

## **Pottery of Cencelle: a research instrument for the functional and social reconstruction of daily context of a Medieval city**

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### **Resumo**

O projeto de investigação que venho a desenvolver no âmbito do meu doutoramento em Arqueologia Medieval, visa reconstruir o contexto funcional e social do quotidiano de uma cidade medieval a partir da análise de achados cerâmicos. A área de investigação é a cidade de Leopoli-Cencelle, de fundação papal (856 d.C.), localizada entre as montanhas de Tolfa, na região Norte do Lácio, na província de Roma (Itália). A Universidade de Roma “La Sapienza” tem estado, desde 1994, envolvida nas escavações arqueológicas deste sítio, tendo trazido à luz parte dos bairros residenciais e artesanais, o setor religioso, onde se inclui a igreja e o cemitério adjacente, e o setor relacionado ao poder civil, como ruas, as portas da cidade, guarnições militares e cisternas. Metodologicamente, iniciaremos com o estudo dos dados existentes, de forma a atingirmos resultados mais complexos e que possam ser utilizados em grande escala. A quantidade de material em questão pode ser estimada em cerca de 100.000 fragmentos, divididos por unidades estratigráficas e classes cerâmicas, para o período compreendido entre os séculos XI-XII e XV, o que nos fornece uma série de dados morfológicos e quantitativos. Uma vez obtida a documentação completa da análise realizada aos fragmentos cerâmicos, os artefatos poderão ser classificados de acordo: a percentagem de presença/ausência e de distribuição/concentração; na definição de critérios funcionais; na complexidade do sítio de proveniência, com referências aos aspetos sociais da cidade, à articulação do espaço, à composição da população à vida profissional e à alimentação.

Através da análise dos resultados obtidos na nossa investigação e o seu cruzamento com os dados extrapolados das fontes arquivo-documentais em estudo e com as metodologias de diferentes áreas, como a antropologia física, a etnoarqueologia e a antropologia, temos como objetivo final apresentar uma reconstrução antropológica dos aspetos diários da vida num centro urbano medieval.

### **Palavras-chave**

Leopoli-Cencelle, cerâmica, vida cotidiana, tardia Idade Média

### **Abstract**

The research project for my PhD in Medieval Archaeology aims to reconstruct the functional and social context of the daily life in a medieval by examining the ceramic findings. The investigation area Leopoli-Cencelle, which has been brought to light through the archaeological excavations carried out by Sapienza University of Rome since 1994. This town was founded by Pope Leo IV in 856 AD and is located on the Tolfa Mountains, about 40 miles north of Rome (Italy).

The methodology proposed starts from the analysis of simple data and aims to achieve complex results, that can be used on a large scale. The amount of material, that was analysed, can be quantified in about 100.000 fragments, divided by stratigraphic units and pottery classes. The material covers the historical period that goes from the 13th centuries up to the 15th and supplied a great quantity of morphological and quantitative data. After obtaining a complete documentation from the analysis of the fragments, the artefacts can be classified in their entirety according to: the percentage of presence/absence and distribution/concentration; the definition of functional criteria; the complexity of the site from which the fragments came from (with reference to the social aspects of the city, the articulation of space, the composition of the population, professional life and food).

The final objective consists of providing a global approach to the study of the site, focusing on the anthropological reconstruction of the everyday life of a medieval urban centre in

its complexity. The results obtained will be integrated with the data extrapolated from the study of archival-documentary sources and with the methodologies of different disciplines (physical anthropology, ethnoarchaeology and anthropology).

**Keywords:**

Leopoli-Cencelle, pottery, daily life, late Middle-Ages

The research I hereby propose is the main subject of my PhD, which began last year at Sapienza University of Rome, at the Doctoral School in Archaeology (34th Cycle, post-classical archaeology and antiquity curriculum).

This work started from the need to outline a more organic picture of the society and the daily life of a medieval city. It aims to reconstruct the living and working contexts and craftsmanship of the time in a functional and social way, using potteries as a guiding tool, in addition to the daily physical space where the inhabitants of the *civitas* (town/city) lived between the 13<sup>th</sup> and the 15<sup>th</sup> century.

#### THE CITY OF LEOPOLI-CENCELLE

The area of investigation is the city of Cencelle, in Italy, in northern Latium, between the towns of Tarquinia and Allumiere, a few miles east of Via Aurelia and west of Mignone river (Fig. 1).

Cencelle was founded by will of the Pope Leo IV in the 9th century AD, in order to protect the citizens of the Roman harbour city of Centumcellae against the Saracen invasions. Its urban functions were abandoned during the 16th century, thus defining the period of activity of the town, which lasted from the early to the late Middle Ages. The events that took place during the period of Saracen raids, urged the popes to fortify the main Roman cities and the construction of "new towns" to shield the inhabitants of the most exposed ones. Pope Leo IV determined the temporary abandonment of a harbour and a coastal town through the foundation of the new town of Leopoli-Cencelle (twelve miles away from the Centumcellae) in the middle of the 9th century. In doing so, he started a new population system on the hillside with centralized settlements, among which Cencelle is the first and only case with urban dignity.<sup>1</sup> The biography of the pontiff is reported in the *Liber Pontificalis*<sup>2</sup>, but this episode is also testified in an epigraph that

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<sup>1</sup> Sara Nardi, "Da Centumcellae a Leopoli. Città e campagna nell'entroterra di Civitavecchia dal II al IX secolo d. C.," in *Mélanges de l'École française de Rome. Moyen-Age, Temps modernes* 105 (Rome : École française de Rome, 1993), 2 : 531.

