

Julie Van Kerckhove, Annick Lepot, Barbara Borgers & Sonja Willems¹

UNDERSTANDING CONSUMPTION PATTERNS IN THE *CIVITAS TUNGRORUM* THROUGH THE IDENTIFICATION OF THE ‘NOOR1’ WARE

Introduction

In this article a regionally produced coarse ware, the ‘NOOR1’ Ware, will be used as a case study in an attempt to contribute to the understanding of consumption patterns in the *civitas Tungrorum*, a frontier zone of the Roman Empire (fig. 1). S. Willems associated the term ‘NOOR1’ with this ware as a Dutch abbreviation of ‘Northern’ 1, because of the northern location of its distribution. We used a specific methodology in order to make this coarse ware recognizable for others and to make it suitable to use in the consumption debate. The concept of consumption and its potential for the interpretation of Roman material culture will be explained briefly. The focus of this paper, however, will be on the used methodology. In an attempt to turn a large amount of sherds into a well-processed dataset suitable to be used as a tool for answering more complex social questions, such as consumer practices, we needed a well thought out methodology. All sherds are studied in hand specimen, using the binocular microscope and in thin section petrography, using the polarising microscope. Based on these findings, the fabric is described in detail and furthermore a new typology is created. By comparing the characteristics and the distribution of this coarse ware to the pottery spectrum and traditions from the *civitates Tungrorum* and *Ubiorum*, we are able to make the concept of consumption more tangible.

Consumption

The integration of communities into the Roman Empire is an intensively studied subject in archaeology. This integration process, however, shows regional variations which reflect the social dynamics behind it. In our case study, we want to understand the responses of the population located in a peripheral zone, the *civitas Tungrorum*, to the growing connectivity and homogeneity caused by the annexation to the Roman Empire.

‘Consumption’ will be used to examine the integration of the study region into the Roman Empire. We will use the term ‘consumption’ not strictly for the indication of ‘use’ or the ‘fulfilling of biological needs’ but rather in relation to a cultural process which is more led by desire.² As the effects

of consumption are reflected in Roman material culture, the analysis of the massively produced and consumed regional coarse ware can contribute to our understanding of a complex society.³ According to Roth, a “great increase in the production and distribution of regionally made coarse ware points towards changes in the material environment of the regional consumers which they would have encountered during their daily routines”.⁴ In this paper the regionally produced ‘NOOR1’ Ware will be our case study to show the importance of these ordinary ‘pots and pans for every-day use’ in the understanding of the regional consumers in the *civitas Tungrorum*. Doing so, the cultural process indicated as ‘consumption’ will be approached here as comprising ‘use’, ‘distribution’ and ‘production’ of pottery because of the strong connection between these three elements.

Pottery production in the *civitas Tungrorum*

The real change after the Roman conquest of the territory of the future *Tungri*, together with the introduction of the potter’s wheel, is the emergence of a large-scale production of regional pottery. The first Augustan kilns known in this region produced Gallo-Belgic wares, new table wares integrating Celtic and Graeco-Roman influences.⁵ During the second phase of the evolution of the pottery production, which takes place under Claudius, workshops producing wares for daily use emerge. We can mention the production of cooking wares in Tongeren, the capital of the *civitas*. The corpus of these culinary wares is influenced by the Tiberian production of the Rhineland.⁶ During the Flavian period, the regional production centres develop further. They are principally located within the towns and *vici*, mainly producing cooking wares, *mortaria*, flagons and fine wares. From this period onwards,

S. Willems (INRAP/ UMR7041 Paris X); the work for this article has been partly financed by the IAP Program (IAP VII/9-CORES) initiated by the Belgian Science Policy.

² See also GREENE 2008, 66.

³ GREENE 2008, 67.

⁴ ROTH 2007, 39.

⁵ For Momalle, see DERU 1996; for Braives (with a production of Gallo-Belgic wares from the Claudian period onwards), see BRULET 1983; for Vervoz, see BORBERS forthcoming.

⁶ Tongeren is the only production center attested for this period but several others fabrics recovered within consumption sites in the *civitas* confirm the existence of other workshops producing the same cooking sets. See VILVORDER ET AL. 2010.

¹ J. Van Kerckhove (VU University Amsterdam); A. Lepot (Université catholique de Louvain-la-Neuve); B. Borgers (Vrije Universiteit Brussel),

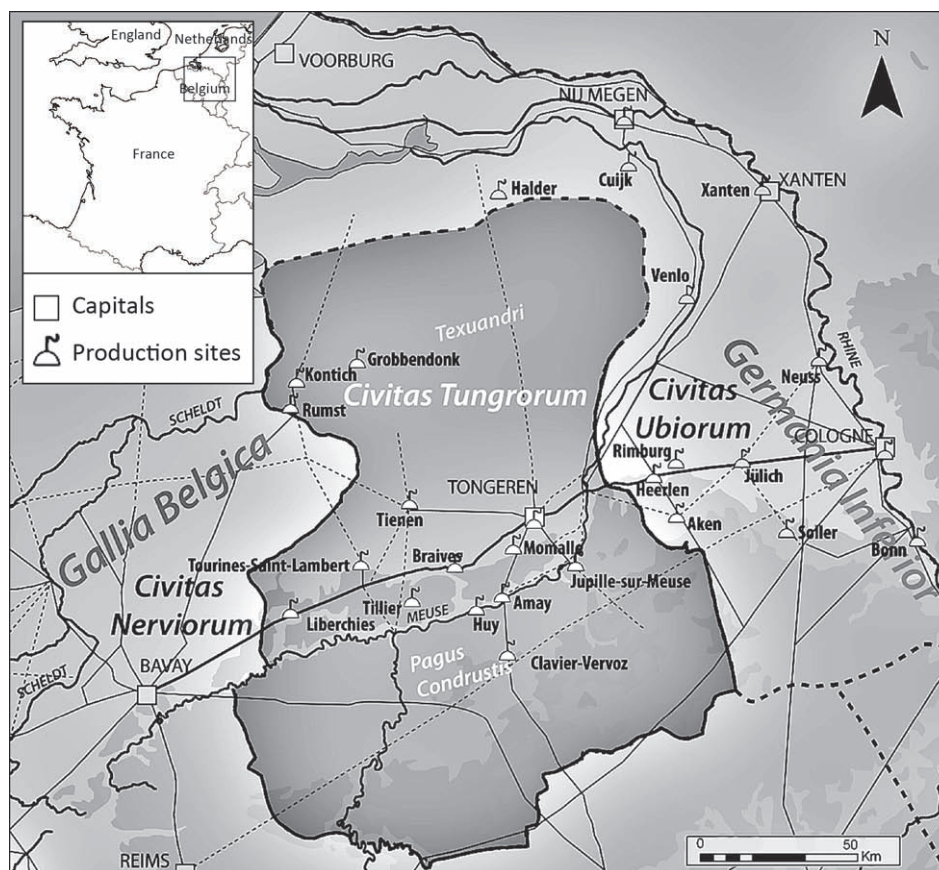


Fig. 1. Location of the *civitas Tungrorum* and production sites mentioned in the text.

