A cultural perspective on Merovingian burial chronology and the grave goods from the Vrijthof and Pandhof cemeteries in Maastricht
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Part II

Chapter 4

The Typo-chronological Analysis of the Grave Goods from the Vrijthof and Pandhof Cemeteries in Maastricht (The Netherlands) from a Cultural Perspective

Only a small selection of the results from the excavations of the Vrijthof (1969/70) and Pandhof (1953/54) cemeteries has been published up to now, and the integration of the various components of the archaeological evidence in a single overview never came into being. The analysis of a complicated archaeological dataset, such as that from the Servatius complex, generally starts with the analysis of the chronological and topographical development of the site. The grave goods are one component of the evidence that contributes to this reconstruction. The main goal of the foregoing chapters was to illustrate that chronological analysis of grave goods from a cultural perspective results in the reconsideration of the accuracy of chronological methods and the pursued chronological refinement. This had already some effect on the chronological analysis of the finds from Maastricht, and maybe it has more profound consequences for future grave goods analysis. The pursued chronological phasing of the graves and grave goods from Maastricht is the analytic focal point in this chapter, and the results of the chronological analysis are published hereafter. Further research is required in order to connect the identified cultural categories of grave goods and objects with the actual burial evidence. The creation of distribution maps of the various finds in Merovingian Gaul, or independent data, as for example provided by physical anthropological research, can contribute to insights in this connection. Although skeletal remains were recovered from the cemeteries in Maastricht, and the dataset of the two cemeteries is considerable and unique, for solid significant statistical correlations between grave goods and a variety of biological features it appeared to be too fragmented and disturbed, and as a consequence too small to create a solid statistical research basis. Other analysis, such as isotope analysis, was only performed on a small sample of the skeletal remains, and general patterns cannot be identified yet. The application of the cultural perspective on the chronological analysis is therefore limited to the formulation of a number of research questions in relation to the results of the analysis of the skeletal remains and with some examples of variable circulation in isolated graves. These research questions can only be exemplified with the burial evidence from the Servatius complex, and they serve as an illustration for the study of chronology from a cultural perspective.

The cultural perspective in the chronological debate was in the preceding chapters formulated as the reflection on the connection between grave goods and the deceased and the associated circulation trajectories of the objects. Chronological methods as a practical exercise also have an analytical background, which, in short, relates to the structure and meaning of the created classification schemes and the establishment of chronological phases, short or long, on the basis of these schemes. In chapter 1 the basic assumptions of the process of seriation as a chronological method and their relation to the presumed accuracy of the achieved chronologies, especially chronologies that consist of short phases, were discussed. How, then, should chronological analysis be performed with regard to the theoretical drawbacks of chronological methods, and especially the pursued chronological refinement? The datasets of the Vrijthof and Pandhof cemeteries do not meet the requirements for a state of the art seriation or topo-chronological analysis, and an independent typo-chronology of the graves and grave goods for Maastricht or its hinterland cannot be obtained on the basis of these cemeteries alone. Existing typo-chronologies (which were for the majority obtained by seriation) have to form the basis for the first chronological analysis of the two cemeteries. The selected typo-chronologies are independent schemes;
they are created for one cemetery or a group of cemeteries on the basis of a distinct chronological method (seriation and/or topo-chronology). The suitability of the selected typo-chronology schemes for the chronological analysis of the finds from Maastricht will be discussed, as will the underlying assumptions of the produced typologies and the length of the absolute chronological phases i.e. in this part the theoretical backgrounds and the cultural perspective of a number of chronological studies are investigated. The conclusions, together with the conclusion to part I, contribute to the final choices with regard to the chronological phasing of the grave goods from the Vrijthof and Pandhof cemeteries. It will appear that insights in the variability in circulation of isolated graves provide data that can connect the burial evidence with the discussed cultural categories of grave goods and objects, but these are established on the basis of circulation periods of object types that were obtained with chronological methods that focused on the dating of graves. Other methods to gain more reliable date ranges of isolated object-types have to be considered.

4.1 The Vrijthof and Pandhof cemeteries: the construction of a typo-chronology

The typo-chronological analysis of the grave goods from the Vrijthof and Pandhof cemeteries are in this stage analysed as finds from isolated burial grounds and need to be placed in a broader perspective in future analysis.314 The cemeteries belong to the Servatius complex (Fig. 2 and 10).

Figure 10. The cemetery plans of the Vrijthof and Pandhof cemeteries (after D.E. Smal).

314 The analysis of all the archaeological evidence from the Servatius complex will result in two volumes; the first volume includes all the features of the Vrijthof site, the second includes the Pandhof site and the graves that were excavated in the Church and which formed, at least the graves before the first stone building phase of the Church (c. 550), one cemetery with the Pandhof site.

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This complex consists of the ancient construction phases of the church of Saint-Servatius and the archaeological record that was excavated in and around this church. The archaeological underground was uncovered during several excavation campaigns. The first was undertaken in 1919\(^{315}\), thereafter the excavation of the Pandhof in 1953/54\(^{316}\), the excavation of the Vrijthof square in 1969/70, the excavation of the ‘Cloister’ (1980) and the Church (1982-1989)\(^{317}\), and finally the excavation of one of the small remaining undisturbed parts of the Vrijthof square in 2004\(^{318}\) formed the dataset of this Servatius complex. The excavations inside the Church revealed numerous late Roman and early medieval graves with grave goods, but these could not be incorporated into the grave goods analysis in this thesis, which is restricted to the Vrijthof and Pandhof sites.

The Vrijthof site was excavated from the end of 1969 till the beginning of 1970.\(^{319}\) Trenches 4, 5 and 6 revealed the early medieval cemetery (Fig. 2 and 10). The cemetery was not completely excavated; only the borders to the south and west were identified. It seems plausible to expect that the cemetery stretched to the Roman road in the north. The excavation north of the road (Excavation Maastricht Theatre\(^{320}\)) did not reveal any burials. The cemetery could have expanded more to the east than we know. Moreover, the section between trenches 5 and 6 was not excavated due to miscommunication between the excavators and construction workers. This section was destroyed and the ground (with the finds of the graves from this section) were discarded somewhere outside the city of Maastricht. The excavation of the Merovingian cemetery in trenches 4, 5 and 6 took around three weeks, which raises some doubts about the quality of the administration of the considerable number of graves, grave goods, skeletal remains and other features. The Vrijthof cemetery knows next to a horizontal layout also a vertical stratigraphy, which is an unusual feature for Merovingian cemeteries. The analysis of the vertical layers of graves offers possibilities for the comparison of the typo-chronological results with the vertical positions of the graves.

The original documentation of the excavation was made available. This process resulted in the final outlines of the graves, their relative relation to other graves and the final assignation of the associated grave goods and skeletal remains.\(^{321}\) This documentation formed the basis for the typo-chronological analysis of the Vrijthof grave finds. The post-excavation processes resulted in the absence of some finds, which were recorded during the excavation. For some finds it is unknown what happened to them, for others it is known that they were stolen from an exposition in the seventies. An important source of information for some of the absent finds is the Ypey-archive.\(^{322}\) A number of finds that are missing can be described, more or less accurately, and classified on the basis of the information in this archive. The missing finds which cannot be reconstructed anymore, but for which it is known that they were found in a grave, are also incorporated in the overview of the grave finds. Their description will consist of only general terms such as pottery or metal. With all the documentation available the most complete overview of grave finds was obtained.\(^{323}\)

\(^{315}\) Kalf 1916; Goossens 1920; Panhuysen 1991, 16.
\(^{316}\) The ROB (the former State Service of Archaeology) undertook the excavation. For publications of this cemetery: Glazema/Ypey 1953; Verwers 1986; Soeters 1989.
\(^{317}\) The Archaeological Service of the City of Maastricht carried out this excavation. See for publications: Panhuysen 1988; 1990a; 1991.
\(^{318}\) The AAC (Amsterdam Archaeological Centre) and the Archaeological Service of the City of Maastricht carried out this excavation. See for the publication: Dijkstra/Flamman, 2004.
\(^{319}\) A detailed discussion of the history of the Vrijthof excavation will be published in the first volume of the all-round analysis of the Servatius complex.
\(^{320}\) Hulst 1994.
\(^{321}\) F. Theuws and D. Smal analysed the field drawings, on the basis of which they produced the horizontal cemetery plan, a Harris-matrix of the vertical stratigraphy of the graves, and the composite of each grave which comprises the definite outline of the grave and the location of the grave finds and the skeletal remains. This analytical process will be discussed in the first volume of the analysis of the Servatius complex, in which, among others, the analysed cemetery plan, the composites of the graves, and the vertical stratigraphy will be published.
\(^{322}\) Ypey studied a selection of the finds from the Vrijthof cemetery and made photographs and pictures of them, which he kept in his archive.
\(^{323}\) One category of objects from the Vrijthof excavation was already published in detail: The finds of bone and antler (Dijkman/Ervynck 1998).
The Pandhof site was excavated in 1953/54, and was executed in eight trenches (Fig. 10).\(^{324}\) The outlines of the excavated graves were recorded, and a considerable number of the finds and skeletal remains could be assigned to a specific grave number. The finds from what was identified as one grave during the excavation were often given the same find-number and as a consequence it was in some instances not possible to reconstruct the find-location of the grave goods, although this was possible for the majority of the finds.\(^{325}\) The Pandhof cemetery also has a complicated horizontal and vertical stratigraphy.\(^{326}\) The borders of this cemetery were not established, but it is known that it formed one part with the graves prior to the first stone building phase of the Church (around 550) that were excavated inside the Church and those that resulted from the so-called 'Cloister' excavation. It is remarkable that trenches 1, 2, 7 and 8 of the Pandhof excavation produced a high number of graves and grave goods and that especially in trench 3 hardly any findings were recorded. This is a strong indication that parts of the cemetery were not recorded due to excavation strategies.\(^{327}\)

Ypey and Glazema published the most exclusive finds from the Pandhof cemetery already in 1955.\(^{328}\) Some of these finds are now lost, but can be described and classified on the basis of the published photographs and added descriptions. An extended archive of the finds was also made for the Pandhof finds, in the discussion of the grave finds referred to as the 'Pandhof-archive'. For each grave (numbered by the associated find numbers of the objects of what was during the excavation identified as a grave) a description and schematic drawing of most of the finds were included. On the basis of this information, it can be determined which finds were once present but now lost or corroded to such an extent that detailed identification is now impossible (especially for some iron objects such as axes/franciscas and seaxes). Some of these finds can be described, although summarily, and classified on the basis of this documentation.

