



Exchange and Trade in Medieval Europe

Papers of the 'Medieval Europe Brugge 1997' Conference
Volume 3

edited by
Guy De Boe & Frans Verhaeghe

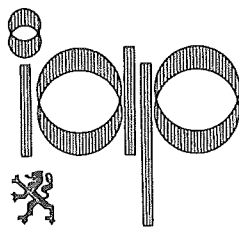
I.A.P. Rapporten 3

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Prof. Dr. Guy De Boe



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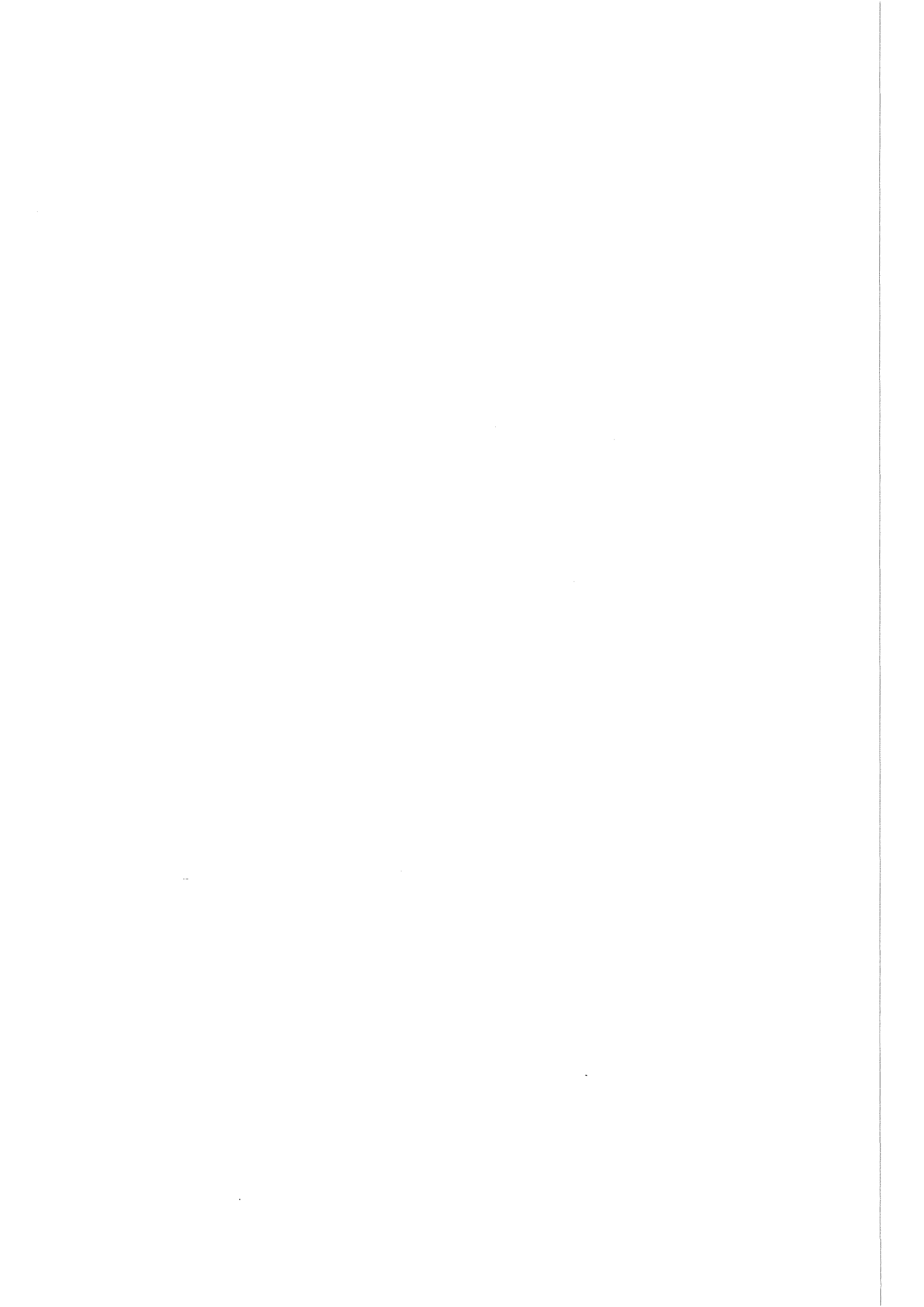
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Hugo Blake
Axel Christophersen
Marc Ryckaert