the potters wanted to obtain wares with a red-brownish aspect by colour coated or smoked surfaces which was probably a reflection of a change in fashion.⁷ This technical transformation has also been attested for productions in the *civitas Ubiorum*.⁸ During the 2nd and 3rd centuries, the use of a smoked post-firing effect continued to be popular for the coarse ware and the table ware. It can even be considered as characteristic for the pottery industry in the *civitas Tungrorum*.⁹ From the 2nd century onwards, the pottery of the *civitas* develops a regional shape sequence. Although it follows the general sequence of shape and decoration from production sites of the *Rhineland* such as Cologne, Xanten or Niederbieber, the potters produce typical shapes such as the so-called ‘Haspengouwse’ flagons and the ‘Tongeren’ beakers.¹⁰

The location of the kilns seems to be strongly connected with market places. However, a striking concentration of kilns can be seen in the central loess region. This could be explained by the many *villae* in the vicinity (potential consumers) or the presence of the Via Belgica (the road connecting Baviay to Tongeren and Cologne). Despite the importance of a functioning transport and market system, the occurrence of suitable refractory clays in this part of the *civitas Tungrorum* seems to be of overriding importance for the location of the kilns.¹¹ The distribution of the regional pottery depends on the status of the market places, the commercial links, but also the quality of the productions seems to have had an impact on the exchange patterns of the regional wares.¹²

Methods

Besides the (relatively) large physical evidence of kilns and waster samples, which are currently being studied,¹³ in this article we turn to the fabric evidence from consumption sites in order to gain insight into the production, distribution and consumption of pottery. It is one of these fabrics, the ‘NOOR1’ Ware, which forms the subject of this paper.

⁷ Tienen (HARTOCH/MARTENS 2001), Amay (REKK/VILVORDER in press), probably Jupille-sur-Meuse (COCQUELET/GUSTIN in prep.), Vervoz (BORGERES forthcoming).

⁸ Heerlen (BLOEMERS/HAALBOS 1968), Jülich (LENZ 1999).

⁹ See GOSSELAIN/LIVINGSTONE SMITH 1995 for the post-firing effect; see WILLEMS 2005 for Tienen and Tongeren; see HANUT 2010 for Tourinnes-Saint-Lambert.

¹⁰ For the repertoire of the *civitas Tungrorum* in general, see HANUT 2010, 2012; LEPOT/ESPEL 2010. Pottery sequences have been developed for production sites on the local level, focussing on the shape repertoire and the technological characteristics. We mention the production centres at Tongeren (WILLEMS 2005; VILVORDER ET AL. 2010), Tienen (MARTENS ET AL. 2004; BORGERES in prep.), Liberchies (VILVORDER ET AL. 2010), Tourinnes-Saint-Lambert (BOSQUET/HANUT 2011), Amay (REKK/VILVORDER in press), Clavier-Vervoz, Grobbendonk, Rumst and Kontich (BORGERES in prep.). The study of these production centres provides information on the shared regional characteristics of the pottery.

¹¹ For refractory clays and ancient pottery industry, see PICON 1997. For the Medieval productions, we can mention Raeren and Andenne.

¹² LEPOT 2012.

¹³ BORGERES in prep.; LEPOT in prep.; VAN KERCKHOVE in prep.

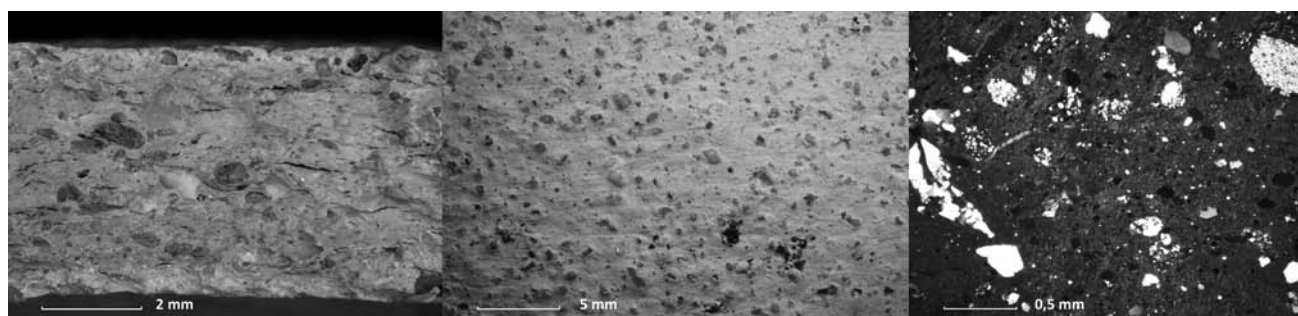


Fig. 2. The fabric of 'NOOR 1' Ware seen under the binocular microscope (A), the surface of a sherd (B) and the fabric in thin section (C) (see **colour plate 5**).

We described the fabric macroscopically by using a binocular, low magnification stereo microscope. Our aim for this was twofold. An important goal was to make the 'NOOR1' Ware recognizable for other pottery specialists. We also tried to formulate a hypothesis regarding the provenance. By studying the thin sections we tried to form a hypothesis regarding the technological practices of the potters, including their knowledge and technological skill. A typology is created in order to gain insight in the forms and functions of this production and to examine the correspondence or differences with the regional shape sequence. A goal for the future is to create a typo-chronology by studying well-dated contexts in which the pottery is found. We also made distribution maps in order to investigate distribution patterns. How far did the 'NOOR1' Ware travel? Was it restricted to a special type of site? Do we see a differentiation in the spread of specific pottery types? Can the distribution say something about the production location?

We approached the regional 'NOOR1' Ware in this specific way in the context of our consumption-debate. So what can we say about the regional consumers and what was the impact of this cooking ware?

Macroscopic fabric description (fig. 2A–B)¹⁴

On the eye, this wheel-thrown pottery is recognisable by the coarse inclusions protruding the surface. The surface colour ranges from pink and reddish yellow (7.5YR7/4,8/4-7/6,8/6) to a very pale brown (10YR7/3,7/4) with a green shine. The core shows a reddish yellow to light red (5YR6/6-2.5YR6/6) colour, while the pots with a very pale surface tend to have a light grey or whitish core (2.5YN7/-7.5YRN8/).¹⁵

For the fabric description we used a binocular, low magnification stereo microscope with a magnification from $\times 10$ up to $\times 40$. The matrix (hardness, texture/structure, colour), the pores (size, sorting, abundance and shape) and the inclusions (size, sorting, abundance, shape, nature and the composition) are described. This is consistent with the methodology used in Peacock 1977.¹⁶

The dark pink clay matrix is very dense and is well mixed with a white-firing clay. In some cases the white-firing clay is visible in the form of white lenses or in the form of white clay pellets. The pores are always longitudinal and poorly sorted. The fabric contains 15 to 20% of inclusions, which are very poorly sorted. The inclusions are dominated by rounded quartz (10%) which varies from 0.25 to 1 mm. The quartz can be pink, brown, milky and smoky. It can also be clustered. Less than 5% of the inclusions are rounded silt- and/or sandstone (which is possibly *Buntsandstein*), which vary from 1 to 2 mm in diameter. Pellets of iron (hydr)oxides make less than 5% in total. Sometimes iron (hydro)oxides enclose the pink quartz. Feldspars are sparsely present and vary from 0.1 to 0.5 mm. Little black inclusions (possibly augite or lydite) are rarely detected.

