative on past economic systems, culture, and social diversity. Food preparation and the access to specific food types are generally associated with gender, social status, group differentiation, and identity (Palmer and Van der Veen 2002). Identifying luxury food items may add to the understanding of changes in, and the structuring of, past societies. However, the fragmentary nature of the preservation of organic remains, as well as biased sampling methods, mean

2. E.g. several examples in Dillian and White 2010; Gaimster 2014; Karg 2007; Mehler 2009; Roslund 2007.

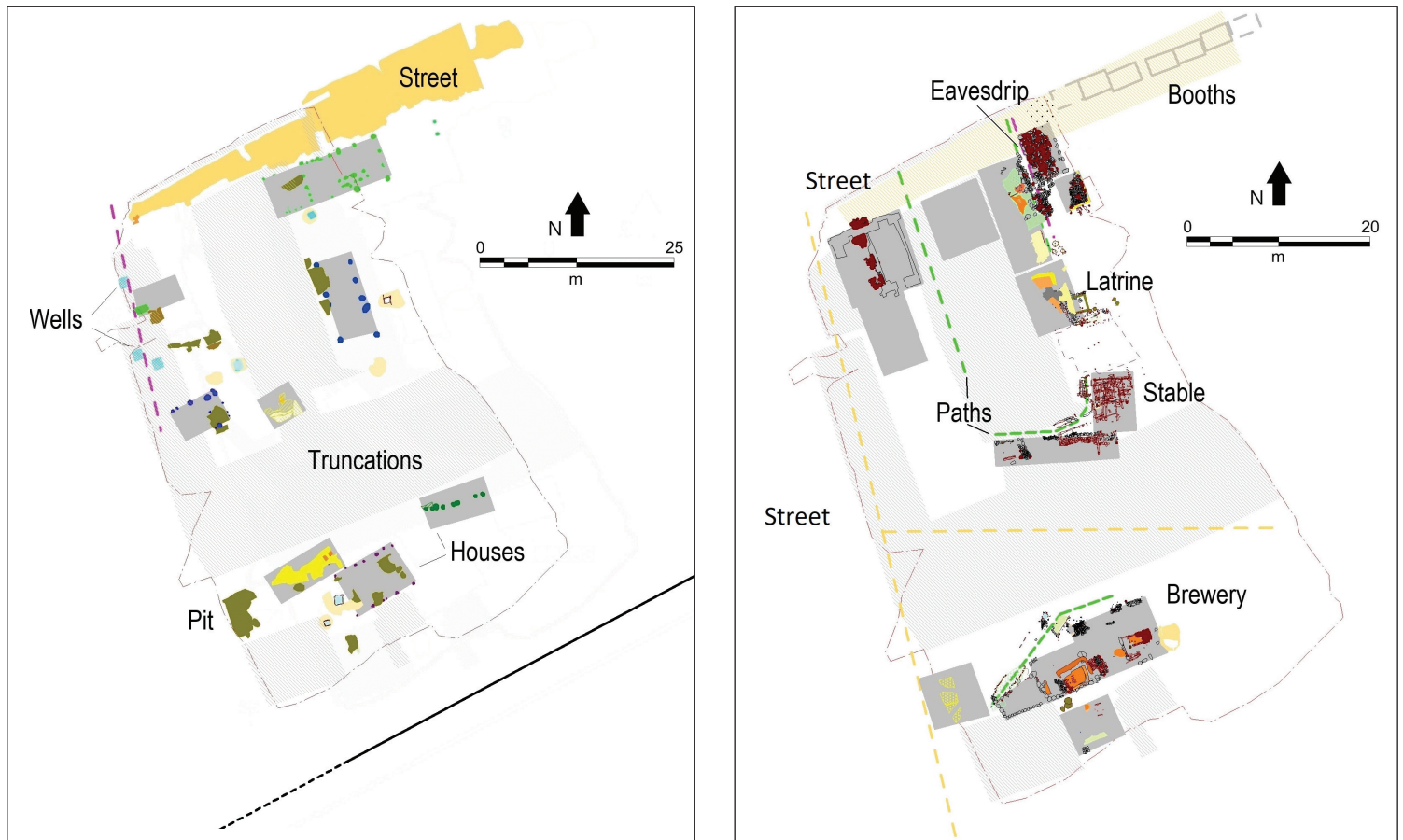


Figure 2.2. The excavated area in Odense. To the left, the settlement in the eleventh century. To the right, the fifteenth-century settlement. The dashed lines are suggested streets or alleys; the red dot-dash line marks the excavated area; the grey rectangles are suggested buildings; the large yellow area to the north is the street; the light grey areas are areas without preserved archaeology; the remains to the east of the excavation border are from a later excavation campaign (OBM9776/13-01-2016). Illustrations by K. Haase.

that food as a marker of culture or status as such can be difficult to recognize in the archaeological record (Palmer and Van der Veen 2002). The very few written sources or direct evidence for food traditions in the medieval period in a Danish context may also make it more challenging to interpret the botanical record. Food may hold economic or social importance, but this possible distinction is not visible from the food remains alone; it needs to be seen in context. Finding botanical remains in domestic or non-domestic contexts may be of importance when interpreting the food's economic or social value. Integrating the context and the associated material culture may present a fuller interpretation of the significance and role of the food remains.

In the following, we will investigate cultural networks and their impact on society seen through food, imported goods, and their biography. The argument is developed through a concrete example from the archaeological record of the medieval town of Odense in Denmark.