The Vrijthof and Pandhof cemeteries form the basis for the first typo-chronological analysis of the Servatius complex.\(^{329}\) The Vrijthof location is a distinct burial ground within this complex. The graves from the Pandhof location formed, together with the graves excavated in the Church and Servaas Cloister, one cemetery before the first building phase of the church (before 550). After 550 it remains uncertain if the choice for burial *intra muros* or *extra muros* signified a profound difference regarding how these burial locations were perceived. The comparison of the burial locations of the Servatius complex will be a research subject after all the archaeological evidence is completely available and analysed, as will their identification as specific burial grounds in comparison with the characteristics of other early medieval cemeteries.\(^{330}\)

Some information can already be summarised (Table 8). The Pandhof cemetery consisted of more graves than the Vrijthof cemetery. The majority of the graves and grave goods of both the cemeteries can be dated in the sixth and seventh centuries, but on the basis of the available documentation it can be concluded that the Pandhof cemetery started to be a burial ground some time

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\(^{324}\) A detailed reconstruction of the excavation history will be published in the second volume of the detailed all-round analysis of the Servatius complex.

\(^{325}\) The composites of the graves and the exact find location of the finds in the graves will be published in the second volume of the analysis of the Servatius complex.

\(^{326}\) R. Panhuysen and N. Jaspers analysed the field drawings in detail on the basis of which they produced the horizontal cemetery plan, a Harris-matrix of the vertical stratigraphy of the graves, and the composite of each grave which comprises the definite outline of the grave and the location of the grave finds and the skeletal remains. This analytical process will be discussed in the second volume of the all-round analysis of the Servatius complex, in which, among others, also the analysed cemetery plan, the composites of the graves, and the vertical stratigraphy will be published.

\(^{327}\) A detailed description of the excavation of the Pandhof location will be published in the second volume of the analysis of the Servatius complex.

\(^{328}\) Ypey/Glazema 1955.

\(^{329}\) One of the first research goals of the analysis of the Servatius complex was formulated as the description of the chronological and topographical development of this complex during the late Roman and the early medieval period.

\(^{330}\) Merovingian cemeteries can be defined on the basis of various characteristics such as their location (rural cemeteries as opposed to cemeteries such as the Vrijthof and Pandhof which are located near a religious complex, although both are also different, etc.), duration, the relative number of burials of men and women, the sorts of grave goods, the location in the landscape (a study initiated by de Haas (2010)), etc. Thorough research on the characteristics of distinct burial grounds has until now only scarcely been executed, and for now it is only possible to identify some characteristics of the Vrijthof and Pandhof cemeteries, but it remains difficult to define them as a certain type of cemetery.
before the Vrijthof location, probably already in the late third century. Some of the Pandhof graves can, on the basis of the grave goods, be dated in the late Roman period and in the transition period (globally the fifth century) from the late Roman to early medieval period. Late Roman objects were also reused in Merovingian graves (which was a common practice in the early medieval period, see chapter 3), and the only hard evidence for the assignation of these graves (without early medieval finds) to the late Roman period is provided by the stratigraphical analysis. A considerable number of the graves from the Vrijthof and Pandhof cemeteries contained, next to the grave goods, skeletal remains (Table 8).

<table>
<thead>
<tr>
<th></th>
<th>Vrijthof</th>
<th>Pandhof</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of graves</td>
<td>320</td>
<td>498</td>
<td>818</td>
</tr>
<tr>
<td>Number of possible graves</td>
<td>136</td>
<td>332</td>
<td>468</td>
</tr>
<tr>
<td>Gravestones with grave goods</td>
<td>146</td>
<td>152</td>
<td>298</td>
</tr>
<tr>
<td>Datable graves</td>
<td>90</td>
<td>104</td>
<td>194</td>
</tr>
<tr>
<td>Gravestones with skeletal remains</td>
<td>262</td>
<td>315</td>
<td>577</td>
</tr>
<tr>
<td>Gravestones with skeletal remains and grave goods</td>
<td>106</td>
<td>75</td>
<td>181</td>
</tr>
</tbody>
</table>

Table 8. Basic information on the graves, grave goods and skeletal remains from the Vrijthof and Pandhof cemeteries (see also table 11).

Both the chronological methods seriation and topo-chronology require a relatively complete and extended dataset in order to create a classification of types that occur repeatedly in a series of graves. This requirement is not met by the datasets of the Vrijthof and Pandhof cemeteries; an independent typo-chronological scheme cannot be produced for these cemeteries, and neither can they be incorporated in an existing one, since such a scheme is not available for the Middle Meuse Area, which is considered to form a distinct cultural area of which Maastricht was one of the centres in early medieval times. Other choices with regard to the classification of the grave goods from these two cemeteries had to be made, and the resulting typo-chronological ordering of the graves has to be seen as preliminary. The use of existing typo-chronological schemes of cemeteries in more or less distant regions was in the first stadium of research the only option for the phasing of the graves from Maastricht. The evaluation of the typologies that stand at the basis of these chronological schemes and their suitability to form the basis for the classification and dating of the grave goods from the Vrijthof and Pandhof cemeteries, but also the identification of their specific cultural perspective on chronology, is therefore the main discussion in the following sections.

The typo-chronological debate has mainly been dominated by German and French research schools and is evaluated in detail in numerous publications (see chapter 1). The publication of the cemeteries from the area of Trier by Böhner (1958) forms the origin of this debate. It was different from preceding publications because it introduced a distinct method for relative dating, the so-called combinational analysis. This method distinguished itself from the foregoing dating methods in that it is based on the complete range of grave goods. Before that, the dating of graves was mainly based on comparisons with

331 The excavations also revealed graves from later periods, but these are not the subjects of investigation here.
332 The skeletal remains were for both cemeteries analysed by R. Panhuysen and E. Smits, both of the Amsterdam Archaeological Centre (University of Amsterdam). A detailed overview and discussion of the results will be published in the first (Vrijthof cemetery) and second (Servatius cemetery) volume of the full analysis of the Servatius complex.
333 On the basis of the analysis of the documentation of excavation. This number is different from the records made at the time of excavation.
334 The creation of an independent typo-chronological scheme for the Middle Meuse Area on the basis of both published and excavated but unpublished cemeteries from the area alongside the river Meuse from Maastricht to Namur is a research goal for the nearby future (Anastasis-project (research term: 2009-2013), Amsterdam Archaeological Centre).
335 Böhner 1958.
historically dated assemblages or on just a specific selection of grave goods. This last method formed the basis of Werner’s publication *Munzdatierte austrasische Grabfunde* (1935). His dating method was based on coin-containing graves from which the development stages of the variety of associated finds in these graves were established. These development stages (*Stufen*) were subsequently dated on the basis of the associated coins. Böhner’s objections to this method were related to the selective character of the material (only these objects associated with ‘coin-containing graves’) on the basis of which the *Stufen* were constructed, and on the complexity of the circulation of coins and the associated dating problems. Böhner perceived the cemeteries from the area of Trier suitable for the development of a method of relative dating and for the accomplishment of a more elaborate relative and absolute chronology, which should have validity for Merovingian cemeteries outside the region of Trier.

A typology of grave goods is the basic condition for the realisation of relative and absolute chronologies. Böhner’s typology, as he mentions himself, is relatively crude. A refined subdivision would blur the general picture of the chronological change of the grave goods he wished to develop on the basis of the available dataset. The material diversity and the number of undisturbed graves from the cemeteries of Trier were sufficient to obtain a certain object variety for every *Stufe*, *Stufen*, according to Böhner, should be interpreted as periods during which certain object-types were used as grave goods on the basis of which graves can be dated. The lifespan of the object-types are represented in his graphical representation of the five *Stufen*. The definition of multiple object-types for all the categories of grave goods was new in the research on Merovingian cemeteries, as was the definition of five *Stufen* on the basis of the lifespan of these object-types. The period before Böhner was characterised by the dating of graves, not on the dating of the life-span of object-types.

After the introduction of Böhner’s combinational method the propositions for new typo-chronological schemes and discussions on their refinement obtained a prominent position in the chronological debate (see chapter 1). The plausible degree of chronological refinement on the basis of chronological methods such as seriation, as it was discussed in this thesis, can only be grounded on chronological considerations from a cultural perspective. It is, however, generally thought that the cultural backgrounds of objects and object deposition with the dead are of little distorting influence. Apart from cultural considerations it can be stated that the definition of criteria for typological purposes is a subjective and random exercise if the choices made are not substantiated according to the formulated research goals. For chronological research it is therefore necessary to establish a typological scheme that is defined on the basis of chronological significant criteria in order to diminish the influence on the obtained chronological orderings of parameters other than time as much as possible. In the following it is explored to what degree the typology schemes that are used for the chronological analysis of the finds from Maastricht meet this requirement, how the chronological phases in the resulting chronological orderings of graves were created, and if in this process some thoughts were expressed which relate to the creation of chronological significant typologies, to the cultural backgrounds of the objects which were selected as burial objects, and to relatively short or long chronological phases.

### 4.1.1 The published cemeteries of the Middle Meuse Area (Belgium) and the Netherlands

Recent archaeological research established the cultural homogeneity of the Middle Meuse area (the area along the river Meuse from Maastricht to Namur) during the early medieval period regarding trade and artisanal production (Fig. 11). It can therefore be suspected that the grave goods from this area display more similarities with the grave goods from the Servatius complex than those from other regions. The majority of the published Middle Meuse cemeteries are based on Böhner’s typo-chronology,

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336 See Böhner (1973, 7-12) for an outline of the development of dating methods going back to the discovery of Childeric’s grave in 1653.

337 Böhner 1958, 15-16.

338 Böhner 1958, 12-13, 16.

339 An obvious example is the separate analysis of assemblages of men and women; it was suggested that also age at death is of influence on the ordering.

which is mainly due to the fact that they were nearly all published some time ago (mainly in the sixties and seventies of the previous century). Next to methodological objections with regard to the application of typo-chronological schemes from other regions, it can also be stated that this work, published in 1958, is outdated by now in terms of chronological analysis. The cemeteries of the Middle Meuse area are therefore of little use for the choice of descriptive criteria and for the dating of the finds from Maastricht, but are required for insights in distribution patterns of resembling objects in order to find additional proof for the Middle Meuse area as a homogeneous cultural region regarding material culture.

Figure 11. The research areas of the consulted typo-chronology schemes compared to Maastricht and the middle Meuse area.