Based on the macroscopic analysis we can formulate a couple of hypotheses. First of all, the size of the inclusions has a bimodal distribution, which is possibly due to the fact that the large fraction of rounded quartz and silt- and/or sandstone was added to the clay. The roundness of these inclusions is possibly caused by river weathering. The broad variety in colour of the quartz is typical for sediments in the Rhine-Mosel area, contrasting the more dull Meuse sediments.¹⁷ Relevant for our study is the outcrop of *Buntsandstein* (the red sandstone) in the region around Düren, in the stream valley of the Rur.¹⁸ The above mentioned coloured quartzes are also present in these sediments from the Rur, although this river strictly lies in the stream area of the river Meuse.¹⁹ The presence of coloured quartz is due to the fact that the Eifel is part of the catchment area from the Rur. So based on the combination of these factors we can formulate the hypothesis that the production is located somewhere in the region between Meuse and Rhine, north of the Eifel and more specific the stream valley of the Rur. We excluded the Upper Rhine region, south of Mainz (where there is also an outcrop of red sandstone) as a possibility for the provenance, because of the typology (see further in this article) and the specific colour of the 'NOOR1' Ware. The pink-reddish colour is

¹⁴ This fabric is called CCL-DEQL (Commune claire à dégraissant quartz laiteux) in the reference collection (IFRC) from the Centre de Recherches d'Archéologie Nationale of the UCL (Université Louvain-la-Neuve).

¹⁵ WILLEMS 2005, 76.

¹⁶ PEACOCK 1977.

¹⁷ For the comparison of the petrological composition of Rhine and Meuse sediments, see KOLDEWIJN 1955, 37–45; VAN STRAATEN 1946, 146; MAARLEVELD 1956, 105; ZONNEVELD 1948, 103–123; ZONNEVELD 1947, 118–142.

¹⁸ LEPPER/RAMBOW/RÖHLING 2005; WALTER/ZITZMANN 1973.

¹⁹ We want to stress that we mean the river Rur (in the stream area of the Meuse) and *not* the river Ruhr.

very typical for the eastern part of the *civitas Tungrorum* and the western part of the *civitas Ubiorum*.²⁰ Two known production centres in the region around Düren are Jülich and Soller.²¹ However, after a thorough examination of the production material from Jülich and Soller with the binocular microscope, we can exclude these as potential production sites of the ‘NOOR1’ Ware.²²

Microscopic fabric analysis (fig. 2C)

For the analysis in thin section petrography, we used the Whitbread approach (1995), whereby inclusions, clay and voids are examined.²³ This methodology allows for identification of technological practices, comprising all the steps in the operational chain.

All the samples examined in thin section appear to comprise one fabric, which is characterized by non-calcareous clay, containing poorly-sorted opaques of variable size throughout the matrix. Within the coarse fraction, there is a range of fine-grained meta-sedimentary inclusions, such as phyllite and sedimentary rock inclusions, including siltstone, and sandstone. These appear to grade into one another and represent a metamorphism of a suite of sedimentary rocks with variable grain size. The clay is very compact, containing rare quartz and opaque inclusions. The parallel orientation of the vughs indicates that the pottery has been wheel thrown. The vessels have been fired in a high temperature, and in a well-controlled oxidizing firing atmosphere.

What are the implications of the technological practices when compared to other production sites in the region? The ‘NOOR1’ Ware is characterized by its heavy temper and red clay. The use of quartz temper may have been to improve the workability of the clay or the performance of the fired vessel. Indeed, quartz is known to increase the mechanical properties, and therefore; the potters may have decided to temper their vessels in order to make them thermally chock resistant.²⁴ The practice of tempering culinary pottery at production sites on the west bank of the Meuse River (in the *civitas Tungrorum*) tends to differ from the ‘NOOR1’ Ware in that it occurs only occasionally, and it tends to be characterized by mono-crystalline quartz inclusions.²⁵ By contrast, the coarse tempered vessels from Jülich and Sol-

ler, east of the Meuse River bank (in the *civitas Ubiorum*), suggest similarities to the ‘NOOR1’ Ware, both in terms of practice, given that they tend to be heavily tempered, as well as in terms of characterization of inclusions, e.g. the complex mixture of sedimentary and metasedimentary rock inclusions. What distinguishes the ‘NOOR1’ pottery from these wares, however, is its red iron-rich clay, contrasting the (mostly) paler colours of the mixture of colluvial loam and tertiary clay from Jülich and Soller.²⁶ While the research on the provenance of the ‘NOOR1’ Ware is currently in progress, we will undertake clay prospection and analysis

Typology of the ‘NOOR1’ Ware (fig 3)²⁷

The pottery types have got a name which consists of the pottery category, the fabric, the form and a number. The pottery categories are Coarse Ware Oxidised (CW OX) and Fine Ware Oxidised (FW OX). The fabric is obviously NOOR1. The forms consist of jars (JA), bowls, (BO), plates (PL), jugs (JU), lids (L) and beakers (BE). **Table 1** shows corresponding types used in other publications. We can classify the majority of the vessels as ‘cooking ware’, by which we mean pottery that is mainly used in the kitchen for preparing food or to boil liquids. The main forms are: jars, bowls, plates, lids and jugs. Especially for the jars, however, we cannot exclude a primary use as transport containers. The pottery sequence of the cooking ware seems to be conditioned by the repertoire from the Rhineland.²⁸ However, the details of the rims are quite different from the Cologne production and could be interpreted as regional variants (**fig. 4**). Especially the rim details of the lid-seated cooking bowl BO2 and cooking jar JA4 are different from the rims of the equivalent types produced in Cologne. The bowls and jars from Cologne have well-defined heart-shaped rims, while the ones in the ‘NOOR1’ Ware are less elaborate and almost flat. The ‘NOOR1’ Ware seems to be produced from the end of the 1st century until the 3rd century. The pottery types can be fitted into three pottery phases.²⁹ The jars JA1 can be dated in the first phase (between 70 and 110/120 AD). The bowls BO1, JA2, JA3 and plates PL1 probably date from the first phase until the second phase (between 110/120 and 165/175). The bowls BO3, jugs JU1 and plates PL3 can be dated in the second phase. The third phase (between 165/175 and 270/280) comprises jars JA4, bowls BO2, BO4, JU2 and plates PL2, PL4. The lids L1 can be dated in the second and third phase.