Preface

Trade and exchange may take many forms and affect practically all aspects of medieval and later society, whether of a straightforward material nature or related to more general social and economic behavioural patterns. In addition, the archaeological study of trade and exchange has moved from simple and even simplistic approaches using readily identifiable goods of known – or presumed to be known – origins and their geographical distribution as a means to identify trade relations between different points in space. It is now understood that the study of trade and exchange cannot readily be divorced from the many other components of the material world.

Trade and exchange can therefore reasonably be considered to constitute one of the most complex issues which confront archaeology in general. Medieval and later archaeology are no exception to the rule and in a number of cases these disciplines have also to take into account what is known about the general economic and social context in which trade and processes of exchange emerged, functioned and influenced the material and social, economic and even cultural world. But the complexity of the subject, its interaction with so many other spheres of human society and the many possible clues – from the goods themselves over trade technology, the spatial impact of trade through the influence it has on spatial organisation and infrastructure to the possible impact on local production and on social representation by means of imported commodities – make it very difficult to isolate trade and exchange from the other components of the medieval and later world: trade and exchange are always present and always play some part in the development of those societies.

The present volume offers a collection of pre-printed papers related to the world of medieval and later trade and exchange. These papers were presented on the occasion of the international conference on medieval and later archaeology MEDIEVAL EUROPE

BRUGGE 1997 which took place in Brugge, Belgium, on 1 through 4 October 1997. A number of them was presented and debated during the sessions of section 03, under the general title *Exchange and trade - Echanges et commerce - Warenaustausch und Handel - Uitwisseling en handel*, organized by Hugo Blake (University of London), Axel Christophersen (University of Trondheim and NIKU, Trondheim) and Marc Ryckaert (Provincial Government of West-Flanders). Unfortunately, quite a few contributors to this section did not submit a text in time for inclusion in the present volume.

In addition, the above-mentioned complexity of the subject leads almost automatically to a considerable degree of overlap between this topic and the many other subjects discussed at the conference. This in itself clearly demonstrates the need for medieval and later archaeology to pay suitable attention to the many intricate links and interactions between the many components of the medieval and later world, which was and is in itself one of the basic reasons for the MEDIEVAL EUROPE conferences at York and at Brugge.

For sheer practical reasons, however, a number of contributions had to be isolated from the others and organised according to some of the issues discussed at Brugge. Together with the fact that not all papers presented during the conference were the subject of a text to be included in the pre-prints, this explains why the general structure and the contents of the present volume do not conform exactly to the programme of the conference. It has been organized keeping in mind both the complexity of the subject and the general lines of the structure of section 03 of the conference. This means that the contributions in the present volume have more or less been grouped according to the following topics:

- Most of the papers have been grouped in a first section on 'Commodities and artefactual indices of

contact' and ordered according to two sub-themes: a first series of papers consists of more general regional or sub-regional approaches, while a number of specific classes of commodities are discussed in a second sub-section on specific commodities. The latter are organized according to the type of commodity concerned: ceramics, glass, stone, fish and salt.

- A separate sub-section concerns the means of exchange and includes Ingrid Gustin's paper on coins in Viking Age Birka, Sweden.

- In view of the importance of trade in the emergence and spatial development of towns as well as because of its impact in terms of specific types of urban infrastructure and urban buildings, a number of papers grouped under the heading 'Trade, towns and urban infrastructure'.

Of necessity, the papers are rather short and the volume of course does not do total justice to the many excavations and the wealth of other types of research work where trade and exchange constitute basic issues or are of direct or indirect importance. Nor does it provide a complete overview of the results attained and knowledge acquired. Nevertheless, the 20-odd papers included in the present volume provide a good idea of the potential of this particular field of research, emphasizing at the same time the complexity of the subject. This is even more true when the volume is considered within the context of the other volumes in the present series and when the reader takes into account that trade and exchange are also very much present – directly or indirectly – in these other volumes. This in itself again emphasizes the one of the basic points of the philosophy behind the MEDIEVAL EUROPE conferences.