A number of Merovingian cemeteries are known from what is nowadays the Netherlands, and only few have been published. It appears that the typo-chronological analyses of the published cemeteries depend on the work of Böhner, too, as it was observed for the publications of Belgian cemeteries. An exception is the publication of the cemetery of Lent. 341 Although the typology of Böhner is often used, much effort was put in an overview of numerous parallels for the grave goods. The publication as a result offers a thorough discussion of the majority of the grave finds. The last publication of the cemetery of Rhenen aimed at the reconstruction of the fifth century phase of this cemetery. 342 The burials of the fifth century were dated according to the Rhineland phases of Siegmund and were related to four generations (generations of 30 years; the short phases represent the subsequent generations)

who formed the burying community in order to shed some light on the structure and size of the communities that were living there in the fifth century (since not much settlement evidence is known from the fifth century). The cultural aspects of object deposition with the dead in relation to the refinement of typo-chronological schemes have scarcely been a matter of debate in the Netherlands. The authors of the publication of Lent, however, showed considerable interest in the reconstruction of the production (centres) of the grave finds, their exchange and the distribution patterns of resembling objects. The results of their research can shed some light on various forms of object circulation and the consequences for chronologies.

4.1.2 The typo-chronologies of the Rhineland Area (Germany)

The research history of Merovingian burial chronology in the Rhineland Area is already discussed in detail in publications from the French and German language regions. The following sections involve the most recent contributions to the typo-chronological debate.

Siegmund (1998): Lower Rhineland Area

Siegmund offers a typology scheme of which the chronological significance of the defining criteria are tested in several ways and are therefore claimed to have been selected in an objective way. His research is based on Merovingian finds and sites of the so-called Niederrhein area (Lower Rhine Area), which includes the districts of Düsseldorf and Heinsberg (Figure 11). The creation of a complete overview of the very scattered and sometimes briefly published Merovingian finds of one restricted area was one of the main goals of this research. The period covered is specified as the Merovingian period, but the burial evidence that can be identified as ‘Germanic’, from 400 AD on, is also included. The study of the Merovingian period in the lower Rhine area ends with the abandonment of the cemeteries and the ending of the deposition of grave goods; in Siegmund’s typo-chronological scheme this point is fixed at c. 740 AD.

Other research goals were also formulated. Siegmund concludes, after a short introduction of the produced chronologies until then, that an all-inclusive and reliable basis for the chronological analysis he intends to perform for the Lower Rhine Area is not available. Typological and chronological schemes were for the majority developed on a very local level and are, as a consequence, very refined, which makes a comparison between the cemeteries and the unification of the typo-chronology schemes very difficult. On the other hand, he observed that Böhner’s work, which has been, and still is, used extensively, is based on a smaller diversity and amount of material so that this typo-chronological scheme forms, among other reasons already discussed, an inadequate basis. This is in fact a description of the actual research situation in the Meuse valley (to which the Servatius complex belongs). The ambition of Siegmund was to classify the finds of the Lower Rhine Area in a uniform and systematic way that was achieved, for most categories of grave goods, by using metrical characteristics and statistical procedures. Siegmund claims that, by doing so, the high degree of subjectivity in the selection of the defining criteria for typological groups is avoided and that it provides in a transparent typological scheme which is applicable on cemeteries of other regions. The chronological significance of the typological criteria is tested with two procedures.

The various belt elements offer the first testing possibility, the so-called combinational testing. It is generally accepted that a crude classification of this group of finds has proven to have

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346 Siegmund 1998, 17
347 Siegmund 1998, 5 (**Quellenlage**: a detailed description of research area and number of finds).
350 Siegmund 1998, 5, 204-205.
351 Siegmund 1998, 14-17.
353 Siegmund 1998,
chronological significance on a supra-regional scale.\textsuperscript{354} This knowledge is used to prove the chronological significance of the whole range of defined criteria for nearly each group of grave goods from the Lower Rhineland, but will itself also be tested in the end.\textsuperscript{355} The other testing method is the combination of the chronological results of the seriations with the results from the chorological analysis or horizontal stratigraphy, for which the cemeteries of Krefeld-Gellep, Köln-Müngersdorf, Köln-Junkersdorf, Düsseldorf-Stockum and Duisburg-Walsum were used. These were completely excavated and the development or deposition phases of these cemeteries are generally acknowledged as chronological phases.\textsuperscript{356} The with seriation obtained relative phases of graves are compared with the chronological phases of these cemeteries. The consistencies and discrepancies which were discovered were used to adjust and justify the achieved chronological sequence of the graves from the Lower Rhine Area.

On closer inspection it can be observed that the defining criteria for some types are tested on their chronological significance more accurately than those for other types. Siegmund’s work resulted in very refined typological subclasses for certain categories of grave goods and more general ones for other categories. The category of pottery for example shows a very detailed typological scheme (especially for the biconical pots and the dishes/bowls), which is extensively tested on its chronological significance, in contrast with some other categories of grave goods, which are without evaluation only described according to the typological criteria used in previous publications.\textsuperscript{357} Another problem relates to the actual contents of some typological groups. It is observed that the inner coherence is questionable, especially in the type-groups for which metric criteria, such as the biconical pots, form the basis. But this can also be observed in a category such as the iron belts components with silver and copper alloy inlay, which are basically defined on the basis of decoration patterns. These decoration patterns appear to be considerable variables, and each typological groups of Siegmund contains examples with substantial differences. This poses questions to the chronological significance of such a group; obviously clear cut criteria such as the height or size of pots are not involved, but neither discussed as chronologically insignificant. If the similarity within one typological group can be questioned, should we not question the suggested accuracy of the positions of graves in a seriation? In the discussion of the grave goods from Maastricht (part II), it is regularly observed that individual objects can be assigned to a Rhineland type on the basis of a number of criteria, but that their specific characteristics become disguised as a consequence.\textsuperscript{358}

Siegmund’s ordering of graves on the basis of the chronological classification was divided in 11 relative Rhineland phases.\textsuperscript{359} In the description of the phases and their characteristics it is explained how the seriations of the graves of men and women were integrated on the basis of which observations the phases were distinguished from one another.\textsuperscript{360} The absolute dating of the phases is provided by coin-containing graves and the available dendro-chronological dates.\textsuperscript{361} Siegmund created relatively short phases, especially for the sixth century, on the basis of the results of the seriations (Table 9). The chronological phases in the seriations show the dating of graves to one phase; the majority of the object-types are dispersed over more than one phase. The boundaries in the seriation were mainly drawn on the basis of the occurrence and disappearance of certain types together with the information of the topo-chorological analysed cemeteries.\textsuperscript{362} This result is graphically represented in the ’Typentafel mit den chronologisch wichtigen Beigaben’, in which per phase only the significant object-types are

\begin{itemize}
\item \textsuperscript{354} Siegmund 1998, 18. See also the discussion on belts in the analysis of the grave goods from the Vrijthof and Pandhof cemeteries in this thesis.
\item \textsuperscript{355} Siegmund 1998, 17.
\item \textsuperscript{356} Siegmund 1998, 17, 178-195.
\item \textsuperscript{357} This discussion is elaborated on in the description and discussion of the various groups of grave finds from the Vrijthof and Pandhof cemeteries in the following section of this thesis.
\item \textsuperscript{358} This is in the part on the grave goods from the Vrijthof and Pandhof cemeteries discussed where relevant. See for example the section on garnet disc brooches.
\item \textsuperscript{359} The seriations were performed separately on the graves of men and women. The ‘neutral’ graves were seriated together with the graves of men.
\item \textsuperscript{360} Siegmund 1998, 196-200.
\item \textsuperscript{361} Siegmund 1998, 176-180, 200-203.
\item \textsuperscript{362} Siegmund 1998, 196.
\end{itemize}
depicted. By doing so, a simplification of the development of grave goods deposition is presented. Some types have a circulation period which covers two or more phases, but are in this scheme represented as if they belong to one phase. This table seems to suggest that groups of objects occur and disappear suddenly at more or less the same period. Siegmund is aware of this simplification, which was already discussed in chapter 1. Nevertheless, Siegmund saw enough grounds for the construction of relative short phases and profound cultural conclusions with regard to these short phases.

Siegmund’s cultural assumptions regarding the depositions of objects with the dead were for illustrative reasons already discussed in chapter 1. In short Siegmund thinks that the dead were buried with their personal belongings, but that the personal belongings were rapidly replaced in life instigated by changes in what was fashionable. This can, according to Siegmund, be concluded from the appearance of short chronological phases and the general absence of old objects in younger assemblages. It seems as if Siegmund’s ‘cultural conclusions’ are based on the chronological results, but maybe these were already the general thoughts he had with regard to the material culture of the living. As it was argued in chapter 1 of this thesis, the exactness of the position of a grave in a seriation, even if it can be validated as a chronological seriation, can be questioned. It is therefore dangerous to create such short burial phases, especially as Siegmund did for the sixth century, and draw such strong conclusions on the basis of this specific result. Moreover, what becomes especially apparent in Siegmund’s analytical exercise, the focus on the dating of graves to a specific phase, masks the underlying circulation periods of the objects that form the assemblage. This point will be further elaborated in the conclusion to part II and with the examples of graves from Maastricht, which illuminates the underlying variation in circulation periods. It will appear that Sigmund’s cultural conclusions require some reconsideration.

Franken AG (2003): between the lower Rhine area and the Eifel (Kölner Bucht)

Despite these critical notes, the work of Siegmund needs to be acknowledged for its consequently tested chronological parameters of a considerable number of object-types. The typo-chronological results of Siegmund’s work (his thesis of 1989, which includes the typo-chronological analysis in his publication of 1998) were evaluated and to some degree modified in the work of a group of researchers who collaborated in the so-called ‘Franken Arbeits Gruppe Bonn’ (1991) with the aim to make the excavated Merovingian remains available (both habitation and funerary remains) of the region ‘Von linken Niederrhein bis zur nördlichen Eifel’, or the Kölner-Bucht (Figure 9). Although published in 2003, their typo-chronological model is the unchanged model as it was already established in 1992 and which was used as the basis for the dissertations of the researchers involved. Siegmund worked closely with the members of the Franken AG, from which an article in the edited volume ‘The pace of change’ (1999) was a result. This article can be seen as the latest consensus between Siegmund and the Franken AG, although it was published before 2003.