The fine wares are only present in very humble quantities. The beaker BE1 in our typology has an egg-shaped profile and is very similar to the colour-coated beaker Niederbieber 30. This shape can be dated from 150 onwards until the 3rd century. The production of the so-called ‘Tongeren beaker’ is

²⁰ These reddish-pink fabrics are called by H. Van Enckevort ‘Noord-Limburgs rood aardewerk’ (VAN ENCKEVORT 2012, 72–74). See also LENZ 1999 for the colours of the coarse ware from settlements in the Aldenoverer Platte. On the eye the pinkish coarse wares from this region are very similar to the ‘NOOR1’ Ware and only after examination with the binocular they appear to be different fabrics.

²¹ For a brief description of the fabrics, see WILLEMS 2005; for the typology from Jülich, see LENZ 1990; for the typology from Soller, see HAUPT 1984; for the fabric description from Soller, see OKRUSCH/STRUNK-LICHTENBERG 1984.

²² Although this has previously been suggested because of the presence of one or two ‘NOOR1’ Ware sherds between the very homogeneous kiln wasters in Jülich (HANUT 2010). The rare pink sherds in the kilns from Cologne could possibly be interpreted as rubbish which is thrown in the kilns after their use, although this should be checked before drawing conclusions (see for example HÖPKEN 2005 Farbtaf. 4 Warenprobe 26–27).

²³ WHITBREAD 1995.

²⁴ KILIKOGLU ET AL. 1998.

²⁵ BORBERS in prep.

²⁶ OKRUSCH/STRUNK-LICHTENBERG 1984, 475.

²⁷ The drawings are made by Martine Jacobs (CRAN), Henk Hiddink (VU University), Julie Flahaut (Inrap), Marijke Wouters (former VIOE), CLOSE/MARCOLUNGO 1985, DESTEXHE 1994.

²⁸ HÖPKEN 2005 Typentaf. 4–5.

²⁹ See LEPOT/ESPEL 2010 and VILVORDER ET AL. 2010 for a comparison with the Tongeren typo-chronology. The chronology of the ‘NOOR1’ Ware will be refined based on well-dated contexts in LEPOT 2014; VAN KERCKHOVE in prep.

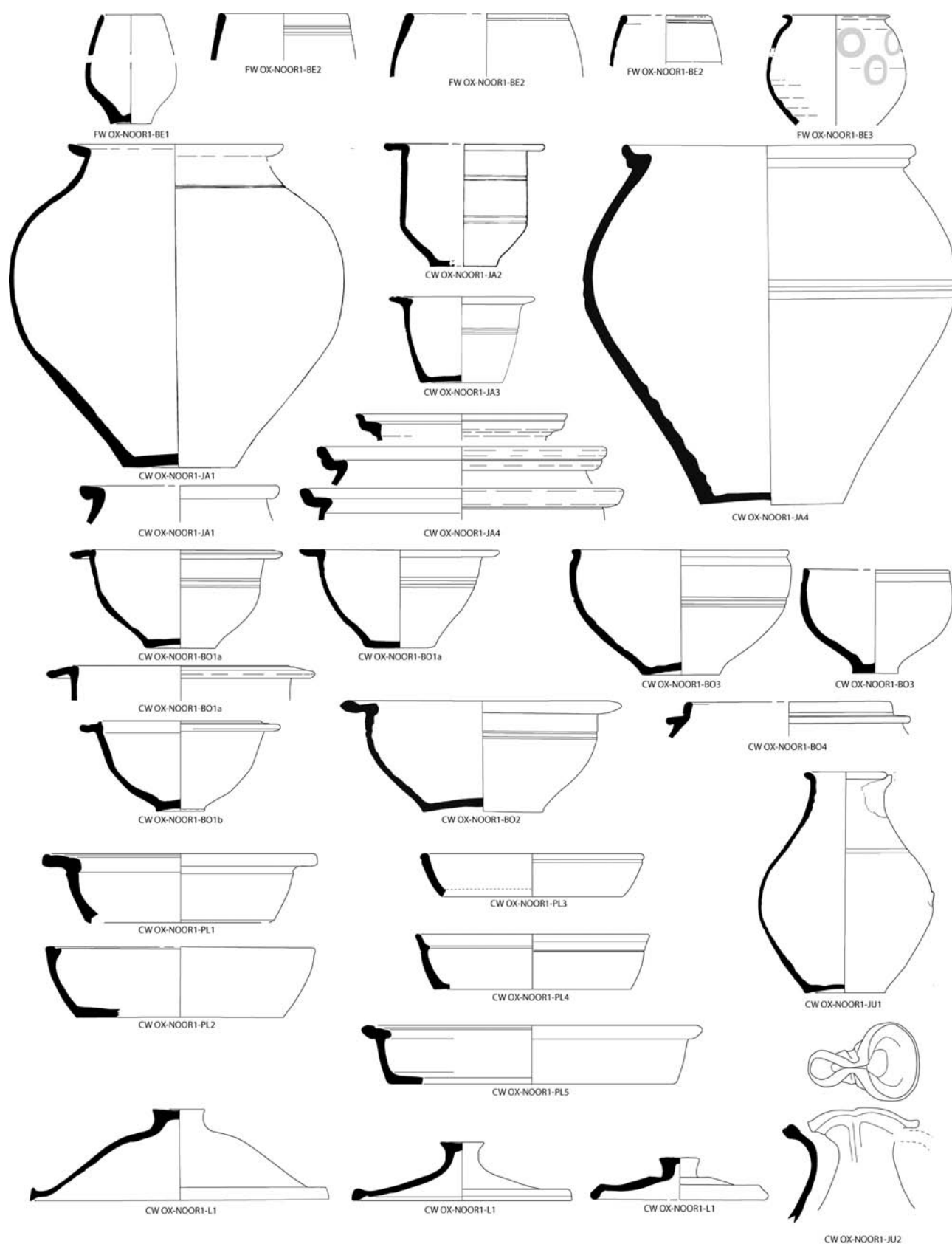


Fig. 3. The typology of the 'NOOR 1' Ware. – Scale 1:5.