<sup>2</sup> Louise Duchesne, *Le Liber Pontificalis*, 2 voll. (Paris, 1886-1892), 132.

surmounted the eastern gateway of the town, where it was found in fragments and describes in detail its foundation and its consecration.<sup>3</sup>

The town of Cencelle, as we know it today, was brought to light by archaeological excavations. The current area began to be outlined in the 12<sup>th</sup> century and was converted into a farm by the 17<sup>th</sup> century, because of incisive land exploitation to extract alum. As a matter of fact, a whole series of renovations of the town started during the late Middle Ages involving all its building materials. The walls were the first part of the town that was rebuilt incorporating the previous Lionine structures made of red tuff and strengthened through the addition of towers and walkways.<sup>4</sup> Nowadays, conspicuous parts of these walls are still standing and have kept their original layout.

However, the urban layout of the town was perhaps disrupted even more by the construction of the great Romanesque church. It was erected on the site of an earlier 9<sup>th</sup> century cathedral dedicated to Saint Peter, which was built in an east-west orientation and located on the highest point of the hill. The church inherited the name and the fame from Saint Peter's Basilica in Rome. The new building (Sector VI) replaced the early Medieval church, changing its orientation in order to place the facade in direct relationship with the public space. It also acquired an external cemetery area, whose continuity of use is documented well beyond the end of its religious function (Sector VII).<sup>5</sup>

Furthermore, the block occupied by public buildings on the opposite side of the church of St. Peter was adjusted between the 12<sup>th</sup> and 13<sup>th</sup> centuries. These buildings are configured in different structures: an ashlar tower; a neighbouring tower house; a public building with an adjoining open area with a well and a cistern; an artisan workshop for the production and sale of pottery (Sector V).<sup>6</sup> There is also plenty of space inherent to

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<sup>3</sup> Letizia Pani Ermini and Francesca Romana Stasolla, "Il paesaggio di una città altomedievale (Leopoli-Cencelle): morfologia e analisi del territorio antropizzato," in *STAIM 2 (Foggia - Monte S. Angelo, 27-28 maggio 2006)*, ed. Giuliano Volpe and Roberta Giuliani (Bari: Edipuglia, 2010), 372-373.

<sup>4</sup> Francesca Romana Stasolla, Maria Di Nezza and Giulia Doronzo, "Materiali, tecniche costruttive e fonti di approvvigionamento a Leopoli - Cencelle," in *Risorse naturali e attività produttive: Ferento a confronto con altre realtà*, Atti del II Convegno di studi in Memoria di Gabriella Maetzke (Viterbo, 27-28 aprile 2010), ed. Elisabetta De Minicis and Carlo Pavolini (Viterbo: DISBEC, 2011), 299-340; Lorenzo De Lellis, "Le mura della città," in *Forma e vita di una città medievale. Leopoli-Cencelle*, ed. Letizia Ermini Pani, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 71.

<sup>5</sup> Sergio Del Ferro, "Lo spazio dei morti a Leopoli-Cencelle: il cimitero della chiesa di San Pietro," in *Forma e vita di una città medievale. Leopoli-Cencelle*, ed. Letizia Ermini Pani, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 39.

<sup>6</sup> Maria Carla Somma, "Leopoli-Cencelle: lo sviluppo della sede del potere," in *L'Europe en mouvement*, IV Congrès international d'Archéologie Médiévalè et Moderne (Paris, 3-8 settembre 2007); Maria Carla Somma, "Il palazzo pubblico," in *Forma e vita di una città*

housing and daily life, which were found especially in the south-eastern quarters of the town. This area is one of the most investigated areas and characterized by a set of organized blocks, which are divided into tower houses, row houses, artisanal facilities and workshops (Sectors I, II, III, IV) (Fig. 2).<sup>7</sup>

The archaeological potential of the area has therefore led to the launch of a research project promoted and directed by the Chair of Medieval Archeology of Sapienza University of Rome in 1994. It was initially coordinated by Prof. L. Ermini Pani and then by Prof. F.R. Stasolla. Other Universities took part in the project: The University "G. D'Annunzio" of Chieti (from the beginning), the École Française de Rome (for the first six years) and both the University of Tuscia (Viterbo) and the University of Perugia (for a short time). The peculiarity and complexity of the site has provided numerous research scenarios in various fields, from the strictly stratigraphic one to the in-depth study of the sources, the examination of the wall structures, the analysis of the material culture, the territorial research and the topographical framework. The conspicuous number of findings –especially potteries– coming from a twenty-five years excavation, has subsequently laid the foundations for a research project focused on the creation of a model of analysis for a unified context of everyday life, starting from the information provided by the archaeological data. These data were then integrated with those obtained from archival-documentary sources and with the results coming from different disciplines, such as physical anthropology, archaeozoology, archaeometry and ethno-anthropology.