The main differences between the work of Siegmund and the Franken AG relate mainly to the classification of the belts and biconical pots. The seriations were performed on the basis of the changed classification of finds. The Franken AG, in contrast to Siegmund, inserted the ‘neutral’ graves in the seriations of the graves of both women and men (Sieg mund inserted the neutral graves in the seriation of the graves of men), what improved the statistical basis of the seriated graves of women, and on the basis of which scarce types could be combined better with a higher number of graves. The Franken AG decided to exclude the objects that date two or more phases earlier than their associated finds (the so-called Merovingian Altstücke), because it would influence the position of the graves in

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363 Siegmund 1998, 204-205, Abb. 81.
365 Theuws 2000.
367 Müssemeier et al. 2003, 11-12.
368 Müssemeier et al. 2003, 13.
question in the resulting sequence. The Franken AG created 10 phases whereas Siegmund created 11, and the dating of these phases is somewhat different too (Table 9).

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1: 400-440 40</td>
<td>1+2: 400-460/80 60/80</td>
<td>1: 400-440 40/50</td>
</tr>
<tr>
<td>2: 440-485 45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3: 485-530 45</td>
<td>3: 460/80-510/25 60/65</td>
<td></td>
</tr>
<tr>
<td>4: 530-555 25</td>
<td>4: 510/25-±565 40/55</td>
<td></td>
</tr>
<tr>
<td>5: 555-570 15</td>
<td>5: ±565-580/90 15/25</td>
<td></td>
</tr>
<tr>
<td>6: 570-585 15</td>
<td>6: 570-580/90 10/20</td>
<td></td>
</tr>
<tr>
<td>7: 585-610 25</td>
<td>6: 580/90-610/20 20/40</td>
<td>7: 580/90-610 20/30</td>
</tr>
<tr>
<td>8: 610-640 30</td>
<td>7: 610/20-640/50 20/30</td>
<td>8: 610-640 30</td>
</tr>
</tbody>
</table>


This difference is due to choices on the basis of which Siegmund established both the length of the phases and the circulation period of the types on the basis of their predominant occurrence in certain phases of the seriation. The Franken AG established the length of the circulation period of the object types from the beginning to the end of their occurrence in the seriation, but the borders of the phases in which the graves are dated are based on the most frequent occurrence of the object-types. The Franken AG is well aware of the statistical limitations, especially regarding the mixed datasets, such as those from cemeteries, on the basis of which these are performed. Although a longer circulation period was regarded as a better representation of reality, cultural backgrounds with regard to more or less long circulation periods were not expressed.

Nieveler and Siegmund (1999): The pace of change

The synthesis of the typo-chronologies of Siegmund and the Franken AG is presented in this article as the ‘Rhineland typo-chronology’. It is different from the publication of the Franken AG 2003 in that the 11 phases as formerly defined by Siegmund were maintained with more or less the same absolute dates (Table 9). The main characteristics of each phase are discussed in this article, and in the graphical depiction of each phase with their main chronological representatives it is possible to distinguish Siegmund’s types from those of the Franken AG. The data-structure of Siegmund’s seriation (1998) is tested on the basis of a multi-dimensional correspondence analysis and this forms the main discussion in the article.

This correspondence analysis is a multidimensional technique, opposed to seriation, which is a one-dimensional technique. It reveals the underlying structure of the dataset. Or in other words it “…reveals the structural relationship between units/variables on the basis of their average similarity”. A seriation always produces a linear result, even if such an underlying structure is not present in the

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370 Müssemeyer et al. 2003, 14.
analysed data. A seriation never shows the ‘clusters’ of graves (on the basis of their similarities) or the distance between these clusters. The linear result always suggests that there is a gradual change in grave goods repertoire, even when the structure of the data tends more towards clusters of graves with similarities, but which show considerable differences from each other. It is claimed that if the result of a seriation is the outcome of the analysis of a dataset of which the structure can be characterised as a gradual change on the basis of relative similarity, than the result of a correspondence analysis of the same data results in a nearly ‘perfect parabola’. It was exactly this result that was obtained with the data on the basis of which Siegmund performed his seriations. This means that the grouping of the graves is consistent and that no other underlying structure than the gradual change in relative similarities is present. Groupings that appear in cluster-analysis indicate that other variables, such as for example differences in status, also structured the available dataset. But even if we can conclude that variables other than time are of limited influence on the result of the Lower Rhineland seriation, it can still be questioned what the chronological validity of the ordering and of short chronological phases is. A gradual change in material culture can be represented in the burial data to be seriated, but this does not mean that it guarantees the exact (or nearly exact) chronological positions of graves. Resembling graves, as it was reasoned in chapter 1, do not necessarily have to be contemporaneous.

For example, if seriations were performed on both the graves of men and women, then the result would be a diagonal line, but the correspondence analysis would show two different groupings because men and women have nearly mutually exclusive sets of objects. If we assume, for example, that the assemblage one is buried with is created or acquired in one’s twenties, then similar graves could have different deposition times. Such a ‘break’ does not become visible in a seriation, nor in a multi-dimensional correspondence analysis. This is of course a hypothetical example, as it was already discussed in chapter 1, but it shows that even if the change in material culture from graves seems to change gradually, without obvious secondary groupings of graves, then the moment of burial is still not captured and absolute short phases would give a misleading picture of the rapidity of change in grave goods repertoires in the Merovingian period. It does show that the assemblages are relatively homogeneous, but the period in which they are created is not captured. The homogeneity of the assemblages can also be a result of a process which takes longer than only one generation. This will be illustrated below. Furthermore, if a seriation does in fact represent a gradual change in grave goods assemblages, then the drawing of lines in sequence of graves is a hazardous undertaking; it can be questioned on the basis of which observations the boundaries of the phases are established. That a change over time in material culture is captured in the seriations of Siegmund and the Franken AG, however, can be reasoned, it is only the exactness of the positions of the graves in a seriation that is questioned here.

The typologies of both Siegmund and the Franken AG can be validated as tested chronological typologies in which the general gradual change of a selection of the material culture of the Merovingian period is represented. The circulation periods of the object-types, however, are based on the position of the graves in a seriation, which can result in a misleading image. This image, however, can be perceived as more accurate than the short burial phases. These typologies are for now the most favourable for the classification of the grave goods from the Vrijthof and Pandhof cemeteries, although the specifics of the grave goods from Maastricht need to be considered. The longer dated lifespan of the objects by the Franken AG is the shortest accepted range for the final dating of the grave goods from Maastricht as will be discussed below.

4.1.3 The typologies of Northern France
Some of the studies of Merovingian cemeteries in Northern France evidently focused on methodological considerations. With the introduction of the possibility to order the graves and their contents by ‘permutation matricelle’ it was claimed that an objective method for chronological analysis was finally

available.\textsuperscript{374} After that, adjustments and refinements were proposed, which eventually led to a ‘chronology normalizee’.\textsuperscript{375} The backgrounds of this typo-chronological debate, as it took place in France, will be discussed in short here.

\textbf{Périn (1980): The Ardennes and Meuse Area in Northern France}

Périn offers a typological and chronological synthesis of several cemeteries which are located in a restricted area: the Ardennes and Meuse regions in Northern France (included in the research area ‘entre Manche et Lorraine’ (Fig. 11)). By doing so, he introduced a new statistical method (\textit{permutation matricelle}) in the scholarly debate in France, which equals the method of seriation, in order to obtain a relative sequence of graves in an objective way.\textsuperscript{376} This method results, according to Périn, in fewer uncertainties with regard to the obtained results than the topo-chronological analysis up to then performed.\textsuperscript{377} Périn’s methodological principles are less obvious than those of Siegmund despite the title of his book (\textit{La datation des tombes mérovingiennes. Historique- Méthodes-Applications}), which suggests otherwise. Although Périn shows thorough methodological insights in the problems of dating graves and grave goods, in the end it seems that the only consideration that was taken into account with regard to his classification scheme was its statistical workability. Périn and others published several other works with generally the same background after this publication, but the publication from 1980 records the extended methodological discussion that did not change dramatically thereafter.\textsuperscript{378} The complete process and considerations will not be repeated here; only some remarks with regard to the ‘\textit{choix des types}’ and the cultural considerations regarding the construction of relative and absolute phases will be commented on.

Because of Périn’s focus on methodological issues it can be expected that the defining criteria of the typological classes would be discussed in detail, both on a practical and a theoretical level. Indeed, Périn states that the typological choices have a direct influence on the resulting chronology.\textsuperscript{379} The typological process is subjective, is not universal and should be experimented with.\textsuperscript{380} The \textit{type archéologique} is an object-type which is defined by an optimal number of criteria that are representative for a series of objects and can change depending on the research goal pursued.\textsuperscript{381} The problem of the \textit{type archéologique} is that it needs to contain a sufficient number of specimens in order to show a meaningful distribution; if objects occur infrequently then a simple classification is required, and vice versa.\textsuperscript{382} Although Périn is well aware of the fact that every research goal demands its particular \textit{types archéologiques}, his main concern relates to the necessity of effective statistical groups of object types in order to obtain a sequence of graves that shows an ordering that can be divided in chronological phases. This statistical discussion is briefly about the number of objects that represent an object-type.\textsuperscript{383} Although discussed at great length, Périn’s theoretical awareness did not form the basis for the construction of his classification scheme. His exercise resulted in less refined classes of grave goods than Siegmund defined for the Lower Rhine Area (Table 10). An advantage of such a typological scheme as Périn proposed, and which was later adjusted by Legoux, Périn and Vallet, is that the majority of the grave goods from other Merovingian cemeteries can be classified accordingly.

With regard to the length of chronological phases, Périn illustrates his cultural perspective with the possibility-scheme of Steuer (see chapter 1). Whereas Steuer claims that more precise dating than 50 years is questionable from a theoretical perspective, Périn thinks that the objects one is interred with are for the majority personal possessions which were gathered in the course of life. Inheritance was,
according to him, not a common practice, so the circulation period of the grave goods will generally not exceed the length of a lifetime/generation. Although these considerations can be compared to those of Siegmund, the length of the chronological phases of Pépin exceeds those of Siegmund. Pépin is in this sense more loyal to the fact that the boundaries in orderings of graves do not have to represent cultural reality, but are merely an analytical tool.

**Legoux, Pépin and Vallet (2004): entre Manche et Lorraine**

The publication in 2004 of Legoux, Pépin and Vallet is the ‘final’ correction of the typo-chronology scheme that can be found in Pépin (1980) and several publications thereafter (Fig. 11).

<table>
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<tbody>
<tr>
<td>ABD 1</td>
<td>450-475</td>
</tr>
<tr>
<td>ABD 2</td>
<td>475-525</td>
</tr>
<tr>
<td>BCD/DE</td>
<td>525-550</td>
</tr>
<tr>
<td>DEF</td>
<td>550-600</td>
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<tr>
<td>DEFGH</td>
<td>600-620/30</td>
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<tr>
<td>EFGH/GHI</td>
<td>620/30-650/60</td>
</tr>
<tr>
<td>GHI/HI</td>
<td>650/60-690/700</td>
</tr>
</tbody>
</table>

Table 10. The length of the chronological phases of Pépin (1980) and Legoux/Pépin/Vallet (2004).