Code of the vessel type	Shape	Corresponding types
CW OX-NOOR1-JA1	Jar	Köln R23/Niederbieber 87/Stuart 201B/Vanvinkenroye 472
CW OX-NOOR1-JA2	Jar	Köln R25/Stuart 202/Vanvinckenroye 474
CW OX-NOOR1-JA3	Jar	Like Stuart 202
CW OX-NOOR1-JA4	Jar	Köln R24/Niederbieber 89/Stuart 203/Vanvinckenroye 478-479
CW OX-NOOR1-BO1a	Bowl	Köln R11/Niederbieber 102/Stuart 210/Vanvinckenroye 498-507/flat and pending rim
CW OX-NOOR1-BO1b	Bowl	Stuart 210/Vanvinckenroye 497bis/elaborate rim
CW OX-NOOR1-BO2	Bowl	Köln R15/Niederbieber 103/Vanvinckenroye 508-512
CW OX-NOOR1-BO3	Bowl	Köln R9/Stuart 211/Niederbieber 104/ Vanvinckenroye 531-534, 538
CW OX-NOOR1-BO4	Bowl	With collared rim
CW OX-NOOR1-PL1	Plate	Köln R4/Stuart 215/Vanvinckenroye 547-550
CW OX-NOOR1-PL2	Plate	Stuart 216/Vanvinckenroye 551-555
CW OX-NOOR1-PL3	Plate	Köln R1-R2/Niederbieber 111/Vanvinckenroye 564, 566
CW OX-NOOR1-PL4	Plate	Köln R5/Niederbieber 112
CW OX-NOOR1-PL5	Plate	Niederbieber 110
CW OX-NOOR1-L1	Lid	Niederbieber 120
CW OX-NOOR1-JU1	Jug	Vanvinckenroye 375
CW OX-NOOR1-JU2	Jug	Niederbieber 97/Vanvinckenroye 362
FW OX-NOOR1-BE1	Beaker	imitation Köln E22/Niederbieber 30?
FW OX-NOOR1-BE2	Beaker	Vanvinckenroye 525-527/imitation handmade calcite-tempered beakers?
FW OX-NOOR1-BE3	Beaker	Vessel form like Niederbieber 90/Brunsting 4/imitation Köln E20/Stuart 2 or Niederbieber 32?

Table 1. Typology of ‘NOOR1’ Ware with overview of corresponding types from other production and consumption sites.

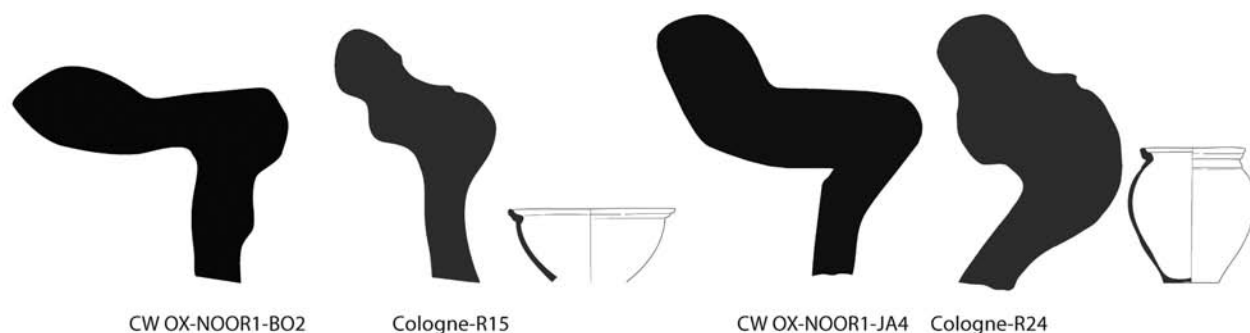


Fig. 4. Comparison between the rims of the ‘NOOR 1’ Ware and those from Cologne. Drawings Cologne (after HÖPKEN 2005).

restricted to the *civitas Tungrorum* (fig. 5) and can be dated from the second half of the 2nd until the beginning of the 4th century.³⁰ This ovoid beaker is also produced in the ‘NOOR1’ Ware, where it is called BE2. This beaker often has two grooves under the rim which seems to be typical for a ‘cooking set’. Plates and bowls also had these specific grooves, which leads to the conclusion that these vessels were part of one cooking set. They are found in small and large sizes. The large vessels often have burning traces, which confirms once again that they can be used for heating. The beakers BE2 possibly imitate the handmade calcite-tempered beakers,

which are well known in the *tumuli* and the consumption sites during the 2nd and 3rd century in the central part of the *civitas Tungrorum*. These calcite-tempered beakers are inspired by indigenous shapes.³¹ Another particular shape is the beaker which is named BE3 in our typology. This beaker type (sometimes with and sometimes without painted circles) is mainly produced in the area between Meuse and Rhine, north of the Eifel. The profile of this beaker is very similar to colour-coated beakers Niederbieber 32 and face urns Niederbieber 90. The painted circles could be an imitation of slip

³⁰ VILVORDER ET AL. 2010, 244.

³¹ This handmade form has a burnished surface and is manufactured in a high quality (see LEPOT/VILVORDER in press).

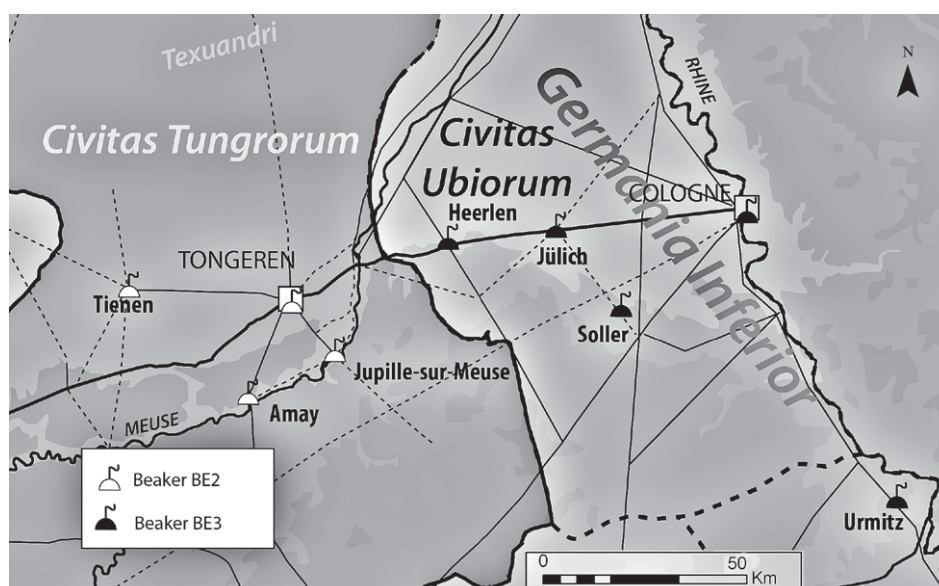


Fig. 5. Production sites where the beaker types BE2 and BE3 are produced.

decorations. This beaker should probably be dated between 150 AD and the 3rd century.³² The fact that the beakers are mainly produced in coarse fabrics allows us to interpret them as regional vessels which are mainly destined for preparing and consuming hot liquids.