The Case Study

Odense is currently the third-largest city in present-day Denmark, and it was one of the largest towns in medieval Denmark. In the medieval period, towns were centres of consumption and gateways where imported, regional, or local goods were redistributed to smaller towns and the hinterland. As an example, written sources testify that the inhabitants of Odense traded oxen, horses, grain, and animal hides to other towns in the late medieval period (Poulsen 1988, 155, 161, 199–200; Hybel and Poulsen 2007, 20). Therefore, towns in general, and Odense in particular, provide an excellent case for the study of imported artefacts and ecofacts and the societal impact of interregional networks. Another vital aspect to the choice of Odense as a case study is that extensive excavations (site code OBM9776) took place in the medieval centre of the town from 2013 to 2014 (Fig. 2.1). A contextual methodology with extensive sieving and sampling for archaeobotanical as well

as zoo-archaeological analysis was applied (Haase 2017). The archaeological strata presented excellent preservation conditions for wood, bone, and other organic material. An extensive find assemblage as well as well-preserved structures, such as stalls, houses, stables, latrines, paths, roads, fences, manure heaps, and other structures from the eleventh to sixteenth centuries,³ were uncovered (Fig. 2.2). Without the contextual approach and extensive sample strategy, it would not have been possible to perform analysis on object biographies or gain useful insights into the development of imported goods and foodstuffs.

Despite the size of the excavation, the site is not representative of Odense as a whole. In the medieval period, it was located in the town's centre close to the town hall, the cathedral, and the main thoroughfare (Fig. 2.1). Written sources from the fifteenth century testify that high-status artisans, merchants, doctors, and members of the town council inhabited the area (Christensen 1988, 158). The image we get from this particular site may therefore reflect the well-off, the well-connected, and possibly the 'first-movers' of the town, which is vital to keep in mind when discussing the results of the analysis.

Identifying Imported Goods

As mentioned above, many archaeologists have discussed imports and the implications of imported goods when seen as empirical evidence of intersocietal contact (e.g. Dillian and White 2010; Gaimster 2014; Naum 2014; 2016). When discussing import, there is the added task of identifying imported goods and differentiating them from local goods (Schortman and Urban 1987). In this process, it is also essential to analyse the relationship between local/regional and interregional goods to establish the relative significance of import.

In this study, we see imported goods as objects that are of non-local and non-regional origin and were transported to the town through trade, as gifts, or as personal belongings (Dillian and White 2010). Whether an object is of non-local/regional origin can be defined by species or provenance analysis, or through information in written sources on their provenance. The provenance of animal-based resources (e.g. leather, bone) can be established through species analysis, assessing its ecological characteristics or by applying isotope or protein analysis. An assessment has shown that in most cases, bone and leather from OBM9776 was of local or regional origin (Brandt, Ebsen, and Haase 2020; Østergaard 2016;

2018). Palynological and macrobotanical studies can inform us whether particular plant and wood species were part of the local flora or not. Chemical and mineralogical analysis can be carried out to establish the origin of artefacts such as ceramics, glass, and jewellery. However, in this study, traditional typology has been used as a means of provenance for this group of artefacts (the clay type, shape, colour, decoration, etc.).

In some cases, it can be difficult to distinguish between local/regional and interregional products. Goods such as grain, iron, cloth, and beer could be produced locally or within the region of medieval Denmark. Yet we know from written sources such as the Lübecker poundage accounts that these items were imported to Denmark and probably also Odense in the medieval period (Hybel and Poulsen 2007). The import of products that could be produced locally may be explained by demand outstripping local supply for specific goods. It may also be that a particular product — such as German beer — is preferred (Hybel and Poulsen 2007, 366). It is not possible to ascertain when this is the case for a specific group of artefacts or ecofacts. However, it is something that must be considered in each case. In the following, the focus is on imported artefacts seen as the expression of an interregional network. Therefore, objects have been defined as local/regional when there was doubt concerning their provenance. This decision leaves an unspecified number of imported objects within the local group. We assess that this error is of little significance to the aim and results of this study (Table 2.1).

Ecological characteristics of plants may provide information on the local or non-local origins of the remains. Botanical remains are considered exotic when the source material cannot grow locally because of climate or other constraints. Examples are fruits with a natural distribution in the Mediterranean region or fruits and spices derived from Africa or Asia (e.g. Livarda 2011). While food remains from a different ecological background can be assumed to be of exotic origin, it is more difficult to distinguish between the local, regional, and exotic origin of plants with broader ecological distributions. Finding exotic plant remains in archaeological settings may therefore be an indicator of import or other types of long-distance networks.

In some cases, it may even be possible to distinguish between local and regional sources of non-exotic botanical remains. Still, it is difficult without provenance studies, such as isotope analyses. A broad natural distribution of plants makes it difficult to interpret whether a particular type of plant has been grown near the town, or whether it

3 All years are AD.

Table 2.1. The distribution of objects and products present in the archaeological record of OBM9776 according to their relation to an interregional or local/regional network. Source OBM9776/16-05-2013. Data processed by K. Haase and N. Hammers.

Interregional Network	Local or Regional Network
<ul style="list-style-type: none"> • Lead/tin • Copper-alloy objects • Gold • Glass objects • Belgian redware • Andenne ware • Proto stoneware • Paffrath ware • Pingsdorf ware • Rouen ware • Baltic burnished ware • Lübecker ware • Stoneware • Grimstone ware • Crucibles from Hessen • Clay pipe • Whalebone • Rock crystal • Quernstone • Whetstone • Stave-built vessels • Barrels • Walrus tusk • Scallop shell (pilgrim badge) • Hops • Bread wheat • Grape seeds • Fig seeds • Spices • Iron objects/iron slag 	<ul style="list-style-type: none"> • Glazed and unglazed local earthenware • Baltic ware • Antler • Leather • Amber • Textile • Mussels • Timber • Wooden objects • Bone objects • Animal and fishbone • Bog myrtle • Apple/pear • Plum/cherry • Nuts • Strawberry • Raspberry • Spindle whorls (clay) • Travertine (building material)

was imported from its hinterland or other parts of Denmark. Written sources may hold information about which economic plants were procured from the regional area. Contemporary depictions of cities and city maps showing orchards may be evidence for the local cultivation of fruits. Nevertheless, the local cultivation of fruits in orchards in or near the

town does not exclude possible import of fruits from regional settings.