The realisation of a project, that starts from the potential of the pottery of Cencelle and then expands feeding on a wider application field, is part of the so-called “global” approach to the study of archaeology. The project considers a series of factors that start from simple information and can lead to complex results, which can be used on a large scale. It is based on the comparison with various disciplines, but also strongly anchored to the material data.<sup>8</sup>

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*medievale. Leopoli-Cencelle*, ed. Letizia Ermini Pani, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 54-55.

<sup>7</sup> Francesca Romana Stasolla, *Leopoli Cencelle: il quartiere sud-orientale* (Spoleto: Fondazione CISAM, 2012).

<sup>8</sup> Enrico Giannichedda, *Uomini e cose. Appunti di archeologia* (Bari: Edipuglia, 2006); Enrico Giannichedda, “Chi ha paura dei manufatti? Gli archeologi hanno paura dei manufatti?” in *Archeologia Medievale XLI, 2014* (Firenze: All’insegna del Giglio, 2015) 79-93; Tiziano Mannoni and Enrico Giannichedda, *Archeologia della produzione* (Torino: Einaudi, 1996). In particular on the city of Cencelle: Giorgia Maria Annoscia, “Observations on Daily Life in the Communal Town of Leopoli-Cencelle,” *El Futuro del Pasado* 8 (2017), 267-296; Francesca Romana Stasolla, “La ceramica di Cencelle nel medioevo. Alcune riflessioni di metodo per una questione ancora aperta,” *Scienze dell’Antichità* 24, no. 1, 175-181; Francesca Romana Stasolla, “La portata del deposito: organizzazione sociale e dati quantitativi a Cencelle,” in *Atti VIII Congresso Nazionale*

## THE POTTERY OF CENCELLE

In these years the pottery of Cencelle have been the subject of numerous researches: from reprocessed studies for theses<sup>9</sup> up to analyses. The latter produced chrono-typological synthesis, whose purpose was either processing data from the ongoing excavations<sup>10</sup> or that focusing on specific case studies. These studies are geared to the investigation of productive contexts<sup>11</sup>, prevalence and circulation<sup>12</sup>, production and functionality of the artefacts. Individual environments within larger sectors or pottery classes were frequently preferred for chronological or research needs.

The objective is to achieve a reading of the material data in their entirety, starting from synthesis studies and increasing them with a systematic investigation. This project also aims to review the pottery findings and classify them according to: the percentages of presence/absence and distribution/concentration; the definition of functional criteria; the complexity of the site from which they come (with reference to

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*di Archeologia Medievale (Matera, 12-15 settembre 2018)*, ed. Francesca Sogliani and others (Firenze: All'insegna del Giglio, 2018), 176-179; Francesca Romana Stasolla, "Il quotidiano di una città medievale: archeologia dell'alimentazione a Leopoli-Cencelle," in *Le archeologie di Merilli. Miscellanea di studi in ricordo di Maria Maddalena Negro Ponzi Mancini*, ed. Paolo De Vingo (Alessandria: Edizioni dell'Orso, 2018), 511-522.

<sup>9</sup> Nadia Barone, "Materiali ceramici d'età rinascimentale e moderna provenienti dalla cripta della chiesa di Leopoli-Cencelle," in *La polifunzionalità nella ceramica medievale. Atti del Convegno sulle ceramiche di Roma e del Lazio in età medievale e moderna (Roma - Tolfa, 18-20 maggio 2009)*, ed. Giorgia Maria Annoscia and Francesca Romana Stasolla (Roma: Società Romana di Storia Patria, 2015), 189-206; Enrico Cirelli, "Leopoli-Cencelle. Relazione preliminare sulle tipologie ceramiche," in *Le ceramiche di Roma e del Lazio III. Atti del III Convegno di studi (Roma, 19-20 aprile 1996)*, ed. Elisabetta De Minicis (Roma: Edizioni Kappa, 1998), 109-114; Enrico Cirelli, *La ceramica di Cencelle nel Medioevo. I materiali rinvenuti negli scavi dell'École Française de Rome (settore III, 1994-1999)* (Rome: École Française de Rome, 2017); Luna Serena Michelangeli, "Dal frammento al contesto: la ceramica dal cimitero di Leopoli-Cencelle," in *Forma e vita di una città medievale. Leopoli-Cencelle*, ed. Letizia Pani Ermini, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 41.

<sup>10</sup> Enrico Cirelli and Nolwenn Lecuyer, "La ceramica dei settori III-IV (settore III, ambiente 8)," in *Leopoli-Cencelle. Una città di fondazione papale* (Roma: Palombi Editori, 1996), 2: 82-85; Lydie Glaudel, "Note preliminari sulla ceramica del sito di Cencelle: l'esempio del settore III F," in *Le ceramiche di Roma e del Lazio in età medievale e moderna, IV. Atti del IV Convegno di studi (Viterbo, 22-23 maggio 1998)*, ed. Elisabetta De Minicis and Gabriella Maetzke (Roma: Kappa Edizioni, 2002), 256-265; Maria Isabella Marchetti, "Maiolica arcaica dai settori I e II di Cencelle," in *Le ceramiche di Roma e del Lazio III. Atti del III Convegno di studi (Roma, 19-20 aprile 1996)*, ed. Elisabetta De Minicis (Roma: Kappa Edizioni, 1998), 103-108.