Distribution of the ‘NOOR1’ Ware (fig. 6)

The presence of the ‘NOOR1’ Ware group has been demonstrated at a wide range of settlement types (villa complexes, rural sites, small towns, capitals) and cemeteries, in contexts dating from the late 1st century until the 3rd century AD but with a peak in the 2nd century. We see a concentration of ‘NOOR1’ Ware sherds around Tongeren. This is in part due to the fact that in this area a lot of sites have been inventoried.³³ However, the ‘NOOR1’ Ware is also found in the north of the *civitas* (to the villa of Hoogeloon) and it is even found in Bavay and Famars. The distribution (but also the differences in quantity which are not yet indicated on this map) seems to indicate that the ‘NOOR1’ Ware was particularly transported by roads. We see a concentration of ‘NOOR1’ Ware along the Via Belgica (the road connecting the city of Bavay with Cologne) and the road connecting the Via Belgica with the north of the *civitas* (passing the villa of Hoogeloon). The ‘NOOR1’ Ware is also present in sites along the river Meuse,

but in a far lesser degree. This hypothesis should be confirmed by quantifying the pottery in future research.

When we look at the distribution of the beakers BE1, BE2 and BE3 in general (including those produced in Heerlen, Tongeren and Tienen), we could say that the types BE1 and 2 did not reach consumption sites far over the *civitas* borders. They do not seem to travel further as Cuijk, near the Meuse.³⁴ The beaker BE3, however, had a much larger distribution area. Beakers of this type are found in sites in the *civitas Batavorum*, the *civitas Cananefatium* and even in Colmar.³⁵

Conclusion

First we described the fabric macroscopically by using a binocular, low magnification stereo microscope. Thin sections were analysed following the Whitbread methodology. A typology is created in order to gain insight in the forms and functions of this production and to examine the correspondence or differences with the regional shape sequence. A goal for the future is to create a typo-chronology by studying well-dated contexts in which the pottery is found.

There are several hints for locating the production centre of this ware in the region around Düren. First of all we see a concentration in the production of the regional beakers BE1, BE2 and BE3 in the area between Meuse and Rhine, north of the Eifel. Moreover, the beakers BE2 are not produced in the Rhine-region at all. Secondly, the mineralogy (the colours of the quartz and the red sandstone, which is possibly *Buntsandstein*) and the pink colour of the fabric pointed to a provenance in the stream valley of the river Rur.

³² In Jülich, pottery was produced from 70 until the third quarter of the 2nd century. From the last quarter of the 2nd century until the end of the 3rd century the production of pottery seems to be transferred to Soller (LENZ/MOMMSEN/PERSE 2007, 120–121). Only a few fragments are known in Urmitz Ware (personal communication Sibylle Friedrich; see also VAN KERCKHOVE in press a). The sherds from the kilns in Heerlen are dated in the 2nd century, but further study of the contexts is needed (VAN KERCKHOVE submitted).

³³ LEPOIT 2014. In the Southern Netherlands a lot of pinkish coarse fabrics are present in rural sites, but their identification as ‘NOOR1’ Ware has to be confirmed after analysis with the binocular microscope (VAN KERCKHOVE in prep.).

³⁴ For Cuijk, see VAN KERCKHOVE in press b.

³⁵ For the *civitas Batavorum*, see HAALEBOS 1990; for the *civitas Cananefatium*, see VAN KERCKHOVE 2011; example from Colmar seen by S. Willems in museum.

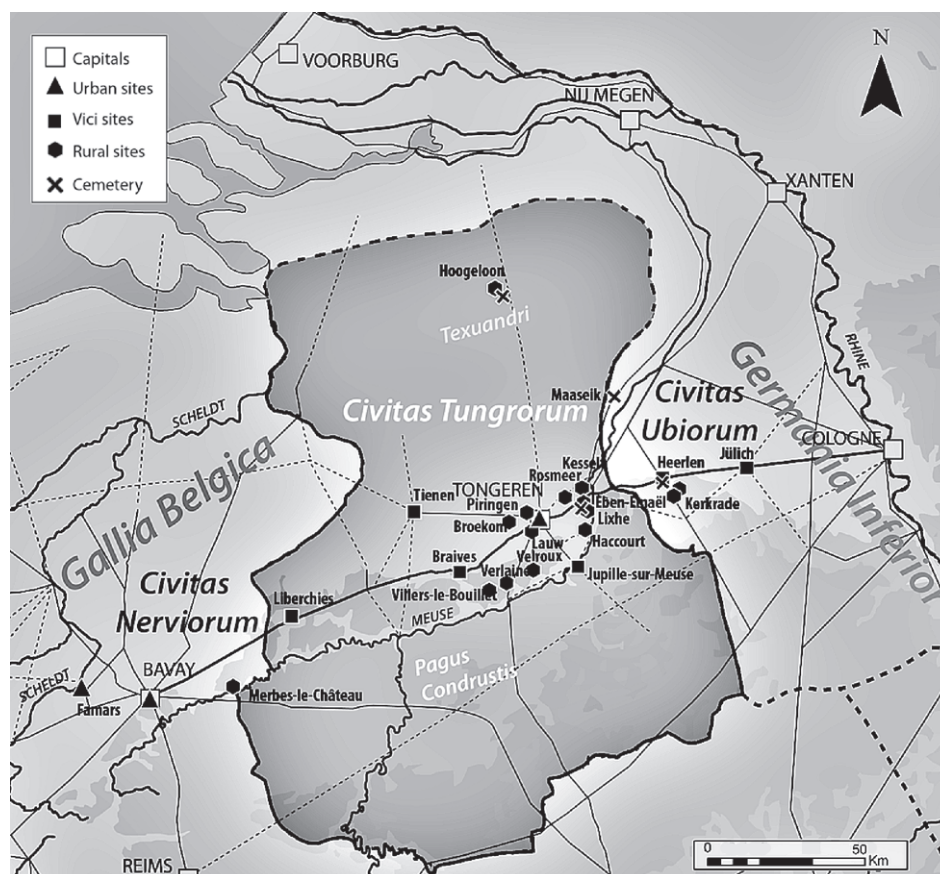


Fig. 6. Distribution of the 'NOOR 1' Ware.

Potters used an iron-rich clay which they heavily tempered with quartz and fired at high temperature. In this way, the 'NOOR1' Ware proves to be very suitable as cooking ware, which is supported by the vessel function and the burning traces.

The 'NOOR1' Ware is mainly a cooking ware with a visible influence from the Rhineland (for example Cologne and Niederbieber). This reflects the fact that the region has become part of the Roman Empire which is characterized by homogeneity and connectivity. However, we see choices in the details of the rim which reflect regional particularities that are not necessarily deliberate consumer choices. The fine wares, on the other hand, show a set of beaker types which tend to be very typical for the region and could be part of a regional consumption culture. The beakers BE1 and BE2 are produced and distributed in a rather restricted area, while the beaker BE3 – sometimes decorated with painted circles – is produced in the *civitates Tungrorum* and *Ubiorum*, but is characterized by a much wider distribution. For the beakers BE1 and BE2 it seems that the production of these types is stimulated by the preference of regional consumers, while the beaker BE3 is also appreciated in a much larger area.