It is claimed that this scheme has more validity than the preceding ones since it is based on a more extended dataset (new graves and cemeteries that could be incorporated within the analysis) and the number of ‘tombe-références’ has increased. It is also claimed that this typo-chronology scheme is applicable on regions outside ‘between Manche and Lorraine’. The typo-chronology scheme is based on 1,200 grave goods assemblages from 70 cemeteries. Approximately 400 types are defined, which incorporate at least five to 10 examples. The absolute phases are borrowed from Ament and translated into French (Table 10). One phase is added, the pre-Merovingian phase. The main difference with the preceding work of Pépin is the slightly increased length of the phases. No further comments with regard to changing perspectives of cultural reality and methodological issues can be found in this publication.

The typologies of Pépin (1980) and Legoux, Pépin and Vallet (2004) do not, in contrast to those of the Rhineland Area, consist of tested chronological types but of groups that were constructed especially to meet statistical requirements. This resulted in more broadly defined typological classes of which a majority has nearly a universal (Merovingian) value. The result of seriations and horizontal plotting of this classification scheme, the considerable length of time in which the objects are dated and the length of the absolute phases, however, relate better to the theoretical considerations made earlier on in this thesis. As it was argued in the discussion of the article of Nieveler and Siegmund, probably the gradual change of material culture from graves is more or less reflected in fine or less refined classifications and in the resulting seriations. This is also stressed by Pépin, with the comment, which should be subscribed, that, although a relative ordering of graves is considerably certain and does represent the evolutionary

386 Legoux/Pépin/Vallet 2004.
387 Legoux/Pépin/Vallet 2004, 5.
change of material culture, it is the absolute dates of the phases, and therefore the dating of the types, which are less certain to reflect cultural reality.388

4.1.4 The typologies of Southern Germany, Switzerland and the Mediterranean world

A selection of cemeteries from Southern Germany, Switzerland and further south, from the Mediterranean area, were integrated in the analysis of the grave goods from the Servatius complex because some of the objects from Maastricht appear to have close parallels in these distant cemeteries. Such comparisons can also be observed in other cemeteries in Northern Gaul, which indicates that next to the identification of cultural homogeneous regions, as for example the middle Meuse Area and the Lower and Middle Rhine Area, other influences should be complied with. Koch presented an elaborate overview of the research history of chronological analysis in Southern Germany and Switzerland.389 The majority of the publications are based on topo-chronological analysis as chronological method and address methodological questions that relate to the process of classifying and dating.

The choice for the selected typo-chronology schemes from Southern Germany was based on their availability, clear and numerous parallels and the attempts of the researchers involved at more generality and comparison. The method of horizontal stratigraphy or topo-chronology, in order to obtain a relative and absolute chronology, was developed on the basis of the cemeteries of southern Germany and neighbouring regions in Switzerland.390 One of the most important publications, in which the methodological backgrounds are thoroughly discussed, is Koch’s final publication of the cemetery of Schretzheim (Fig.11).391

Various scholars worked on the excavation results of the cemetery of Schretzheim, excavated from 1890 to 1901, and from 1927-1934, but Koch published a complete overview in 1977. The introduction of this publication concerns the chronological divisions of the cemetery (Stufen 1-6 / 525-680 (125 years)), which was created on the basis of the plotted object-types on the cemetery plan. The finds were classified by pursuing the highest degree of differentiation possible for each reoccurring sort of object (that means creating as many types as possible).392 No thoughts are expressed regarding the chronological meaning of the created classification. The Leitformen (index finds) are the finds which are restricted to one development phase or Stufe, in fact they define the borders of each phase. Next to these index finds Koch identified finds that are characteristic for each deposition phase, but which can appear also in other deposition phases. The creation and contents of each Stufe are discussed in six clearly identifiable steps. After drawing up an inventory of the index finds and typical types (showing a high concentration within the by the ‘Leitformen’ bordered area) of the Stufe, the distribution of the graves in the deposition phases are discussed. The remaining steps are the discussion of anomalies; the graves which are located in a bordered area but which are characteristic for another deposition phase, the presentation of a list of datable graves, and the insertion of chronological relevant graves from cemeteries nearby (Sontheim an der Brenz and Niederstotzingen). Thereafter, within the list of dated graves and their contents, Koch makes a distinction per grave between the Leitformen, Langlebigeren Neue formen (these appear for the first time in the deposition phase concerned, but appear also in graves of the deposition phases thereafter), and Langlebigeren Ältere formen (these appear also in the graves of the deposition phases before the phase concerned).393 The data that provided the absolute dates of each phase form the last discussion point. The absolute dates are based on the coin-containing graves and dated parallels. In the end, this resulted in a very thorough discussion of the contents of each deposition phase and each grave.

389 Koch 2001, 26-44.
390 Werner 1953 (cememtery of Bülach) and 1955 (cememtery of Mindelheim); Neuffer-Müller/Ament 1973 (cememtery of Rübenach); Koch 1977 (cememtery of Schretzheim).
391 Koch 1977.
392 Koch 1977, 15.
393 Koch 1977, 35-47.
With regard to the length of the phases, Koch makes the remark that they form the average of the period of production and use of the objects. The period of use is considered to be the period in which the objects were used by the person they are buried with; Koch assumed that the majority of the grave goods represent the personal belongings of the deceased. Numerous phrases point towards this underlying assumption: “Ebenfalls in der Jahrhundertmitte erwarb die Frau aus Grab 26 eine Cyprea...”, and “Wohl schon bald nach der Mitte des 6. Jahrhunderts gelangte eine Bügelfibel […], in den Besitz der reichen Frau aus Grab 513”. Koch assumes that extensive delay in circulation did not occur, at least not regularly, and that as a consequence graves can be dated to restricted phases without too many problems. Koch’s phases have a range from 20 to 35 years (Table 11). The anomalies in the distribution groups are discussed, but not explained, only perhaps in one instance: graves of children can contain objects of which the custom to deposit them became regular some time later (when the majority of the women who acquired such objects died). In fact, these are incidences that can become visible on cemetery plans (assuming that they represent a gradual development in time), and never in a seriation; the graves of children would be placed in relation with the elder women with comparable grave goods. The cemetery starts at the beginning of the sixth century. The sixth century in Schretzheim is divided into relatively short phases (20-30 years), which have different dates than those of the sixth century in the Rhineland and Northern France.

Recently, Koch performed a seriation with the burial evidence from the cemetery of Pleidelsheim (Fig. 11). After a thorough discussion of the research history of the chronological analysis in Southern Germany, the seriation of the finds from the cemetery are discussed. They are integrated in the seriations of women and men of several cemeteries from Southern Germany, on the basis of which a new chronological phase system for the early medieval period in Southern Germany was introduced (SD phase 1-10: 430-670). Koch used the method of seriation for this cemetery because the cemeteries of the first phases of the early medieval period are not characterised by the neatly development phases as the later phases are. Koch is well aware of the fact that a classification of finds forms the basis of all chronological analysis, and that the establishment of such a scheme is subjective and is until now theoretically poorly founded. The change in material culture can be fast or slow; this, however, cannot be read in a classification. Koch thinks that the seriational ordering of graves is not only a reflection of the variable time, but that socio-economic and ethnic influences should also be accounted for. The chronological results of the seriation, but also the various grave structures and the relative richness of the graves, are plotted on the cemetery plan. It shows, according to Koch, that groups of families can be identified on the cemetery plan on the basis of these distributions. Koch thinks that the connection with a family group was displayed in the funerary rites. Whether this was the outcome of the deposition of grave goods for the after-life, or that one was buried with their objects which represented him/her in life, is not finalised by Koch. However, in these remarks we can see a careful change in opinion compared to the ones expressed with regard to grave goods deposition in the cemetery of Schretzheim.

<table>
<thead>
<tr>
<th>Koch 1977 (Schretzheim)</th>
<th>Koch 2001 (Southern Germany)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD-phase 1: 430-460</td>
<td>30</td>
</tr>
<tr>
<td>SD-phase 2: 460-480</td>
<td>20</td>
</tr>
<tr>
<td>SD-phase 3: 480-510</td>
<td>30</td>
</tr>
<tr>
<td>SD-phase 4: 510-530</td>
<td>20</td>
</tr>
<tr>
<td>Stufe 1: 525/30-545/50</td>
<td>15/25</td>
</tr>
<tr>
<td>SD-phase 5: 530-555</td>
<td>25</td>
</tr>
</tbody>
</table>

394 Koch 1977, 186.
396 Koch 2001, 43.
397 Koch 2001, 27.
398 Koch 2001, 44.
Stufe 2: 545/50-565/70 15/25  
Stufe 3: 565-590/600 25/35  
Stufe 4: 590/600-620/30 20/40  
Stufe 5: 620/30-650/60 20/40  
Stufe 6: 650/60-680 20/30  
Stufe 7: 555-580 25  
Stufe 8: 600-620 20  
Stufe 9: 620-650 30  
Stufe 10: 650-670 20

Table 11. The length of the chronological phases of Koch on the basis of Schretzheim (1977) and other cemeteries from Southern Germany (2001).

The most important cemeteries from Switzerland (Fig. 11) for comparisons with the finds from Maastricht are the publications of the cemetery of Bülach 400 and Basel-Bernerring, 401 and from the Mediterranean world the cemetery of Kranj in Slovenia (Fig. 11).402 It appeared that a number of grave goods from Maastricht are identical or nearly identical with the objects from these cemeteries. Their utility is not sought in typological and dating possibilities but merely in conclusions about the cultural connections Maastricht has experienced during the Merovingian period. Another interesting discussion regarding similar objects from such distant cemeteries concerns the ‘origin’ of the objects involved and the decision to consider them as ‘exotics’. This discussion is elaborated on in the section on the exceptional bronze and silver plate buckles with fixed plate which show striking similarities with plate buckles from for example Kranj and Basel-Bernerring. 403

The topo-chronological method, which has mainly been developed on the basis of the cemeteries from Southern Germany, cannot be applied to the cemeteries of the Servatius complex; too much is missing of the cemeteries in order to presume that a gradual development of the cemeteries can be extracted from the resulting plans. The cemeteries from South Germany are useful for generating distribution patterns of finds that resemble the finds from Maastricht. The dates of the objects are used when other dating possibilities are lacking. The exactness of such dates, however, as it was discussed above should be questioned, as it will also be discussed in the descriptive catalogue of the finds from Maastricht when the cemeteries from the southern part of Merovingian Gaul are used.