A plant species that might give information on import from regional settings is bog myrtle (*Myrica gale*), which in Denmark is predominantly distributed in Jutland, and rarely occurs in other parts of the country. Archaeobotanical studies also show that the highest quantities of bog myrtle are found in Jutland, while fewer are found in Funen and Zealand.

The distribution of artefacts, raw material, and foodstuffs indicate that Odense depended on its local or regional network for essential everyday goods such as cooking pots, building materials, and foodstuffs. In contrast, an interregional network provided luxury goods such as precious metals and refined tableware.

The goods that represent interregional networks show a great variety. However, defining their exact geographic origin is, in most cases, very difficult. Figs present an interesting example. The natural distribution area of fig is in the Mediterranean region and parts of the Caucasus (Zohary, Hopf, and Weiss 2012). Over time, figs have been brought into northern parts of Europe, where there have been attempts to cultivate it, with various degrees of success. Today figs can be grown as far north as Denmark and Sweden, but whether figs found in Denmark in the Middle Ages were grown locally is unclear. Considering the economic demand of figs, we can assume that this fruit was imported in larger quantities to meet needs.

The figs found in Denmark may have been imported from the Mediterranean area, such as Portugal or Cyprus. Still, archaeologically it is not possible to establish the exact trade links. Strontium isotope analysis may provide detailed insights into the provenance of the material but cannot aid in finding the paths of trade. Written sources may, to some extent, shed more light on the complexity of the route figs may have travelled. Carsten Jahnke (2016) has studied the Hanseatic fig trade with an example of the merchant Hildebrand Veckinchusens and his trade with figs at the beginning of the fifteenth century. In this period figs were imported from southern Europe and redistributed through towns like Cologne and Bruges. In 1420, Hildebrand had difficulties selling his figs in Cologne. He then reloaded them, separated them into smaller quantities and sent them to Mainz and Koblenz. Hildebrand also sold figs in Hamburg, Lübeck, Danzig, Tallin, Narva, and Novgorod. From here, other merchants would have redistributed them, and some would end up on the Scandinavian market. The story of Hildebrand underlines that trading routes, transport, and distribution of goods are not straightforward, but goods

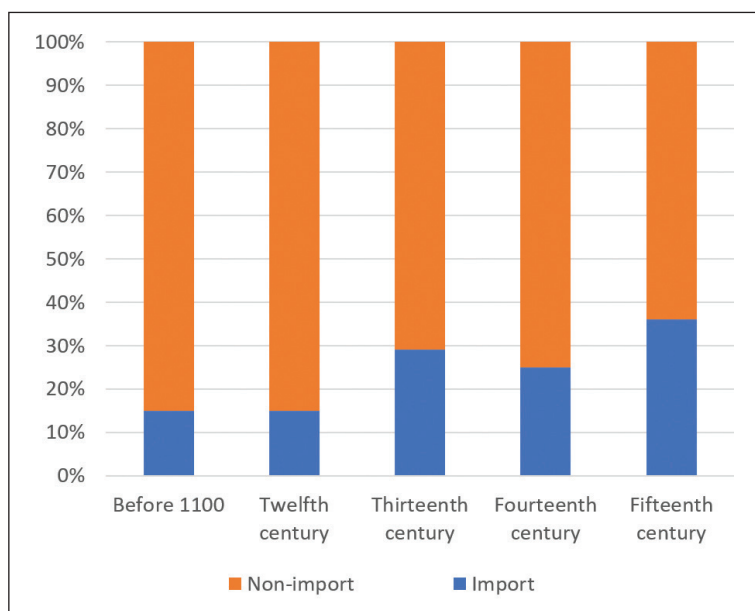


Figure 2.3. Imports and non-imports before 1100 (n=358), twelfth century (n=2344), thirteenth century (n=2540), fourteenth century (n=5346), and fifteenth century (n=5175). Source OBM9776/16-05-2013. Data processed by K. Haase.

may have passed through many harbours and several hands before arriving at their final destination.

As the example shows, it can be dangerous to draw a direct link between the place of origin of an artefact and its place of use. Therefore, it is not straightforward to assume a possible cultural influence from the place of origin to where it was recovered. Provenance can be used as an indicator and a guideline to possible cultural networks. However, it is necessary to study the context in which the imported objects are encountered to ascertain whether there is a correlation between their occurrence and changes in society. Moreover, the ratio of imported goods compared to local produce may be a general indication of the level of interaction between the town and the world outside.

Interregional Trade Networks

The number of ceramic sherds, pieces of whetstone, and other artefact types from OBM9776 have been counted to gain an overview of the level of import in Odense in relation to local products. Even though there are some issues of representation and taphonomy with this type of quantification, it indicates the significance of imported goods. Moreover, we mainly use it in a relative, intra-site comparison where preservation conditions and excavation methods are comparable.

The overall development shows a material culture generally dominated by local or regional goods

(Fig. 2.3). It also shows a presence of imported goods throughout the centuries. However, there seems to be an increase in imported goods sometime during the thirteenth century. The presence of copper-alloy and iron objects dominate the small increase in imported goods in the thirteenth century. This increase is a rise in the import of raw material rather than finished products. The emerging interregional trade in Odense is in line with the consensus that Danish towns from the thirteenth century onwards engaged in a network of trade hubs or gateways for commerce (Poulsen 2002, 49). The significant change in construction and increased size of northern European cargo ships from around the 1180s onwards are also evidence of this development (Bill 2002, 93, 112). The use of purpose-built cargo vessels is part of a development towards a specialization of merchant seafaring under royal protection, which reached a peak around 1250 (Englert 2015, 39–54).