The distribution of the coarse 'NOOR1' Ware seems to be defined by transport by roads rather than by the Meuse river. Although we see a concentration in the Tongeren *loess* region, the 'NOOR1' Ware is distributed and consumed far over the *civitas* borders. Sherds are found as far as Bavay and Famars. The distribution proves once again that this ware functioned in a well-organized system of Roman trading networks.

Based on this research into the consumer culture in the *civitas Tungrorum* with the 'NOOR 1' Ware as a case study, it can be concluded that the region seems to be well integrated into the Roman culture. From the 2nd century onwards, however, a regional repertoire develops. This regional consumption culture is not only appreciated in the region as the wide distribution of the beaker BE3 and of these typical pink cooking wares show.

j.van.kerckhove@vu.nl
annick.lepot@uclouvain.be
bborgers@vub.ac.be
sonja.willems@inrap.fr

Bibliography

- BLOEMERS/HAALEBOS 1968 J. H. F. BLOEMERS/J. K. HAALEBOS, Roman pottery finds in Heerlen, Province of Limburg. *Ber. ROB* 23, 1968, 259–272.
- BORGERS in prep. B. BORGERS, Characterisation of Regional Roman Pottery Production in the *Civitas Tungrorum*, Belgium, using an Integrated Compositional Approach (PhD thesis Vrije Univ. Brussels, in prep.).
- BORGERS forthcoming EAD., An Integrated Approach to the study of Roman Ceramic Manufacture in the *Civitas Tungrorum* region of Belgium: a case study from Vervoz. *Journal Roman Pottery Stud.* 16 (forthcoming).
- BOSQUET/HANUT 2011 D. BOSQUET/F. HANUT, Une fouille de sauvetage sur le vicus le vicus de Walhain/Tourinnes-Saint-Lambert: les travaux d'élargissement de la N243a. In: *Journée d'Archéologie Romaine – Romeinendag Bruxelles* 2011, 7–16.
- BRULET 1983 R. BRULET, Braives II. Braives gallo-romain. Le quartier des potiers. *Publ. Hist., Art et Arch. Univ. Louvain* 37 (Louvain-la-Neuve 1983).
- CLOSE/MARCOLUNGO 1985 F. CLOSE/D. MARCOLUNGO, Le cimetière gallo-romain d'Eben, «Sur les jardins». *Vie Arch.* 17, 1985, 101–201.
- COQUELET/GUSTIN in press C. COQUELET/M. GUSTIN (eds.), Jupille-sur-Meuse. Site de la Fabrique d'Eglise: sanctuaire antique et cimetière du haut Moyen Âge. *Coll. Etudes et Doc. Fouilles* (in press).
- DERU 1996 X. DERU, La céramique belge dans le nord de la Gaule. Caractérisation, chronologie, phénomènes culturels et économiques. *Publ. Hist., Art et Arch. Univ. Louvain* 89 (Louvain-la-Neuve 1996).
- DESTEXHE 1994 G. DESTEXHE, La villa gallo-romaine de la «Campagne du Vivier» à Verlaine. *Arch. Hesbignonne* 12, 1994, 23–98.
- GOSSELAIN/LIVINGSTONE SMITH 1995 O. P. GOSSELAIN/A. LIVINGSTONE SMITH, The Ceramics and Society Project: An Ethnographic and Experimental Approach to Technological Choices. In: *Kungliga vitterhets-, historie- och antikvitets akademien Konferenser* (Stockholm 1995) 147–160.
- GREENE 2008 K. GREENE, Learning to consume. Consumption and consumerism in the Roman Empire. *Journal Roman Arch.* 21, 2008, 64–82.
- HAALEBOS 1990 J.-K. HAALEBOS, Het grafveld van Nijmegen Hatert. Een begraafplaats uit de eerste drie eeuwen na Chr. Op het platteland bij Noviomagus Batavorum. *Beschrijving van de verzamelingen in het Provinciaal Museum G.M. Kam te Nijmegen* 11 (Nijmegen 1990) 167–168.
- HARTOCH/MARTENS 2001 E. HARTOCH/M. MARTENS, La production de céramiques dans le vicus de Tirlemont, Belgique, Composition des pâtes liée à la fonction des céramiques. *SFECAG Actes Congrès Lille-Bavay 2001* (Marseille 2001) 29–40.
- HANUT 2010 F. HANUT, Le faciès céramique de la cité de Tongres: les principaux constituants d'un répertoire. *SFECAG Actes Congrès Chelles 2010* (Marseille 2010) 331–346.
- HANUT/SCHÜTZ/ANSLIN 2011 F. HANUT/J.-L. SCHÜTZ/J.-N. ANSLIN, Nouvelle interprétation chronologique du mobilier céramique et de la verrerie du «Magasin» de Braives (province de Liège): un ensemble exceptionnel d'une surprenante diversité. *Bull. Inst. Arch. Liégeois* 115, 2011, 5–213.
- HAUPT 1984 D. HAUPT, Römischer Töpferbezirk bei Soller, Kreis-Düren. In: D. Haupt (ed.), *Beiträge zur Archäologie des Römischen Rheinlands* 4. Rhein. Ausgr. 23 (Bonn 1984) 391–497.
- KILIKOGLU ET AL. 1998 V. KILIKOGLU ET AL., Mechanical performance of quartz-tempered ceramics. Part I: strength and toughness. *Archaeometry* 40/2, 1998, 261–279.
- HÖPKEN 2005 C. HÖPKEN, Die römische Keramikproduktion in Köln. *Kölner Forsch.* 8 (Mainz 2005).
- KOLDEWIJN 1955 B. W. KOLDEWIJN, Provenance, transport and deposition of Rhine sediments II: an examination of the light fraction. *Geologie en Mijnbouw* 1955, 37–45.
- LENZ 1990 K. H. LENZ, Töpfereien im römischen Jülich (unpublished manuscript).
- LENZ 1999 K. H. LENZ, Siedlungen der römischen Kaiserzeit auf der Aldenhovener Platte. *Rhein Ausgr.* 45 (Bonn 1999).
- LENZ/MOMMSEN/PERSE 2007 K. H. LENZ/H. MOMMSEN/M. PERSE, Charakterisierung der römischen Keramik aus Jülich durch Neutronenaktivierungsanalyse. *Arch. Rheinland* 2006 (2007), 120–123.
- LEPOT 2012 A. LEPOT, Les expressions plurielles des céramiques culinaires dans le nord de la Gaule: Approche technologique. In: C. Batigne-Vallet (dir.), *Les céramiques communes dans leur contexte régional. Faciès de consommation et d'approvisionnement. Travaux Maison Orient et Méditerranée* 60, 2012, 295–318.
- LEPOT 2014 EAD., A. Lepot, Céramique et alimentation en Gaule du Nord. Trois siècles d'acculturation des populations dans les régions de Bavay, Tournai et Tongres (PhD Thesis Univ. Louvain-la-Neuve 2014).
- LEPOT/ESPEL 2010 EAD./G. ESPEL, Analyses techno-typologique et spatiale des céramiques communes culinaires en Gaule septentrionale, *SFECAG Actes Congrès Chelles 2010* (Marseille 2010) 225–240.
- LEPOT/VILVORDER in press A. LEPOT/ F. VILVORDER, La céramique à dégraissant calcite sur le territoire des Tongres. In: J. M. Séguier/M. Joly, *Les céramiques non tournées en Gaule romaine. Actes de la table ronde de Paris*, 25–26 novembre 2010 (in press).