<sup>11</sup> Enrico Cirelli, "Produzione locale e dinamiche commerciali a Leopoli-Cencelle," in *Le ceramiche di Roma e del Lazio in età medievale e moderna, IV. Atti del IV Convegno di studi (Viterbo, 22-23 maggio 1998)*, ed. Elisabetta De Minicis and Gabriella Maetzke (Roma: Kappa Edizioni, 2002), 266-293; Sonia Antonelli, "Leopoli-Cencelle: settore V. La fornace per la ceramica," in *L'Europe en Mouvement. IV Congrès International d'Archéologie Médiévale et Moderne (Paris, 3-8 settembre 2007)*, <http://medieval-europe-paris-2007.univ-paris1.fr/>.

<sup>12</sup> Nadia Barone, "Le ceramiche di Cencelle nel quadro delle relazioni internazionali," in *Forma e vita di una città medievale. Leopoli-Cencelle*, ed. Letizia Pani Ermini, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 129.

the social sphere of the city, the articulation of spaces, the composition of the population, professional life and food).

The total number of ceramic materials under consideration amounts to around 100.000 fragments, divided into stratigraphic units (S.U.) and pottery classes and date back to a period between the 13<sup>th</sup> and the 15<sup>th</sup> centuries. The considerable quantity of ceramic fragments and its presence in every context of the town led to prefer this macro-class making it the one that is effectively comparable. For this reason, it also temporarily excluded from the research other materials such as metal and glass. In this respect, the fact that these materials were reused by the workshops within the walls must be considered.

Precise starting areas were chosen during the planning of the research criteria, therefore, sectors where the excavations had already been concluded were privileged, e.g. the artisanal and residential districts (Sectors I-II, III-IV) and the sacred area (Sector VI). Subsequently, the results obtained were compared to the findings from the areas in which the excavation were still underway (Sector X, maybe the military garrison; Sector XI, residential zone linked to the civil authority area; Sector VII, cemetery area).

The context is particularly interesting for of project that is very focused on the daily aspects, since various traces of fire points or structures related to the practice of cooking were found in the stratigraphy of the south-eastern district of Cencelle. Not all the fireplaces found refer to food practices. As a matter of fact, some of them were clearly used for production and craftsmanship, while, for example, it has been documented that a rectangular surface formed made of roof tiles found in the environment A of Sector III was used for cooking. This surface was also slightly raised above the floor, which was made of irregular stone slabs.<sup>13</sup>

Similarly, the collapse of the presbyterial area of the great Romanesque church in the 17<sup>th</sup> century has sealed and preserved a deposit, that turned out to be very interesting for analyses on culinary habits. The previous crypt was used as storehouse and for food processing and cooking purposes. The numerous remains of acorns found are an evidence of the use of a plant species that was also intended for human consumption and was widespread in the territory before its deforestation. The excavation survey allowed us to reconstruct the acorns toasting process practiced in hearths, which were dug into the stone floor of the ancient crypt. Furthermore, the finding of earthen jars (*ollae* in

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<sup>13</sup> François Bougard and Enrico Cirelli, "Settore III," in *Leopoli-Cencelle. Il quartiere sud-orientale*, ed. Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2012), 181-196.

Latin) arranged in layers interspersed with ash can trace back to a use for conservation, to facilitate the drying and duration over time.<sup>14</sup>

Going back to the analysis of the fragments, which was based on the research works previously carried out and on the published literature, the percentage of potteries in the areas that were analysed leads to reflect on the formation of deposits. Rather homogenous data was found in all residential areas: a high percentage of common use pottery (between 42% and 58%) followed by kitchen containers (between 20% and 28%). At the same time, the area of the Romanesque church contains a smaller number of common use pottery, while kitchen shapes predominate due to the re-use of the environments like a farm dedicated to agriculture in the mid-15<sup>th</sup> century. The medieval cemetery actually has a high percentage of common and kitchen potteries (66% and 25%, respectively), as a consequence of how the archaeological deposit was formed. As a matter of fact, the area of the cemetery was often emptied and filled again with materials from domestic and industrial junkyards.<sup>15</sup> The percentage of majolica fragments is between 26% and 29% in residential areas, while it is lower in religious and political contexts (Fig. 3).<sup>16</sup>

## METHODOLOGY AND PHASES OF RESEARCH

The pottery data already studied and those under study are analysed according to a methodology that involves the preparation and updating of a database. It includes all the information that can be obtained from ceramic fragments coming from the archaeological excavation of the town of Leopoli–Cencelle. In this first phase we<sup>17</sup> begin to outline a subdivision into pottery classes, morphologies and type of clays. Then we proceed to search for the junctions between the fragments and to identify the significant parts used for the graphic reconstruction of ceramic outlines. Gradually, we count the fragments and conservation percentages, in order to identify the minimum and maximum number of pottery receptacles. The last fundamental step is the analysis and

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<sup>14</sup> Nadia Barone, “Le ceramiche della tenuta agricola,” in *Forma e vita di una città medievale. Leopoli-Cencelle*, ed. Letizia Pani Ermini, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 143; Francesca Romana Stasolla, “Cencelle alla fine del Medioevo,” in *Forma e vita di una città medievale. Leopoli-Cencelle*, ed. Letizia Pani Ermini, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 139-141.

<sup>15</sup> Francesca Romana Stasolla and others., “Aree funerarie a Leopoli-Cencelle: riflessioni sui primi dati”, *Scienze dell'Antichità* 21 (2015), 369-398.