The above-discussed studies serve as the basis for the chronological analysis of the grave goods from the Vrijthof and Pandhof cemeteries. It can be concluded that in all of these works the cultural perspective that the deceased were buried with their inalienable personal property, and therefore that a relatively regular and rapid change in the grave goods repertoire of approximately one generation can be observed, is the predominant one. Therefore, when using typo-chronology schemes the use of classification schemes, the actual dating of the objects, and on the basis of these circulation periods of object-types the dating of the graves, are all separate issues. The discussion of these aspects is incorporated in the description and analysis of the Vrijthof and Pandhof finds.

4.2 Cultural categories of grave goods and cultural categories of objects, physical anthropological research and the chronological debate: a new cultural perspective on burial chronology

Burial chronology from a cultural perspective in the first place requires independent data to investigate a number of presuppositions. The cultural perspective until now has predominantly been that the dead

400 Werner 1953. (the method of topo-chronology on the basis of the chronological change of belt fittings from the graves of men).
401 Martin 1976 (the method of topo-chronological analysis).
403 See the section on the Vrijthof and Pandhof belts.
were buried with their (inalienable) personal possessions and that as a consequence a rapid change of the contents of grave goods assemblages can be observed in the burial evidence and that old objects (Merovingian antiques) are rarely present in the burial evidence. The formulation of cultural categories of objects in chapter 3 on the basis of exchange and transmission served to illustrate that the relation between people and material culture was more complicated and that the regular occurrence of prolonged object circulation before deposition is a serious option. Such premises, or such a new cultural perspective on burial chronology, require to be tested for each cemetery. The independent data that provide possibilities to investigate a number of premises are the results of physical anthropological research, and other scientific methods such as isotope analysis, but also comparisons with distribution maps of objects in Merovingian Gaul (Table 12).

<table>
<thead>
<tr>
<th>Cultural categories of objects on the basis of exchange/transmission</th>
<th>Cultural categories of grave goods (contexts of selection)</th>
<th>Available ‘independent’ data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceremonial heirlooms (ceremonial gift-exchange)</td>
<td>- Inalienable group-(family-)possessions</td>
<td>- Biological sex / age</td>
</tr>
<tr>
<td></td>
<td>- Gifts to the deceased</td>
<td>- Other biological features</td>
</tr>
<tr>
<td>Economic resources</td>
<td>- Alienable personal and alienable family possessions</td>
<td>- Vertical stratigraphy and intersections (independent chronology)</td>
</tr>
<tr>
<td>Objectified cultural capital</td>
<td>- Inalienable family possessions</td>
<td>- Isotopes (mobility)</td>
</tr>
<tr>
<td>Sacred heirlooms (ancestral or supra-natural exchange)</td>
<td>- Inalienable group-(family-)possessions</td>
<td>- Distribution maps of objects (mobility)</td>
</tr>
<tr>
<td></td>
<td>- Inalienable personal possessions</td>
<td>- Correlations between various object features and biological features</td>
</tr>
<tr>
<td></td>
<td>- Gifts to the deceased</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Alienable personal and alienable family possessions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Occasional objects</td>
<td></td>
</tr>
</tbody>
</table>

Table 12. The categories of data on the basis of which a ‘cultural perspective’ can be investigated.

The dataset of the Servatius complex at first sight seems to offer these analytical possibilities because it consists of an extended set of skeletal remains of which it was possible to determine a diversity of biological features\(^{404}\) but also independent radio carbon dates and isotope analysis, and both the cemeteries know a vertical stratigraphy. The independent dating possibilities will not be the main discussion in the following.\(^{405}\) The central discussion regards research questions which can be thought of that can contribute to chronological analysis from a cultural perspective.

\(^{404}\) Dr. R. Panhuysen and Dr. E. Smits analysed the skeletal remains of the Vrijthof and Pandhof cemeteries and the detailed results will be published in the first and second volume of the full analysis of both cemeteries.

\(^{405}\) As it was already mentioned, information about the vertical development is available for the Vrijthof and Pandhof cemeteries, and also a sample of the skeletal remains from the Vrijthof cemetery was carbon dated. Is this information of help for the establishment of the circulation periods in Maastricht? Again it must be said that the datasets were considerably fragmented. The Harris-matrices will be published in detail in the two volumes of the full analysis of both cemeteries, but for now it can be mentioned that the matrices are not detailed enough to establish or check the circulation periods of the complete variety of object-types and neither for the object-types that are present in the established vertical sequences of graves. This information, however, is suitable to check the relative positions of dated graves on the basis of the grave finds. The small sample of skeletons that were carbon dated offer the same opportunities; their dates can support the dating of the graves on the basis of their grave goods, but for detailed information about circulation periods of object-types the sample was too small. Because the information was not that detailed, both the vertical sequences of graves and the results of the carbon dating did not distort the datings of the Maastricht graves on the basis of objects as they are listed in this thesis (list 1).
4.2.1 Cultural categories of grave goods: the connection between grave goods and the deceased

The most important results of the analysis of skeletal remains which contribute to these aspects of the chronological debate are the biological sex and age of the identified individuals. Other information such as for example the observed fractures, the cause of death, pathology and the whole range of metric variables, will not be discussed here, but these also offer possibilities for comparisons and correlations with for example specific features of the burial evidence. Information about biological sex and age, on the other hand, make it also possible to discover certain general patterns in burial patterns and how they change in time. Such interpretations require statistical analysis. The datasets of the Vrijthof and Pandhof, separate, but also together, are, however, too small to form a sound statistical basis for this sort of analysis. First, the number of undisturbed graves is difficult to estimate due to poor excavation administration. In the second place, the number of graves with skeletal remains of which the biological sex and the biological age with a certain precision are determined, and which also contain grave goods is relatively low. An overview of the gender and age groups with associated grave goods assemblages can be generated, but the results can hardly be considered to form a basis for significant statistical analysis. The solution is to offer a list of significant research questions regarding biological sex and age in relation to grave goods assemblages in order to investigate some general correlations which relate to the central theme of this thesis: what is the nature of the connection between grave goods and the deceased and which cultural categories of objects on the basis of circulation are of influence on chronology?

Biological sex and age, gender and cultural age

It can be stated that early medieval grave goods accentuate or express gender. This is referred to as the ‘artefactual construction of gender’, which can be practiced in both life and death.406 The establishment of the artefactual gender is more ambiguous than the determination of the biological sex of the deceased. Publications of Merovingian cemeteries traditionally present (as can be observed in the majority of the tables of contents) grave goods as categories which are either considered to be associated with women or men, or as neutral objects (with no exclusive association with either women or men). Although this grouping is generally based on modern perspectives of the association of biological sex with certain objects (weapons are associated with men and jewellery with women), a nearly complete overlap can be observed for the estimated artefactual gender and, in the cases that it was possible to determine, the biological sex.407 Although the binary opposition is quite convincingly demonstrated by the tests Halsall performed on the cemeteries of Lorraine, remarks can be made upon the use of his crude classification of the grave goods. In this respect the groups of grave goods that are generally regarded as neutral are of special interest. Further research can elucidate whether specific features of these neutral objects, such as for example decorations on pots, can more often be associated with either men or women. Moreover, the discrepancies, although they are infrequent, between gender and biological sex can be interesting to explore somewhat further. These discrepancies are often attributed to mistakes or uncertainties in the investigation of the skeletal remains or are related to flaws in the administration of the excavation. Deviant correlations, however, can also point towards conscious choices.

There are different ways to decide which objects-types should be considered feminine, masculine or neutral. Mostly this is decided in a quite subjective way, based on preconceived modern notions about objects and their gender association, but also on general knowledge of object associations; weapons are hardly ever associated with items of jewellery. Objects such as knives, combs, finger rings, purses, and pottery and glass vessels are generally found in the graves of both men and women and are the so-called ‘neutral’ objects. The list of dated Vrijthof and Pandhof graves (list 1) shows what the determined cultural gender and biological sex of the respective graves are.

407 Halsall 1995, 80.
Significant correlations between the age of the deceased and object-types have also been observed, although, in contrast with gender, this will not for every cemetery result in comparable correlations.\(^{408}\) The detected correlations in various studies indicate that the age of the deceased was a social category which was also constructed with specific objects. Cultural age is probably related to various defining events in life and life-cycle transformations, but it can also be the age of the deceased as the survivors constructed it. Biological and cultural age does not have to match in the same degree as biological sex and gender. Two 16-year old women, for example, can have a different cultural age which depends on a diversity of social factors, such as for example matrimonial status and maternity. Therefore, predictive age-assignation on the basis of grave goods, in contrast with biological sex, should be dealt with cautiously. The results can also vary from cemetery to cemetery. The correlations can predominantly be found for age-groups, but exact biological ages are more difficult to obtain.

Moreover, cultural age is much more difficult to categorise on the basis of objects than cultural gender. The artefactual construction of age is already in our modern western society not unambiguous, and it is even more difficult to think of categories of objects that associate with a certain age in the Merovingian period. Jewellery can easily be perceived as feminine, but for which age categories are certain adornments considered appropriate in Merovingian times?\(^{409}\) Although the model is based on a small dataset, Halsall convincingly demonstrates that the detected correlation between age groups and certain object-types emerges quite consistently for the sixth century cemeteries from his research area (Table 5).\(^{410}\) As Halsall already expected on the basis of anthropological analogy, the group of young adults receives the most extended range of grave goods. For the women, it was observed that they receive the full range of female-specific objects earlier, namely within the age group of Juveniles (14-22), but still are accompanied by them, although with less jewellery, in the following age group. For the men, the full range of gender specific objects is placed in the grave within the age category of Young Adults (22-40). These correlations, however, change in the seventh century. These correlations were found in Lorraine, but it must be noticed that these correlations are not as predictive as masculine or feminine objects are for the biological sex of the associated person.

### Cultural categories of grave goods: significant research questions

The basis for the analytical possibilities is offered by an overview of the associations between biological sex, age groups and ‘sorts’ of assemblages of finds. Such an overview was for example offered by Halsall (see chapter 2). However, this picture has to be established for every isolated cemetery or region. Such an overview should be created separately for the sixth and the seventh century, as Halsall showed, in order to discover changing patterns. These overviews show the percentage of each age group in the cemetery, the percentage of furnished burial in each age group, the relative ‘richness’ of the age groups, the associated sorts of assemblages of grave goods with age groups and biological sex, etc. It will be clear that for the identification of significant patterns a considerable amount of data is required, which the Vrijthof and Pandhof cemeteries cannot provide (Table 13).