- LEPPER/RAMBOW/RÖHLING 2005 J. LEPPER/D. RAMBOW/H.-G. RÖHLING, Der Buntsandstein in der Stratigraphischen Tabelle von Deutschland 2002. Newsletters. Stratigraphy 41, 2005, 129–142.
- MAARLEVELD 1956 G. C. MAARLEVELD, Grindhoudende midden-pleistocene sedimenten: het onderzoek van deze afzettingen in Nederland en aangrenzende gebieden. Mededel. Geol. Stichting C 6, 1956, 105.
- OKRUSCH/STRUNK-LICHTENBERG 1984 M. OKRUSCH/G. STRUNK-LICHTENBERG, Porositäts- und Dunnschliffuntersuchungen an Mortaria aus Soller und Lincoln. In: D. Haupt, Römischer Töpfereibezirk bei Soller, Kreis Düren. In: Beiträge zur Archäologie des Römischen Rheinlands 4. Rhein. Ausgr. 23 (Bonn 1984) 473–475.
- PEACOCK 1977 D. P. S. PEACOCK, Ceramics in Roman and medieval archaeology. In: Id. (ed.), Pottery and early commerce: characterization and trade in Roman and later ceramic (London 1977) 21–33.
- PICON 1997 M. PICON, Le passage des céramiques culinaires gauloises aux céramiques culinaires romaines, à La Graufesenque (Aveyron, France): résultats et questions. In: S. Santoro Bianchi/B. Fabbri (eds.), Il Contributo delle analisi archeometriche allo studio delle ceramiche grezze e comuni (Bologna 1997) 71–74.
- REKK/VILVORDER in press S. REKK/F. VILVORDER, Caractérisation de la production d'Amay. Doc. Arch. Régionale 5/Collect. Arch. Joseph Mertens 14 (Louvain-la-Neuve in press).
- ROTH 2007 R. ROTH, Styling romanisation. Pottery and society in Central Italy (Cambridge 2007).
- ROYMANS 1996 N. ROYMANS, The sword or the plough. Regional dynamics in the romanisation of Belgic Gaul and the Rhineland area. In: Id. (ed.), From the sword to the plough. Three studies on the earliest romanisation of northern Gaul. Amsterdam Arch. Stud. 1 (Amsterdam 1996) 9–126.
- STRAATEN 1946 L. M. J. U. VAN STRAATEN, Grindonderzoek in Zuid-Limburg. Mededel. Geol. Stichting C 6(2), 1946, 146.
- VAN KERCKHOVE 2011 J. VAN KERCKHOVE, Het Romeinse aardewerk, in Archeologisch onderzoek aan de Uithofslaan, gemeente Den Haag. In: A. Pavlovic (ed.), Deel 1: sporen van bewoning uit de ijzertijd (vindplaats 6) en de Romeinse tijd (vindplaats 3). Haagse Arch. Rapp. 1122 (Den Haag 2011).
- VAN ENCKEVORT 2012 H. VAN ENCKEVORT, Gebundelde sporen. Enkele kanttekeningen bij aardewerk en nederzettingen uit Romeins Nederland (PhD Univ. Leiden 2012).
- VAN KERCKHOVE in press a J. VAN KERCKHOVE, Het Romeinse aardewerk in Voorburg-Arentsburg, een handelsstad gespecialiseerd in de bevoorrading van de militairen aan de West-Nederlandse kust. In: M. Driessen/E. Besselsen (eds.), De opgravingen in Voorburg-Arentsburg. Themata (Amsterdam in press).
- VAN KERCKHOVE in press b J. VAN KERCKHOVE, Het Romeinse aardewerk. In: D. S. Habermehl/J. van Renswoude (eds.), Opgravingen te Cuijk-De Nielt. Nederlandse Arch. Notities (Amersfoort in press).
- VAN KERCKHOVE submitted J. VAN KERCKHOVE, The pottery production from Heerlen (in prep.).
- VAN KERCKHOVE in prep. J. VAN KERCKHOVE, Pottery consumption in the northern part of the civitas Tungrorum, the ceramic evidence from the Roman villa of Hoogeloon in a new perspective. (PhD VU Univ. Amsterdam in prep.).
- VANDERHOEVEN/MARTENS/VYNCKIER 2001 A. VANDERHOEVEN/M. MARTENS/G. VYNCKIER, Romanization and settlement in the central part of the Civitas Tungrorum. In: S. Altekamp/A. Schäfer (eds.), The impact of Rome on settlement in the North-western and Danube provinces. Lectures held at the Winckelmann-Institut der Humboldt-Universität zu Berlin in winter 1998/99. BAR Internat. Ser. 921 (Oxford 2001) 57–90.
- VILVORDER ET AL. 2010 F. VILVORDER ET AL., La céramique de Tongres, quatre siècles de production d'un caput civitatis. SFE-CAG Actes Congrès Chelles 2010 (Marseille 2010) 241–256.
- WALTER/ZITZMANN 1973 H. W. WALTER/A. ZITZMANN, Geologische Karte der Bundesrepublik Deutschland und benachbarter Gebiete 1:1 000 000 (Hannover 1973)..
- WHITBREAD 1995 I. K. WHITBREAD, Greek Transport Amphorae: A Petrological and Archaeological Study. British School at Athens/Fitch Lab. Occasional Paper 4, 1995.
- WILLEMS 2005 S. WILLEMS, Roman Pottery in the Tongeren Reference Collection: Mortaria and Coarse wares. Vlaams Inst. Onroerend Erfgoed Rapporten 1 (Tongeren 2005).
- WOOLF 1998/2000 G. WOOLF, Becoming Roman. The origins of provincial civilization in Gaul (Cambridge 1998/2000).
- ZIEGLER 1990 P. A. ZIEGLER, Geological Atlas of Western and Central Europe. Shell Internationale Petroleum Maatschappij BV² (1990).
- ZONNEVELD 1947 J. I. S. ZONNEVELD, Het Kwartair van het Peel-gebied en naaste omgeving, Mededel. Geol. Stichting C 6/3, 1947, 118–142.
- ZONNEVELD 1948 J. I. S. ZONNEVELD, Zand-petrologische onderzoeken in de terrassen van Zuid-Limburg. Mededel. Geol. Stichting N.S. 3, 1948, 103–123.