<sup>16</sup> Francesca Romana Stasolla, “La ceramica di Cencelle nel medioevo,” 175-181.

<sup>17</sup> The study of the archaeological materials of the city of Lepoli-Cencelle is carried out by the research team of the teaching of medieval archaeology (Sapienza University of Rome).

classification of the types of clay. It is carried out according to the compilation parameters of the datasheets recommended by ICCD (*Istituto Centrale per il Catalogo e la Documentazione*) for the composition of the clays.<sup>18</sup>

My research is based on the valuable information we managed to gather this year from putting together the various methodological contributions provided by the study of ceramic material. We can mostly find the typical forms of medieval kitchenware for the areas of Latium among the different morphologies present in the town. Earthen jars are predominant and represent over 60% of the recoveries and are followed by pots, lids of various shapes and sizes, texts and pans; therefore, the absence of large containers for cooking is confirmed.<sup>19</sup>

*Ollae* are receptacles that preserve a greater morphological continuity between the Roman period and the Middle Ages thanks to their unchanged features. They were used to cook soups, broths and boil food in water or milk. They could have either one or two handles and sometimes a lid; their sizes could vary; there were even small sizes to cook sauces and gravies or to heat liquids and prepare portions for one person.<sup>20</sup>

Even though the typological changes are not many, the sizes change a lot. This is the reason why these pots are also referred as kitchen set. The diameter of the smaller pots is usually 10-12 cm or even 8-9 cm and doesn't tend to be more than 15-20 cm for the bigger ones. Their capacity goes from 0.2 to 3 litres and this is particularly interesting in areas, that were inhabited by many people. One of the reasons could be the reduction of the use of wood to burn: perhaps it was less expensive to divide the food into more pots to light only one fire, in order to cook in a shorter time.<sup>21</sup>

To a minor extent, meals were also prepared in pans, that had a lip on the brim and were equipped with a tubular handle on which the wooden shaft was inserted. It is documented that enamelled pans were used for frying food and preparing stews in Cencelle in the 14<sup>th</sup>-15<sup>th</sup> century; during the same centuries there was also an increasing use of open-shaped containers, which also led to a change in eating habits. Bread and focaccia bread were cooked in baking pans with short sides and no handles. These pans

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<sup>18</sup> Ninina Cuomo di Caprio, *Ceramica in Archeologia 2: Antiche tecniche di lavorazione e moderni metodi di indagine* (Roma: L'Erma di Bretschneider, 2007), 45-136, 599-603.

<sup>19</sup> Francesca Romana Stasolla, "Il quotidiano di una città medievale," 511-522.

<sup>20</sup> Maria Isabella Marchetti, "In cucina," in *Forma e vita di una città medievale. Leopili-Cencelle*, ed. Letizia Pani Ermini, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 113-115.

<sup>21</sup> Francesca Romana Stasolla, "Luoghi e strumenti della cucina nell'archeologia del quotidiano altomedievale," in *L'alimentazione nell'altomedioevo: pratiche, simboli, ideologie. Atti della LXIII Settimana CISAM* (Spoleto: Fondazione CISAM, 2016), 555-600.



were also used as a support base for food in order to isolate it from direct contact with embers (Fig. 4).

Nevertheless, pottery for the pantry and the table also shows a rich set. Its dishes were mainly decorated with the typical colours of archaic majolica (blue/green, brown and yellow). Bowls and jugs are the most common morphologies among these. If the first ones were large, they were used to serve liquid or semi-liquid dishes, while if it was smaller it was used for seasoning sauces, cooked fruit and small sweets. The second receptacle often has trilobate and so-called pelican rim, it was manufactured in various sizes with capacity ranging from about 0.35 to 2 litres.

There are other morphologies of pottery for the table, namely: small amphorae, basins, dishes and cups. Many of them may have been produced in the kiln of Cencelle, since decorative similarities and a correspondence of the clays with the fragments of pottery excavated in the so-called potter's workshop was found (Fig. 5).

For the last, are also amphorae that could hold up to 10 litres water. They have a globular shape and a flat bottom; to these are added pitchers without coating or with banded painting, and smaller pots used for cosmetics, medicine, painting or as containers for spices and seasonings.<sup>22</sup>

As regards to the evaluation of how to use an artefact, it is necessary to consider both its shape and the material with which it was made, but also the possible traces of use that can be detected. To these early stages of study and classification, it was necessary to add a typological data sheet that can foresee an observation of the fragments, whose aim is to research traces inherent to the social sphere. Therefore, it is necessary to distinguish the different usages that can be identified on the ceramic body, which could be worn out as a result of friction.

Depending on the location on the ceramic body, if, on one side, these marks are found inside artefacts without lids, they may indicate for example the friction of objects such as cutlery or cleaning tools; on the other side, if they are found on the bottom, they could be a consequence of containers used to serve food or of the friction on tables or support bases. The same field of observation also includes recognisable accidental collisions, that did not however lead to the breaking of the piece and the loss of its

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<sup>22</sup> Maria Isabella Marchetti, "Leopoli-Cencelle e la tavola nel medioevo," in *Forma e vita di una città medievale. Leopoli-Cencelle*, ed. Letizia Pani Ermini, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 117; Francesca Romana Stasolla, "Il quotidiano di una città medievale", 511-522.

function. These are sometimes referable to the succession of recurrent incidents over time, perhaps when the artefact was used to serve or transport food.