Imported ceramics make up approximately 6 per cent of the total ceramic assemblage at OBM9776 in the period 1300–1500. Five per cent of the complete ceramic assemblage is German stoneware (270 sherds in total). For the town and the medieval period as a whole, there are indications that the amount of stoneware is between 0 and 3 per cent of the total ceramics assemblage (present case study included).⁴ Compared to the presence of German stoneware in Næstved, Denmark, this is a low number. Research on ceramics from the harbour area in Næstved shows that the percentage of imported ceramics (mainly German stoneware) from the period 1200–1450 was between 13 and 16 per cent (Langkilde 2007, 33). According to the Lübecker poundage accounts, Næstved, Copenhagen, and Skanör were the main Danish towns where the Lübecker ships docked in the late medieval period (B. Poulsen, pers. comm.; Weibull 1966, 43). The Lübecker poundage accounts mention Odense, but it was never an important port in the north European trading network. The *Liber memorialis of Stralsund* (a record of the burghers from Stralsund who died in other towns, or burghers from other towns who died in Stralsund) only mentions Odense three times in the period from 1320 to 1471 (Andrén 1985). In contrast, Copenhagen is mentioned more than ten times (Andrén 1985, 103). Odense is on the periphery of the trade network, which the finds in general and the ceramic assemblage, in particular, seem to confirm.

⁴ The number derives from the museum database at Odense City Museums, where only excavations from 2003 and onwards have a recording of artefacts. The analysis was done by K. Haase.

The German stoneware is not alone in representing the interregional networks of the town, and we shall therefore turn to the overall development in all the imported artefacts. Some of the imported artefacts — the ceramics, whetstones, and quernstones — can be provenanced with some certainty. If these artefacts are compiled by area of origin, it is possible to see how the areas are represented at different periods (Fig. 2.4). From this, it seems that the import from France and Belgium is small but consistent over time. Import from England is almost non-existent. Whetstones and quernstones from Norway are also imported evenly throughout the period. The import of ceramics from Germany shows a significant increase from the fourteenth century onwards, suggesting that the German area becomes increasingly important in the trade network of Odense. If other types of (less frequently occurring) artefacts are taken into consideration, it is possible to establish links to other places in north-western Europe as well. Among these are pilgrim badges from Santiago de Compostela in Spain, barrels from the southern Baltic area, walrus tusk from Greenland or Norway, and a lead ingot from Wales (Jouttijärvi 2017).

The overall impression is that the main part of the imported goods originates from north-western Europe or the area around the Baltic Sea. We can also conclude that the diversity in places of manufacture/procurement for the imported objects increases in the late medieval period. Lastly, the analysis shows that if we trace trade networks through ceramics only, the image will be less nuanced than if a more extensive and varied group of objects is taken into consideration, even though their origin might be more challenging to interpret.

Plant Macrofossil Evidence

The botanical assemblage at OBM9776 shows similarities with the assemblages from other sites in Denmark dating to the medieval period (e.g. Hald, Howorth, and Ranheden 2015; Karg 2007; Moltsen and Henriksen 1998). The assemblage of economic plants is characterized by oats, barley, and rye, as well as a variety of collected and cultivated fruits.

Plants of presumed local or regional origin are found from the earliest deposits onwards. In addition to cereals, the most commonly occurring economic plants are strawberry (*Fragaria vesca*), raspberry (*Rubus idaeus*), and hazelnut (*Corylus avellana*). Both plum/cherry (*Prunus* spp.) and apple/pear (*Malus/Pyrus*) are also found throughout the site but in lower quantities. These species increase in quantity from the fourteenth century onwards. Strawberry, rasp-

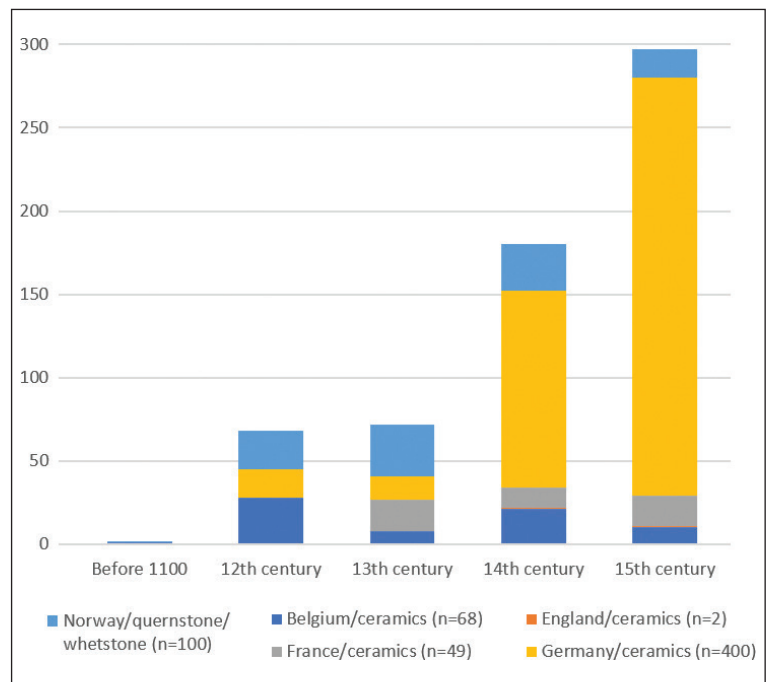


Figure 2.4. Ceramics (number of sherds) and quernstone/whetstone (number of fragments) distribution over time according to the place of origin. Areas reflected by present-day countries. Source: OBM9776/16-05-2013. Data processed by K. Haase.

berry, and hazelnut are often presumed local, since these species can be collected from the edges of the town's fields, or they can be grown in gardens. The latter two groups, plum/cherry and apple/pear, are generally cultivated and could grow in local orchards, or the fruits may have been grown elsewhere and sold on markets (e.g. Kjersgaard 1978).