<table>
<thead>
<tr>
<th></th>
<th>Vrijthof</th>
<th>Pandhof</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graves with grave goods</td>
<td>146</td>
<td>152</td>
<td>298</td>
</tr>
<tr>
<td>Investigated individuals</td>
<td>278</td>
<td>318</td>
<td>596</td>
</tr>
<tr>
<td>Women (biological sex)</td>
<td>95</td>
<td>90</td>
<td>185</td>
</tr>
<tr>
<td>Women with grave goods</td>
<td>35</td>
<td>22</td>
<td>57</td>
</tr>
<tr>
<td>Aged women with grave goods</td>
<td>33</td>
<td>22</td>
<td>55</td>
</tr>
</tbody>
</table>


\(^{409}\) See for example Stauch (2008) who investigated the correlation between gold or silver and age groups.

\(^{410}\) Halsall 1995, 83-86.
Men (biological sex) & 95 & 93 & 188 \\
Men with grave goods & 31 & 12 & 43 \\
Aged men with grave goods & 30 & 12 & 43 \\
Sex indeterminate & 88 & 135 & 223 \\
Sex indeterminate with grave goods & 37 & 38 & 75 \\
Aged individuals, sex indeterminate, with grave goods & 35 & 31 & 66 \\

**Table 13.** The numbers of graves with grave goods and the analysed biological features of the skeletal remains from the Vrijthof and Pandhof graves.

The context is not for all the investigated individuals known, and of the individuals from known contexts, not all can be identified as a grave. The available contexts on the basis of which an overview of correlations between gender, age and associated finds can be created is for the Vrijthof a number of 63 contexts (grave goods that are associated with women or men of which the age was determined) and for the Pandhof a number of 34 (total for both cemeteries = 97 individuals). However, not all these contexts were identified as graves. Together with the observation that a majority of the graves can not with certainty be identified as undisturbed, that for the majority of the graves only one or few grave goods are available and that in some graves more than one individual was identified for which it is difficult to establish to which individual the eventual grave goods can be attributed, it is concluded that the informative datasets are too small and will not offer significant correlations. Moreover, some assemblages of grave goods, which also include interesting and elaborate ones, were not associated with skeletal remains. These grave goods as a consequence fall outside such overviews. When the 100 aged individuals of the Vrijthof and Pandhof are assigned to specific age groups this becomes especially problematic. Moreover, of the individuals of which the age was determined a considerable group consist of age assignations that could not be more precise than ‘adult’ (20-80 years, or other broad groups). These age determinations cannot be used for an overview of correlations between age groups and grave goods. However, to compensate for the absence of such a significant overview, cultural research questions for which such overviews are indispensable can be formulated and illustrated here with graves of the Vrijthof and Pandhof as examples. They relate to the formulated cultural categories of grave goods and the cultural categories of objects on the basis of transmission.

The chapter in which the cultural categories of grave goods were identified served also to investigate whether the primordial assumption of inalienable personal possessions is one to be maintained. It was concluded that such a category could have existed, but that it was one of the many options of how early medieval people appreciated the objects that surrounded them; it was suggested that such a notion of material culture does not offer an encompassing explanation for furnished burial. This conclusion can be substantiated to some degree with the available burial evidence from Maastricht. If especially dress-related objects were inalienable personal possessions one was in the end buried with, then the elderly would be associated with such objects to the same extent as the younger generations of which it can be suspected that they already acquired these items in life. A series of basic research questions with regard to this subject can therefore be thought of on the basis of which this practice of burial with inalienable personal possessions can either be rejected or accepted as a general practice for the cemeteries to be analysed.

Were (a selection of) the dead buried with their inalienable personal possessions? 
- What is the percentage of elderly (above 50/60) in the burial population?

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411 Pandhof grave 11321 for example, which can be considered to be the ‘richest’ grave of the Pandhof cemetery with gold and silver jewellery, was not associated with skeletal remains.
- What is the percentage of elderly that are buried with objects?
- What is the percentage of each age group that were buried with objects?
- How can the objects in each age-group be characterised?
- What other characteristics besides ‘dress-related’ objects can be thought of?
- What is the distribution of these categories over the age groups?
- Etc.

The Vrijthof cemetery shows that of the investigated individuals, six were assigned to the age group 57-73. Of these, one woman was buried with grave goods, but the grave ‘goods’ consisted only of one polychrome bead.

From the Pandhof cemetery, nine burials with individuals with aged between 57 and 80 can be identified. Of this group, one woman was buried with grave goods (grave 11388). The find was a coin, late Roman, which however is now lost, so further information is not available.

The selection of graves within this age-group is small, but it probably points towards the suggestion that the elderly are less regularly buried with grave goods than the age groups below them (see also the section below). The elderly would be buried with their acquired items if burial with inalienable personal possessions was custom. It can be stated with care that this was not a regular practice in Maastricht, but also elsewhere considering other studies of correlations between grave goods and age groups. However, burials with dress-related items and weapons with the elderly do appear in Merovingian Gaul. The suggestion for now is, although the evidence is extremely meagre, that burial with personal possession is insufficient as an explanation for furnished burials in Maastricht. The relation between people and objects was more complicated and several connections in life can exist together. The moment of burial, however, is a moment in which it must be decided how this connection was maintained, transformed, created or dissolved. A general conclusion is that the older one got, the less likely it is that furnished burial was accorded, but the correlations should be investigated for each cemetery again.

4.2.2 Cultural categories of objects on the basis of exchange and transmission: moments of transmission and the variety of circulation periods

The conclusion is that the relation between the living and material culture is more complicated than it was pictured in chronological studies. The exclusive objects that were exchanged in elite networks are not difficult to identify, but it would again be too simplistic to consider exchange, keeping and transmission as a process which is only related to the most exclusive objects and elite networks. The problem is therefore how these processes with regard to the social strata below and to the majority of the burial goods can be identified. Continuity of transmission was related to three categories of objects; the ceremonial heirlooms and the family heirlooms, of which the latter was further categorised as ‘economic’ capital and as the objects that objectified cultural capital of which the intergenerational transmission was of major importance for the maintenance of a group identity. It was reasoned that the objects of the last sub-category were the most likely to become grave goods. This was related to the organisation of the moments of transmission around life-cycle developments and therefore their identification as dangerous moments during which the continuity of transmission could end. When the appropriate transmission of objects failed, their deposition in a grave was an alternative option. Their presence in graves points towards regular failure of transmission, in other words the loss of these objects for the transmission of family identities. This continuity of transmission is not extremely extended (such as it can be possible for ceremonial heirlooms), but will exceed more than one generation. How can these limited prolongations and variability in circulation be observed in the burial evidence?

Probably it was already manifest in the publications of Merovingian cemeteries; the circulation periods of objects are hardly ever confined to one phase (generation), although the graves themselves are dated to restricted phases. The presentation of the results is considerably focused on the dating of graves, which does in fact mask the variation of circulation within each grave. Acknowledging that the
variety in circulation is informative seems to plead for typological and chronological refinement, but the problem is that the variety in the duration of transmission of individual objects cannot be captured through modelled averages, such as those provided by chronological methods like seriation. This means that the representation of circulation in the burial record has to be addressed differently and that the circulation periods of isolated object-types should be obtained differently than only on the basis of chronological analysis of graves. This requires further research which could not be executed in the context of this thesis, but some research questions can be suggested and some examples from Maastricht elucidate the complicated backgrounds of burial phases of graves.

**The grave as a construction of variable circulation and as evidence for object transmission**

The examples of graves from Maastricht serve to illustrate in the first place that the dating of a grave to one phase disguises the complexity of circulation that can be present in the same grave. Combined with the biological sex and age of the associated persons, this can give some insights regarding continuity in transmission and the moments around which transmission to the next generation is organised for a variety of objects.

The following graves from Maastricht have resembling brooches (Fig. 12; Appendix 2.1-4). This would, in the chronological method of Merovingian burial chronology, be a strong indication for the contemporaneity of the graves. However, the ambition to date the assemblage of graves goods to short phases does mask the variety of circulation. The variety of circulation is revealed in these examples.

<table>
<thead>
<tr>
<th>Vrijthof grave 95 (Appendix 2.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological sex: woman</td>
</tr>
<tr>
<td>Cultural gender: woman</td>
</tr>
<tr>
<td>Age: 33</td>
</tr>
<tr>
<td>Brooch, garnet: C-F? (460/80-610)</td>
</tr>
<tr>
<td>String of beads: Maastricht: B-E (400-580/90)</td>
</tr>
<tr>
<td>Belt, belt stud, bronze: D (510/20-565)</td>
</tr>
<tr>
<td>Belt, buckle, bronze: D-E (510/20-580/90)</td>
</tr>
<tr>
<td>Coin: Antoninianus, barbarian imitation</td>
</tr>
<tr>
<td>Coin: Antoninianus, Quintillus</td>
</tr>
<tr>
<td>Comb, comb case: D-F (510/25-610/20)</td>
</tr>
<tr>
<td>Knife: -</td>
</tr>
<tr>
<td>Pottery Vessel: Missing</td>
</tr>
<tr>
<td>Rest: -</td>
</tr>
<tr>
<td>Bracelet, glass (fragment La Tene bracelet): -</td>
</tr>
<tr>
<td>Earring, silver: F-H (580/90-670/80)</td>
</tr>
<tr>
<td>Earring, silver: F-H (580/90-670/80)</td>
</tr>
<tr>
<td>Date of grave: 580/590-670/680</td>
</tr>
<tr>
<td>Range of circulation: B-H (400-670/80): <strong>280 years</strong></td>
</tr>
<tr>
<td>Merovingian antiques: not observable in a seriation, but could have been present</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vrijthof grave 166 (Appendix 2.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological sex: woman</td>
</tr>
<tr>
<td>Cultural gender: woman</td>
</tr>
<tr>
<td>Age: 20-40</td>
</tr>
<tr>
<td>Brooch, garnet: D-E (510/20-580/90)</td>
</tr>
<tr>
<td>String of beads: D-H (510/20-670/80)</td>
</tr>
<tr>
<td>Belt, strap end: missing</td>
</tr>
<tr>
<td>Belt, plate buckle: G-H (610/20-670/80)</td>
</tr>
<tr>
<td>Belt Part, strap end: G-H (610/20-670/80)</td>
</tr>
<tr>
<td>Key: C-F (460/80-610/20)</td>
</tr>
<tr>
<td>Purse: G-H (610/20-670/80)</td>
</tr>
</tbody>
</table>