The recording of traces of burnt food is quite common and can be useful to verify the use of fire by containers, even when these are considered unsuitable for this function due to their shape or coating. At the same time, their absence does not exclude that the artefact was used to cook, since these traces also depend on both the method used and the material (indirect contact with fire or heating in ash, steam or water). The distribution of combustion traces allows to establish, whether it was placed in direct contact with fire, suspended or placed on a stove: in the first case, the blackening was found on the support base of the container, while in the second one on the whole lower external surface.<sup>23</sup>

Furthermore, it is also important to mention alterations caused by the contents. For example, internal encrustations produced by the carbonization or decantation of food, or anomalies of the coating due to the temperature, the acidity and the typical features of the contents.<sup>24</sup>

The registration of the weight is also functional, because it allows to obtain the index of fragmentation of the contexts that were examined, and the indication of the capacity of the different types of single ceramic elements. In doing so, we were able to analyse the capacities and the individual and collective uses of the containers. Lastly, what we discovered from the recovery of materials that went out of use at the end of their life cycle is also very important: through reuse and restoration, their original function often changes. For example, jugs or mugs can become buckets for wells, incense burners, braziers, etc., while the numerous pottery fragments come back to life as jewels or game-pieces.<sup>25</sup>

In addition to the research lines outlined above, closely linking the given material to the stratigraphy and the documentation produced over the years for the various sectors of the town analysed, is also proving to be a necessary line of reasoning. In fact,

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<sup>23</sup> Guido Vannini and Elisa Pruno, "Problemi di polifunzionalità nella ceramica medievale," in *Le ceramiche di Roma e del Lazio in età medievale e moderna. Atti del VII convegno: La polifunzionalità nella ceramica medievale*, ed. Francesca Romana Stasolla and Giorgia Maria Annoscia (Roma: Società romana di storia patria, 2015), 7-30.

<sup>24</sup> Enrico Giannichedda, "Usure e valutazioni d'uso in reperti ceramici postmedievali del Museo di Masone," in *Atti del XXVII Convegno: La ceramica postmedievale in Italia. Il contributo dell'archeologia (Atti dei Convegni Internazionali della Ceramica – Albisola, 1994)*, ed. Centro Ligure per la Storia della Ceramica (Firenze: All'insegna del Giglio, 1997), 75-76.

<sup>25</sup> Francesca Romana Stasolla, "Taverne e tavernieri," in *Forma e vita di una città medievale. Leopoli-Cencelle*, ed. Letizia Pani Ermini, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 101.

the archaeological deposits in Cencelle are well known in all the areas of the city by now and the analysis of their composition modalities has allowed to understand the modalities of their formation, as a result of a very high number of successive rearrangements.

The late Middle Ages renovation works buried the previous stratigraphy, often covering and affecting the stone floors, and generating the frequent decontextualisation of the findings, in most cases found in following levels and filler stratigraphy. It should be said, however, that the position of the town and the difficulty of reaching it have meant that almost no type of finding got there by chance, resulting in a natural selection of artefacts. Therefore, in the same way, only what was intended to be taken away during the construction phases for a precise reason was actually removed.<sup>26</sup>

As a result, the comparison between substantial amounts of different data and the need to make them relate closely to each other, led us to use the GIS platform (Geographic Information System). We tried to make the best out of this powerful tool as a support in the management and analysis of the information needed for the reconstruction of a well-structured socio-economic model.<sup>27</sup>

This system will allow to: place the findings in real time in their specific context; interact with the base of operations in order to ask questions and attempt combinations between the material and the archaeological data; enhance graphic restitution, legibility of the aspects of spatial distribution and concentration and presence/absence of pottery classes from one area to another.

The consultation of archival-documentary sources will be essential to give an organic picture of the work. Written documentation rarely allows to understand the social composition of Cencelle, because private documents mostly refer to transfers of land and especially to religious structures such as the monastery of Farfa or the monastic cell of Santa Maria del Mignone.

However, it is also important to mention the document of submission to Viterbo, stipulated in 1220 by the Mayor and some of the citizens on behalf of the whole population. The document quotes 197 names, that probably belonged to men (over 18 years old), who lived in Cencelle. This historical evidence also mentions the social role of some of those who signed the document. A very articulated social hierarchy emerges from the text: notaries, judges, marquises, but also artisans and people who provided

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<sup>26</sup> Francesca Romana Stasolla, "La portata del deposito," 176-179.

<sup>27</sup> Claudio Filippo Mangiaracina, "Costruzione di un Sistema GIS a base regionale per lo studio della ceramica medievale in Sicilia", *Archeologia e Calcolatori* 23 (2012), 51-64.

services. Another source that gives us an almost direct comparison is the Statute of Civitavecchia. Civitavecchia is the nearest city to Cencelle, with which it shares social composition and many historical events. There are other statutes in cities and towns that are mainly located in Latium, such as Ferentino, Anagni, Viterbo, Corneto. These statutes represent an excellent comparison with the Cencelle's, either for the consistent juridical and urban impact, the chronological proximity and the descriptions of some professional activities.<sup>28</sup>

If the research interacts with the studies of scholars from other disciplines, a global approach and a similar use of data certainly acquires additional value, also because it allows a wider evaluation of all the problems.