Exotic plant remains found at OBM9776 appear in the botanical record from the first half of the fourteenth century. The quantity of fig and grape seeds increases in the second half of the fourteenth century and throughout the fifteenth century.

The earliest evidence of grape seeds in Denmark dates to the Late Iron Age and Viking Age (Henriksen, Holst, and Frei 2017), but these remains are rarely found in the archaeobotanical record. The first recorded occurrence of grape in Odense dates to fourteenth-century deposits from OBM9776. From this period onwards, grape seeds are sporadically found in contexts dating to the fourteenth and seventeenth centuries (Karg 2007). Fig seeds are found more frequently in Denmark from the twelfth century onwards, but only in limited quantity and distribution compared to other countries (Moltsen and Henriksen 1998; Karg 2007).

The economic plant remains from Odense show a continuation in the use of plants of predominantly local and regional origin from the twelfth to the fif-

teenth centuries. While imported fruits are found in fourteenth-century contexts, these do not reach the same quantities as local fruits (e.g. strawberry, berries, apple/pear). At OBM9776, fig seeds are found in twelve samples, and grape only in six, compared to forty-four samples containing strawberry seeds. Finds of fig and grape are also limited in other Danish towns throughout the fourteenth and fifteenth centuries (Karg 2007), indicating that the relatively low quantities of fig and grape in Odense are not an isolated phenomenon in Denmark. This picture is in contrast to medieval sites in Germany, the Netherlands, and England, where fig and grape seeds often are found in hundreds or thousands (e.g. Greig 1981; Hellwig 1997; Smith 2013). The low quantity of fig and grape seeds and their limited distribution suggest that these fruits were not part of an everyday diet in the same way as collected and cultivated fruits.

The botanical remains reveal a system of local/regional and international networks. The potential of remains to be derived from both local and regional, or regional and interregional sources, blurs the lines between the different network types, which makes it difficult to assess which networks weigh more heavily.

Regarding the organic material, especially plant remains, there are taphonomic and representation issues that need to be considered. From written sources, we know that a lot of the imported material consisted of perishable food. A survey of the exports and imports through the port of Hull shows that between 95 and 99 per cent of the goods were perishable (Gaimster 2014, 63). The amount of macrobotanical data that is available from excavations does not reflect this. There are two explanations: sampling strategies during excavation and subsequent analysis and preservation conditions of the plant macrofossil remains. How well plant remains are preserved depends on the type of remains (seeds, leaves, stems), size, durability, and quantity of the remains. Durable remains, such as cherry and plum stones, are potentially well preserved because of their hardness. These remains are not likely to fragment, but the larger size may work against the representation of these finds in archaeological subsamples. Smaller seeds may be less durable than some larger seeds. However, because smaller seeds from some plants appear in higher quantities, there is statistically a higher chance of encountering the remains than more durable, but rare, seeds.

In addition to preservation, there might be issues with the representation of material based on sampling and subsampling. Latrines often contain large volumes of material, yet it is practically impossible to sample the entire contents of a context (Fig. 2.5).



Figure 2.5. Latrine barrel from OBM9776/16-05-2013. Drawing by N. Hammers and photo by K. Haase, Odense City Museums.

Therefore, choices must be made during fieldwork about which part of the context to sample.

The red lines in Figure 2.5 indicate that there are three visibly distinct layers in the latrine, whereas the yellow square represents the approximate size of the sample taken. The example shows that a lot of the material will not be sampled. Further sample selection occurs in the lab, where samples are processed. Subsampling may lead to an inaccurate representation of the plant remains from a particular context.

The representation and taphonomic issues mean that the conclusions in this case only can apply to the actual preserved material. The priorities in sampling practices and the preservation conditions make it impossible to conclude anything based on what is not present.

A Biography of the Stave-Built Vessel

We have established that the interregional network of Odense was mainly related to the area around the Baltic Sea and north-western Europe. The question

is if this trade network is also a cultural network in the sense that it affects the daily lives, norms, and practices of the inhabitants of the town. One way of tracing the impact of the trade networks is by looking at the relations between artefacts and humans through the biography of an artefact (Jervis 2014, 4). In the present study, the wooden beakers or stave-built vessels are chosen as an object for a biographical study for several reasons. The vessels are most likely imported (see below), and many of them are well contextualized in the archaeological record. Moreover, they are closely related to regular human behaviour since they are everyday objects.

From OBM9776 there are one hundred vessels or fragments of vessels in total. They are found in thirteenth-century contexts, but they have mainly been found in contexts from the second half of the fourteenth century. In the following, we will study the biography of stave-built vessels from their manufacture, to their distribution, use, reuse, and discard, in order to analyse the interaction between human and artefact as well as the relation to other types of material culture.

Manufacture and Distribution

Species analysis of the wood from the stave-built vessel shows that the staves were made from spruce (*Picea abies*). Spruce has been documented in pollen samples of late fourteenth-century lake sediments but appears only in minimal amounts (Rasmussen and Bradshaw 1998, 66). Spruce is commonly perceived as being introduced into Denmark around the year 1730 (Larsen and others 2013, 121, 400–01). Before 1730 spruce may have been imported from Norway, Sweden, Germany, Poland, or the eastern Baltic area. Stave-built vessels found in Norway have been interpreted as an import. In Bergen, they are found in those parts of the town that were dominated by merchants related to the Hanseatic League (Thomsen 2014, 17). The assertion that stave-built drinking vessels were imported to Denmark is supported by a written source from 1552. It states that a customs officer in Aalborg was ordered to buy a barrel of stave-built drinking vessels (Bencard 1969, 42).