Date of grave: 610/620-670/680
Range of circulation: C-H (460/80-670/80): **220 years**
Merovingian antiques: not observable in a seriation, but could have been present

| Vrijthof grave 187 (Appendix 2.2) |
| Biological sex: woman |
| Cultural gender: woman |
| Age: 27 +/- 3 |
| Brooch, garnet: E-F (565-610) |
| Brooch, garnet: E-F (565-610) |
| String of beads: Maastricht D-G (510/20-640/50) |
| Belt, buckle: C-D (460/80-565) |
| Pendant, filigree: D-F (510/25-610/20) |
| Pendant, filigree: D-F (510/25-610/20) |
| Pottery, biconical pot: D-E (510/20-580/90) |
| Earring, silver: C-E (460/80-580/90) |
| Earring, silver: C-E (460/80-580/90) |
| Finger ring: - |

Date of grave: 510/25-580/590
Range of circulation: C-F (460/80-610): **150 years**
Merovingian antiques: not observable in a seriation, but could have been present

| Pandhof grave 11220 (Appendix 2.3) |
| Biological sex: Woman |
| Cultural gender: Woman |
| Age: 19-28 |
| Brooch, garnet: D-E (510/20-580/90) |
| Brooch, garnet: D-E (510/20-580/90) |
| Brooch, bow: D-E (510/20-580/90) |
| Brooch, bow: D-E (510/20-580/90) |
| Beads: - |

Date of grave: 510/25-580/590
Merovingian antiques: no
Range of object circulation: D-E (510/20-580/90): **80 years**

| Pandhof grave 11321 (Appendix 2.3) |
| Biological sex: - |
| Cultural gender: Woman |
| Age: - |
| Brooch, garnet: D-E (510/20-580/90) |
Brooch, bow: E (565-580/90)
String of beads: Maastricht: B-E (400-580/90)
Pendant, filigree, gold:
Belt, buckle, silver: D-E (510/20-580/90)
Pendant, silver: -
Coin: 318-320
Gold thread: -
Earring: C-G (460/80-640/50)
Pendant, crystal ball: C-G (460/80-640/50)
Coin, pendant, silver: c. 500-600

Date of grave: 510/25-580/590
Range of circulation: B-G: 460/80-640/50: **190 years**
Merovingian antiques: not observable in a seriation, but could have been present

Pandhof grave 10365 (Appendix 2.4)
Biological sex: man
Cultural gender: woman
Age: 24 +
Brooch, garnet: D-E (510/20-580/90)
Brooch, bow: D-E (510/20-580/90)
String of beads: Maastricht: B-E (400-580/90).

Date of grave: 510/25-580/590
Range of circulation: B-E (400-580/90): **190 years**
Merovingian antiques: not observable in a seriation, but could have been present

**Figure 12.** The total range of circulation of complete assemblages in individual graves.

It appears from these examples that the widest range of circulation of the objects that form the assemblages varies from 80 to 280 years. The widest circulation range of these graves such as they are represented in the examples do not have to represent the actual range of circulation, because an object could have been acquired at first, by the family in which it was going to be transmitted, at the end of its ‘normal’ circulation curve. But the examples, which are not an exception in Merovingian burial archaeology when the contents of the graves are observed more carefully with regard to their dating ranges, do show that the narrow date ranges of object-types (they circulated as long as approximately one generation) that stand at the basis of the general cultural perspective of chronological analysis until now, is a feature which is only scarcely observable in the results of the chronological analysis of Merovingian burials. Burial chronology aims at dating the grave goods assemblages, and in doing so it follows the logical assumption that the youngest objects provide the date of a phase in which the burial should be dated. This is solid archaeological thinking, but presenting the results as such covers the underlying variety in circulation as the examples from Maastricht show. These examples are not exceptions; the wide circulation range applies to the majority of the graves from Merovingian cemeteries. Why, with the reservations about the accuracy of dating methods taken into account, should these circulation periods not be taken as point of departure for cultural analysis? They can be interpreted as that something as prolonged circulation was in fact a social reality of the variety of Merovingian material culture. If methods could be found that provide more accurate dates of the circulation periods of various object-types, this would form solid evidence for the investigation of variable circulation...
periods, both between various sorts of object-types as within one group of object-type. Not all the Vrijthof and Pandhof graves are analysed on variation in circulation, because this thesis only contains the preliminary analysis of these cemeteries, but such a presentation would be a preferable option for future publications. For now the overview of finds and the range of circulation per grave can be found in List 2 (List of dated object-types per grave).

Although probably somewhat exaggerated, the examples of the Vrijthof and Pandhof graves with brooches show the opposite of the presumed burial with personal possessions. It can be observed that the circulation periods of the object-types in nearly all the graves show overlap. If the graves were seriated, their position in the sequence would have averaged the various circulations; this is why researchers can claim that really old objects (objects that clearly date some phases earlier than the average circulation periods of the other grave goods) can only sporadically be observed in the investigated graves, despite the fact that the examples above show that it is very well possible that older objects, although not necessarily extremely old objects, are on a regular basis present in graves.

How can the examples of possible variation of circulation in one grave be interpreted? The range of circulation per grave can inform us about how long which items were in circulation, and, in combination with the age at death, some conclusions can be formulated regarding the importance of continuous transmission per object, and the identification (the age at death of the responsible care-taker) of the termination of this line of transmission. The data can form a basis for further theorisation on practices of transmission and burial. Variability in circulation within one grave can indicate that something as the transmission of objects existed. What research questions can be thought of with regard to transmission and the failure of transmission on the basis of the complete dataset of burial evidence?

-Which life-cycle stages can be identified for the Merovingian period on the basis of the burial evidence, or what are the moments of acquisition/transmission?

Beads for example were mentioned as objects that are associated with children. This could indicate that the transmission and acquisition of (a selection of) beads that were considered family heirlooms was structured around a transformation in a child’s life.

-What are the associated objects of acquisition/transmission?

-Can these objects be found in other age-groups? Does this imply that this specific transmission has failed? For example: does the occurrence of beads in graves of older women indicate that an opportunity for their transmission had not occurred?

-Empty graves can be a sign of successful transmission. They require further investigation, for example their distribution over the cemetery can be informative, as can the determined age and gender of the deceased.

-Etc.

Two graves, Vrijthof grave 194 and Pandhof Grave 10799, are comparable on the basis of a resembling object: a ‘Mediterranean’ plate buckle. They are comparable regarding their outline and ‘tradition’, but are executed in different materials. The Vrijthof specimen is of bronze, the Pandhof specimen is of silver and also has some additional decorations (Fig. 17; Appendix 2.5).

Vrijthof Grave 194 (Appendix 2.5)
Biological sex: man
Cultural gender: man
44-53 years
Plate buckle, bronze: Maastricht phase E (565-580/90)
Seax: Maastricht phase D-E (510/20-580/90)
Ring bronze: -
Pandhof grave 10799 (Appendix 2.5)
Biological sex: child
Cultural gender: woman
3-5 years
Plate buckle, silver: E (565-580/90)
String of beads: Maastricht phase C-F (460/80-610/20)
Glass vessel: LR (50-250)
Pottery vessel: LR (300-425)

Figure 13. The circulation span of the grave goods from Vrijthof grave 194 and Pandhof grave 10799

It appeared that the Vrijthof and Pandhof graves with brooches were of women of approximately the same age-group. This could indicate that the acquisition of these brooches were organised around events that relate to this specific age category. The two graves with a 'Mediterranean' buckle show that the associated persons were of different social categories regarding age and biological sex. Various questions with regard to the burial of personal property, variable and prolonged circulation, and cultural transmission can be thought of.

Normally these graves would be dated to the same phase on the basis of the peculiar plate buckles (see the section of 'Mediterranean' plate-buckles in the discussion of the Vrijthof and Pandhof grave goods). Does this mean that such objects were acquired at such a young age as the burial in grave 10799 would suggest? What does this discrepancy regarding the social groups of the associated persons imply for the dating of both graves? Or could it be that the occurrence of such an exclusive object with a child directs towards other actions than appropriate transmission in relation to life-cycle transformations? Can these plate buckles be an exchange with the ancestral world in order to create sacred heirlooms? Is the bronze example an effort to symbolise the same as the exclusive silver specimen from the Pandhof? It appears that these two graves pose several questions on the basis of their comparison, especially when the age at death is considered. Further research is required to investigate the variety in circulation periods in relation to the variety of objects and the biological features of the associated dead. The focus in this thesis has been on the possibility of various more or long prolonged circulation periods.

The variation of circulation in a selection of the Vrijthof and Pandhof graves served as an example for how the dating of an assemblage to a restricted phase disguises the variation within this assemblage. It also showed that for some sorts of objects (garnet disc brooches and bow brooches) a correlation with a specific age group was observed, and that for other objects (the Mediterranean plate buckle) such a 'correlation' (only established on the basis of two graves) was absent. For all the correlations it also has to be questioned if and how they change over time. The aim was to illustrate that underlying features of graves can be interesting to emphasise apart from the dating of graves to one burial phase. When skeletal remains are available, and of course when the dataset is of such a quality that statistical analysis result in considerable significant results, a series of research questions can be thought of that address the nature of the character between the grave goods, the deceased and the community. For future analysis of Merovingian cemeteries, such as those that will be investigated in the Anastasis-project, a cultural perspective should be the starting point of chronological interpretations.

First, the aim should not be to date the graves to such restricted phases as 15/20/30 years; 50 years or more is preferable. It will as a consequence be relatively difficult to describe the changes in ritual repertoires over the course of the Merovingian period in detail, but changes that are framed in
approximately 50 years, over a time span of more or less 300 years, do provide insights in these matters. Secondly, it is far more interesting to focus on the variability in circulation periods that are captured in the graves than only on the burial phases. If the material culture from graves can be seen as material culture which also had a prominent role among the living, the debate on variation in circulations and the meaning these had in society would surely enrich the chronological debate. It requires more research to find a method that offers reliable results with regard to the establishment of the circulation periods of various objects and objects-types. This will probably be one of the challenging subjects of the chronological debate from a cultural perspective. Also the correlation between specific features of objects, such as colour, decoration schemes etc., and a variety of biological features offer interesting research options for a further cultural perspective on burial goods. It will be clear that especially these last correlations require detailed and refined typological schemes, whereas maybe the search for reliable burial chronologies and circulation trajectories of object-types is best served with more crude typologies and dating schemes.