In this regard, the anthropological study of the over 800 graves found has been going on since 2013; the bones found during the excavation of the cemetery area of Cencelle are currently being analysed in the Department of Biology of the University of Rome Tor Vergata by professor Martínez-Labarga and Dr. Baldoni. This research aims to provide information on the inhabitants of Cencelle through an analysis of skeletal biology, regarding their sex, diseases, usury of the bones, nutrition and social structure.<sup>29</sup>

In the same way, the data can be also compared with the archaeozoological analyses conducted on the site. These analyses need to be sided by the new results of researches, as they are carried out. The investigations, that were pursued so far, seem to underline a prevailing consumption of pigs, sheep and goats, followed by cattle and poultry. Even if wild animals are less represented than domestic ones, they are present in a percentage around 3-5 % in the first centuries, up to 17% since the end of the 13th century.

Some remnants show that people used to engage in fishing during all phases, even though its importance in the feeding can be inferred from the recoveries found during the excavations. There were mainly bones of small dimensions.<sup>30</sup>

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<sup>28</sup> Francesca Romana Stasolla, "Il contesto sociale e le attività artigianali" in *Leopoli Cencelle: il quartiere sud-orientale* (Spoleto: Fondazione CISAM, 2012), 94-122; Francesca Romana Stasolla, "L'assetto sociale della città," in *Forma e vita di una città medievale. Leopoli-Cencelle*, ed. Letizia Pani Ermini, Maria Carla Somma and Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2014), 79.

<sup>29</sup> Francesca Romana Stasolla and others., "Aree funerarie a Leopoli-Cencelle," 369-398; Marica Baldoni and others, "The medieval Population of Leopoli-Cencelle (Viterbo, Latium): Dietary reconstruction through stable analysis from bone proteins", *Journal of Archaeological Science: Reports* 24 (2019), ed. Andy Howard and Chris O Hunt, 92-101.

<sup>30</sup> Claudia Minniti, "I resti archeozoologici," in *Leopoli-Cencelle. Il quartiere sud-orientale*, ed. Francesca Romana Stasolla (Spoleto: Fondazione CISAM, 2012), 308-328.

Therefore, it is important to point out a further ongoing collaboration, which is of great importance for this work. In the last year, a fruitful exchange of opinions and data was established with the University of Chieti, represented by Prof. C.M. Somma and Prof. S. Antonelli, based on the ceramic data coming from the examined areas in Cencelle and on the data emerged from the presence of a furnace for ceramic production in the civil quarter.<sup>31</sup> It will also be possible to deepen the considerations on the presence of local ceramic productions thanks to the archaeometric analyses of about 40 known clay mixtures found in Cencelle and selected over the years. These analyses are currently underway and are being carried out by Dr Agostini, official geologist of the Superintendence of Archaeology, Fine Arts and Landscape of Abruzzo.

Finally, in view of the above, another goal will be to contextualize the data obtained, with references to chemical and biological scientific investigations based on the analysis of organic residues and on the traces of use present on the ceramic fragment<sup>32</sup>. The analysis methods that can be used are optical microscopy, gas-chromatography associated with mass spectrometry and genetical analysis (this methodology allows, where possible, the detection of ancient DNA molecules in the archaeological rest and the determination of its botanical origin).

The further investigation provided by instruments linked to biological research can represent an added value for the reconstruction of the function and re-use of some containers, of food dynamics, of the identification of new plant species not yet attested in the area and of the ecology of the environment.

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<sup>31</sup> Sonia Antonelli, "Leopoli-Cencelle: settore V. La fornace per la ceramica," 1-18; Francesca Romana Stasolla, "Il contesto sociale e le attività artigianali", 101-104.

<sup>32</sup> To get an overview of the studies on the subject: Mauro Paolo Buonincontri, Gaetano Di Pasquale and others, "Use and reuse of amphorae. Wine residues in Dressel 2-4 amphorae from Oplontis Villa B Torre Annunziata, Italy," in *Journal of Archaeological Science: Reports 12* (2017), ed. Andy Howard and Chris O Hunt, 515-521; Angelo Gismondi and others, "GC-MS detection of plant pigments and metabolites in Roman Julio-Claudian wall paintings," in *Phytochemistry letters 25* (2018), 47-51; Angelo Gismondi and others, "Grapevine carpological remains revealed the existence of a Neolithic domesticated *Vitis vinifera* L. specimen containing ancient DNA partially preserved in modern ecotypes," in *Journal of Archaeological Science 69* (2016), ed. Andy Howard and Chris O Hunt, 75-84; Maria Teresa Giannotta and others, "Sulle tracce del cibo. Le analisi dei residui organici nelle ceramiche per la ricostruzione dei paesaggi della Puglia settentrionale tra Tardoantico e Medioevo," in *Storia e Archeologia globale dei paesaggi rurali in Italia tra Tardoantico e Medioevo*, ed. Giuliano Volpe (Bari: Edipuglia, 2018), 171-202; Alessandro Quercia, "I residui organici nella ceramica. Stato degli studi e prospettive di ricerca," in *Uomini, piante e animali nella dimensione del sacro (Atti del seminario di studi di Bioarcheologia, Cavallino-Lecce 2002)*, ed. Francesca D'Andria, Jacopo De Grossi Mazzorin, and Girolamo Fiorentino (Bari: Edipuglia, 2008), 209-216; John Evans, "Organic Traces and Their Contribution to the Understanding of Trade, Bronze Age Trade in the Mediterranean," in *Studies in Mediterranean Archaeology, vol XC*, ed. Noel H. Gale (Jonsered: 1991), 289-296; Robert White and Hazelle Page, *Organic residues in archaeology: their identification and analysis* (London: United Kingdom Institute for Conservation Archaeology Section, 1992).