The wooden vessels are known from excavations in Norway, Sweden, Germany, and the southern and eastern Baltic areas from the beginning of the twelfth century, and there are examples in Lübeck and Tallin from the thirteenth century (Vissak 2006, 503). They were manufactured by local artisans or coopers who would probably collect their raw material from the nearby woods. The stave-built vessel was a mass product and was exported as bulk goods.



Figure 2.6. One of the stave-built vessels from Odense. Photo by Jens Gregers Aagaard.

Throughout the medieval period, the predominant way of transporting and distributing goods was by sea. From the thirteenth century onwards, the Hanseatic League was the dominating transport agent in the North Sea and Baltic Sea region (Demuth 2015, 339; Mehler 2009, 90). As mentioned earlier, the link from the place of production to the consumer was rarely direct, and there are many possible scenarios of how goods ended up at their final destination. Goods were transported from place of production to a market, from one harbour to another, sold off, reloaded, etc. Some were even repacked or separated into smaller entities (Jahnke 2016). The ships would pick up goods along their sailing routes and in a way become floating supermarkets, carrying bulk goods, but also other items in smaller amounts — both everyday items such as the stave-built drinking vessels, and luxury products. One example is the Egelskär (Nauvo) wreck that sank in the archipelago south of Turku, Finland, in the late thirteenth century carrying a very mixed cargo (Tevali 2010, 4–5). The Egelskär ship was not an ocean-going vessel but a trading vessel that would transport imported goods between the major ports along the coast for redistribution (Gaimster 2014, 66). The cargo of the Egelskär wreck consisted of Danish limestone, whetstones from Norway or Germany, and Swedish iron,

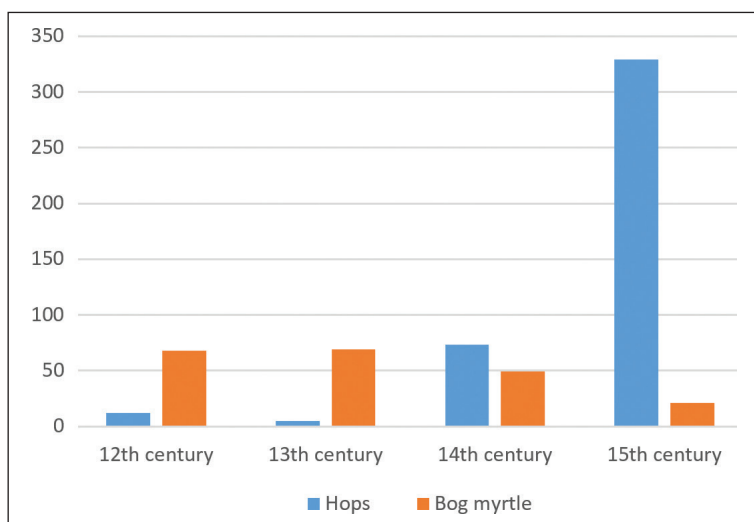


Figure 2.7. Temporal change in absolute number of botanical macroremains from hops and bog myrtle. Illustration by N. Hammers.

as well as stoneware from Lower Saxony. Therefore, the presence of imported goods in the archaeological record is in general rarely evidence of a direct link between place of production and buyer, or even between merchant and buyer. It is more an indication of the possible links and the cultural catchment area of a place. It also must be taken into consideration that goods may be acquired through piracy and sold off or that illicit trade has taken place (Mehler 2009, 96–97). Imported goods can also be the result of people carrying personal belongings with them, as was the case of the German diaspora living in Hanseatic towns outside Germany (Naum 2016, 136). The consequence of this is that when a stave-built vessel from, for example, the eastern Baltic area is found in Odense, Denmark, it is not necessarily an indication of trade or communication between this area and Odense. However, it may be possible evidence of a ship commissioned by a Hanseatic merchant having picked up goods in the eastern Baltic and distributed these alongside other bulk goods from areas where the Hanseatic League had trade connections. Eventually, the stave-built vessel would be unloaded on the market in Scania and redistributed to the market in Odense along with other goods such as herring, salt, figs, stoneware jugs, and other products.

How the Stave-Built Vessel was Used

The use of the stave-built vessel is known from late medieval frescos from Danish churches and northern German altarpieces, where they are often shown as drinking vessels.⁵ In this relation, it is worth not-

ing that the increase of stave-built vessels coincides with an increase in the presence of stoneware at the beginning of the fourteenth century and onwards. The stoneware vessels are mainly jugs and pitchers, all linked to beverages, and, likely, the wooden vessels were also drinking vessels. Even though the vessels are a mass product made from wood, there is nothing that indicates that they were a simple kind of tableware. They were most likely appreciated for their practical function and delicate appearance (Fig. 2.6).

At the same time as the increase in the use of stoneware and stave-built vessels in Odense, hops (*Humulus lupulus*) becomes more frequent among the plant macrofossils, compared to bog myrtle. Bog myrtle is a bog plant, and the leaves and fruits were used in beer brewing as a flavouring and preservative. The plant grows on acidic moorland, with a natural distribution in north-west Europe (Behre 1999; Günther and Karg 2000, 2–3; Viklund 2011). Evidence for the use of bog myrtle in Denmark dates to prehistoric times, whereas the use of hops is not widespread until the Middle Ages (Günther and Karg 2000, 2–3). In Sweden, a shift from bog myrtle to hops is noted in the thirteenth century, while the evidence from the Danish macrofossil records points towards a shift in the fourteenth century (Viklund 2011, 235). Sources regarding the cultivation and import of hops provide varying insights, but the consensus is that hopped beer was introduced by the Hanseatic League in the thirteenth century (Viklund 2011, 240). Written sources provide evidence for both local cultivation of hops, especially in monastery gardens, and the import of the plant (Enemark 1994, 250; Hybel and Poulsen 2007, 213; Poulsen 2000, 66; Viklund 2011, 240). Authorities tried to limit the import of hops to Denmark through a decree on the intensification of hops cultivation in the fifteenth and sixteenth centuries (Hybel and Poulsen 2007, 214). Moreover, a decree issued by King Erik Glipping in 1283 stated that he who imports, sells, or buys German beer should be heavily fined (Poulsen 2002, 32). The ban is repeated several times throughout the second half of the fourteenth century and up to the late fifteenth century (Unger 2004, 68). A limited import of beer as a finished product could be the reason for the increased quantities of hops finds as an indication for local production of hopped beer.