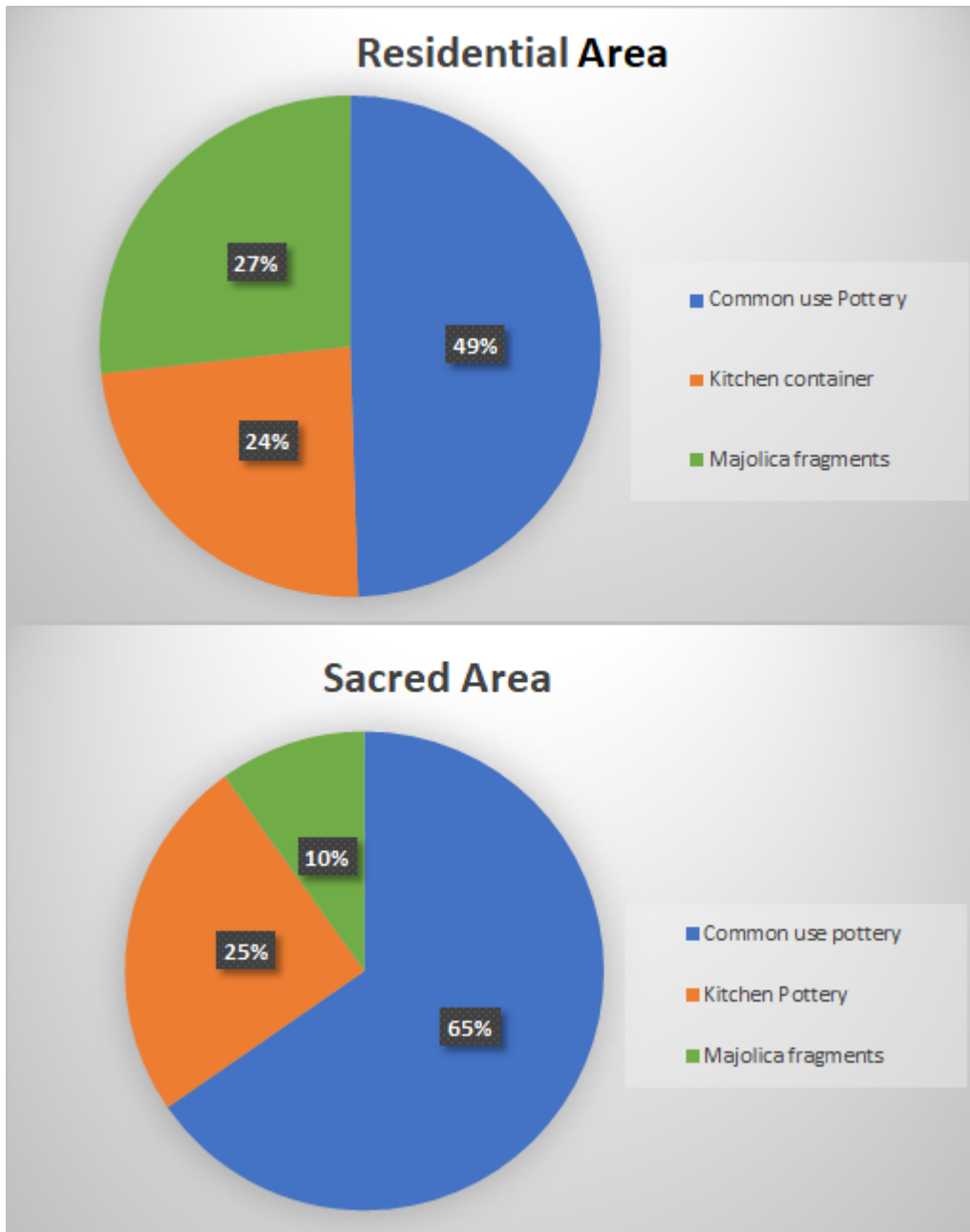
## ANEXOS



**Figure 1** – Geographical location of the town of Leopoli-Cencelle.



**Figure 2** – Aerial view of the town of Leopoli-Cencelle. Source: drone photo by Federica Vacatello.



**Figure 3** – Percentage graphs of the ceramic classes both in residential and sacred areas of Cencelle.



**Figure 4** – Cooking potteries from the Cencelle site: fire olle and “testo da pane”. Source: Letizia Ermini Pani, Maria Carla Somma and Francesca Romana Stasolla, *Forma e vita di una città medievale. Leopoli-Cencelle* (Spoleto: Fondazione CISAM, 2014).





**Figure 5** – Table potteries from the Cencelle site: “maiolica arcaica” plates, mugs and bowls. Source: Letizia Ermini Pani, Maria Carla Somma and Francesca Romana Stasolla, *Forma e vita di una città medievale. Leopoli-Cencelle* (Spoleto: Fondazione CISAM, 2014).