At OBM9776, the botanical evidence shows a shift in the fourteenth century from the use of bog myrtle to the use of hops, with a peak in the mid-fifteenth century (Fig. 2.7). The increase in the use of hops coincides with the increasing import of stoneware from northern Germany, as well as stave-built

⁵ More examples in Bencard 1969, 42.

vessels. The shift in the use of flavouring and preservative in beer can be an indication of changing traditions and the adoption of new brewing practices. It can also be related to legislation demanding the local cultivation of hops, in order to limit hops import from Germany (Andersen 1991, 96–99, 187; Hybel and Poulsen 2007). Archaeobotanical material and written sources provide evidence for both the local cultivation of hops as well as the import of the plant.

The increase in stoneware jugs, stave-built vessels, and hops suggests that a European consumption and table culture, in the shape of German beer and drinking vessels, was introduced into Odense in the fourteenth century. The ban on importing, buying, and selling German beer indicates that the import of German beer was increasing to such a degree that it became a challenge to local trade and threatened to change consumption patterns and social norms. Some of the barrels found in Odense may have contained imported wine or beer. The barrels have been dated, and their provenance is known to be the southern Baltic coast (Germany or Poland) or the Weser area, Niedersachsen, or Flanders (Belgium). The oldest barrel is dated to sometime after 1264 and is most likely to come from Lübeck (Daly 2016, 3–4). It is deposited in a layer that is dated to the beginning of the fourteenth century. Whether it came directly from Lübeck to Odense with its original content is unknown, but the short period between production and disposal seems to indicate so. The introduction of barrels from the southern Baltic coast in Odense is consistent with the general impression we get from the Danish material — that barrels from this area are predominant in Denmark from the early 1300s (Daly 2007, 159–79). This is also in agreement with the written sources, in which there is evidence of German beer becoming a regular product in medieval Denmark (Poulsen 2002, 42).

Even though we do not know the exact origin of the stave-built vessels, we know that the increase in numbers may represent the introduction of drinking and eating practices linked to a European consumption culture. We do not know how this transfer took place, but one suggestion is that the increase in trade and sea-going transport from the thirteenth century and onwards reflects a general increase in mobility of people. With this increased contact and connectivity, it was possible to witness how practices were performed in other cultures or by visitors from other cultures. If people have not seen the artefacts being used in their original context — either at their place of origin or by a visitor bringing the artefact — a cultural transaction is not likely to take place (Linnaa Larsen 2006, 168). The written



Figure 2.8. Bowls associated with wine or beer drinking can be seen in this French illuminated manuscript from the thirteenth century (*Li livres dou santé* by Aldobrandino of Siena. British Library manuscript Sloane 2435, fol. 44^v). Public domain.

sources in Odense only mention a few foreign merchants as citizens. However, foreigners would likely have visited the town regularly to trade or participate in ecclesiastical matters (Rohwedder 2007, 16–19). Another indication of foreigners being an increasing part of town life in the late medieval period is the founding of the ‘Elendegilde’, a guild, in Odense in 1435 (Christensen 1988, 127). The guild was mainly addressing immigrants or transnationals.

The increased mobility is also represented by locals from Odense who would go abroad either as merchants or as journeymen after ending their apprenticeship (Demuth 2015, 341). The wandering would not only spread technologies but also consumption culture and other social practices. It was possible to continue the practices that one had witnessed abroad in Odense because the extensive trade network made it possible to acquire the type of vessels, beverages, and food linked to them.

Another example from fifteenth-century Odense shows how the imported consumption culture was adapted to or merged with local traditions (Haase 2017, 293). During the first half of the fifteenth century, a house with a semi-basement burned down and was abandoned. It was filled in with rubble from the building, and it seems many of the household items were left in the rubble. Amongst these items were a high number of intact stoneware jugs from

Lower Saxony and the Baltic area, two tiny stoneware jars, and local wares consisting of both jugs and bowls (Haase 2017). The local wares were sherds from small shallow bowls. They are interpreted as drinking bowls and may be a local version of the stave-built vessel (Fig. 2.8).

The Last Stage of the Use-Life of the Stave-Built Vessel

Looking at the last stages of the life of the stave-built vessels we turn to a latrine dated by radiocarbon analysis of the content to the last part of the fourteenth century (AAR AMS 2017,⁶ sample AAR-25950). The artefacts related to the latrine are a mixture of local objects and a few imported objects. The artefacts reflect the overall image of the imports of the fourteenth century. The latrine is most likely related to the house that burned down, and the analysis of artefacts as well as plant remains supports the impression of a wealthy household. They were consumers of imported artefacts and foodstuffs. In particular, the macrofossils related to the human excrement and thus the diet of the people using the latrine confirm this impression. Amongst these were black mustard (*Brassica nigra*), fig (*Ficus carica*), grape (*Vitis vinifera*), hops, and raspberries (*Rubus idaeus*). General waste also ended up in the latrine, which is shown by the discovery of nutshells and copper-alloy pins. Finally, some artefacts are interpreted as being hygiene related: leather fragments, two small sticks, bowls, and vessels. The sticks may have served as sponge sticks or *spongia* as seen in Roman latrines. However, these are shorter, between 17 and 20 cm, compared to the Roman sticks with a length of c. 25 cm. The sticks from Odense were made from elder wood which is said to have antiseptic properties. The stave-built vessels served as water containers to soak and rinse the cloth or leather that would then be used as toilet paper. No less than seventeen fragments or whole bowls and vessels were found in the latrine. In Tallinn, the stave-built vessels have also been found well preserved in cesspits (Vissak 2006, 503). It is an indication that they had been put to the same type of use as in Odense.

The latrine in Odense was meant to be emptied when full. It seems this idea of having a permanent latrine is an imported concept introduced at the beginning of the fourteenth century in Odense. Permanent latrines are quite common in Europe from

at least the thirteenth century (Keyes 2016; Smith 2013). In Odense, the stave-built vessels and the possible sponge sticks are only seen in direct relation to latrines from the last part of the fourteenth century and onwards, suggesting that permanent latrines and the use of hygiene measures are related. Using this type of latrine may also be a status marker.

The stave-built vessels, the stoneware jugs, hops, and barrels are some of the imported goods that reflect the interregional networks of Odense and show a connection to the north-west European/Baltic cultural sphere. This is the case even if the amounts of stoneware and the written sources indicate that the town was at the periphery of the Hanseatic trade network. Studying the biography of the stave-built vessel, how it was used, reused, and discarded has revealed more than just the practices related to its use. It has revealed changes in other practices, such as dining habits, food culture, and hygiene. The analysis has shown that cultural contact in the fourteenth century, illustrated by trade networks, had an impact on the daily life practices of the inhabitants in Odense.

Discussion

As the present example shows, it is a multitude of artefacts and the context in which they appear that are indicators of connections and cultural interaction. It has become evident that it is more productive to see imported objects as cultural markers rather than carriers of culture (Demuth 2015, 355; Gaimster 2014, 63). This distinction is important since it indicates that it is not the artefact itself that transfers culture, but rather that artefacts represent the possibility for cultural interaction and cultural transfer. This shifts our focus from objects as carriers of culture to the relationship between objects, people, and ideas (Jervis 2017, 150). It also means that the significance of material culture may change according to the nature of that interaction — that their meaning is relational (Jervis 2014, 3; 2017, 149; Naum 2014, 673). Artefacts, structures, and ecofacts play an active role in making social and cultural interaction tangible as they become expressions of routinized practices (Christophersen 2015, 111). As shown, these patterns of practice and relationships are revealed through a contextual and biographical approach to the archaeological record (Jervis 2011, 240).

The distribution of stoneware, decorated red earthenware, brick architecture, and stove tiles that spread in the Baltic Sea region from the thirteenth century and onwards has been labelled ‘a Hanseatic

⁶ ‘Radiocarbon Report (No. 1897). Aarhus AMS Centre Department of Physics and Astronomy’ (unpublished report, 22 March 2017).

material signature' by David Gaimster (e.g. 2014, 64). This concept of 'cultural packages' and artefacts as carriers of a specific culture has been debated and nuanced in several studies since (Immonen 2007; Jervis 2017; Linaa Larsen 2006; Mehler 2009; Naum 2014; 2016). Instead of arguing that what we see in the case of Odense is a Hanseatic material signature, we argue that it is a result of closer interregional connectivity to Europe — specifically north-western Europe and the area around the Baltic Sea. This type of connectivity is what characterizes the networks of Odense. They are interregional rather than just local, but not on a supraregional scale. The connections that may be inferred by the presence of imported goods are not reflecting a direct contact to the place of origin. Instead, they are brought to Odense through intermediate hubs and harbours (Sindbæk 2017, 556). The cultural influence does not derive from the place of origin, but from the distribution network. The connectivity between Odense, the region around the Baltic Sea, and north-western Europe was dense enough to trigger social change.

Even though we are not talking about global connections in Odense, the globalization approach is considered fruitful since it stresses processes that reach beyond national borders (Sklair 2006, 59). According to Carl Knappett, globalization processes are defined by complex connectivity (Knappett 2017, 29, citing Jennings 2011, 2 and Tomlinson 1999). It is probably going too far to characterize the networks of Odense as complex; instead, what we have seen in the case of Odense is an example of increased connectivity where some elements which also characterize a globalization process are present (Hodos 2017, 4; Jennings 2017, 14–16). The use of stoneware, the preference for hopped beer, and the implementation of new sanitary measures indicate 'homogenization' in a European context, where specific practices are imported and adjusted to local circumstances (Jennings 2017, 14). The mixture of locally produced and imported tableware in the performance of a European consumption culture shows a translation or adaptation consistent with the process of homogenization, where the local culture adds its fingerprint. Instead of characterizing the processes and connectivity as globalization, they can be seen as part of a Europeanization process — a process that was enabled by the mobility of people and trade and resulted in an exchange of culture, practices, ideas, and technologies.

Conclusion

The outcome of our analysis of the imports of Odense has been twofold. The general overview has shown that it is possible to get an indication of the origins and significance of interregional networks through a quantitative approach. However, it must be kept in mind that the presence of specific artefacts and ecofacts is not necessarily evidence of direct contact. Furthermore, the analysis shows that it is only through a contextual analysis that the impact of such networks can be assessed and described. The biographical approach has proven to be a valid and operational method in analysing the societal changes triggered by networks and cultural contacts. The methodology has also proven to be useful for emphasizing the relational aspects of human–object interaction.

Our analysis shows that the interregional networks of Odense before the fourteenth century were dominated by the import of raw materials such as copper alloys and iron. During the fourteenth century, the character of the networks changed and became dominated by goods distributed by the Hanseatic trade network. The range of goods became more diverse and included manufactured goods and foodstuffs. The diversity and increase in import reflect a general increase in mobility and cultural exchange in the north-west European and the Baltic region in which Odense took part. The density of the connectivity and the increase in mobility of both goods and people were catalysts for changes in the everyday lives of the inhabitants of medieval Odense. The changes were manifested in the introduction of new social practices and left as imprints in the archaeological record.

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Archival Material

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