Frans Verhaeghe & Guy De Boe

Anciennes et nouvelles méthodes dans l'archéologie des échanges et du commerce

Importance de l'archéologie du commerce

Tenter d'établir l'importance d'un secteur de la recherche archéologique par rapport à un autre n'a aucun sens; nous devons naturellement prêter une attention égale à chaque domaine. En effet, il est normal que dans un système complexe, ainsi que peut être défini le passé d'une société, tout facteur permettant d'expliquer la vie quotidienne et les événements, pèse sur l'ensemble. Ce poids est plus ou moins important suivant les situations. L'archéologue ne peut l'évaluer *a priori*, et souvent même *a posteriori*, s'il n'est pas certain de connaître suffisamment tous les autres facteurs. Aussi chaque facteur doit-il être analysé comme l'un des éléments du système global.

Le domaine des échanges et du commerce du matériel est sans doute l'un des aspects susceptible d'intéresser le plus l'archéologue, puisqu'il brosse un cadre privilégié et fort précis des productions des objets et de leur consommation. Cependant, ce contexte peut être étudié de plusieurs façons et selon les catégories d'objets, souvent différents entre eux.

L'importance générale de ce secteur de l'archéologie naît du rôle tenu de tout temps par les échanges et les rapports commerciaux: dans la diffusion de la culture, non seulement artistique et technique, mais aussi civile et religieuse; dans une meilleure connaissance du monde, des milieux et des ressources naturelles; dans l'instauration de rapports politico-économiques élargis et durables. Il semblerait, par exemple, que les artisans se soient moins intéressés aux différents types de pouvoir socio-politique et que les commerçants aient été plus respectueux des traditions et des différentes cultures, en raison de la connaissance directe qu'ils en avaient et de façon à mieux cohabiter avec les sociétés qui les avaient produites.

Etat de la question

Dans la majorité des cas, le point de départ de l'archéologie des échanges et du commerce est lié à la constatation ou à la vérification d'un transfert

d'objets, – devenus pièces archéologiques –, d'un territoire à un autre, ou d'un groupe social à un autre. Ces constatations et ces contrôles peuvent être effectués selon des méthodes et avec des instruments différents qui ont été développés au fur et à mesure, ainsi que nous l'évoquerons.

Les témoignages indiquant un échange doivent être eux-aussi regroupés suivant leur nature, donc selon leur signification fonctionnelle, et selon les méthodes employées pour leur étude: denrées alimentaires, matériaux de construction, matières premières ou partiellement travaillées destinées aux manufactures, outils de travail, produits manufacturés prêts à l'emploi. Ces derniers éléments sont plus fréquemment étudiés par la recherche, puisque les déchets des centres habités sont les plus abondants et les mieux connus de l'archéologie.

En s'appuyant sur les vestiges archéologiques, une autre approche permet d'observer et d'étudier les échanges et le commerce. Elle consiste à s'intéresser à l'équipement et aux moyens physiques qui ont permis le trafic ou la consommation de ces objets. Dans ce cadre de recherche, des témoignages immobiliers peuvent être pris en compte, ainsi les ruines des ouvrages routiers ou portuaires, des entrepôts et des édifices douaniers. Les témoignages "mobiles" les plus intéressants sont constitués par les restes des moyens de transport terrestres et flottants, les récipients pour le transport, les emballages, comme les cachets marchands, et d'autres produits manufacturés liés plus particulièrement au commerce, comme les poids, les mesures et les monnaies. Cependant ces méthodes de recherche suscitent des problèmes; nous prendrons d'ailleurs en considération leur limites par la suite.

Dans ce domaine de l'archéologie, une autre méthode d'analyse offre un champ d'information plus ample. Elle consiste à comparer plusieurs données archéologiques entre elles et à les confronter, si possible, aux sources littéraires. Par exemple, l'analyse et la comparaison de certaines données quantitatives permettent de cerner des concepts économiques et politico-administratifs du commerce. Ainsi la présence d'un objet étranger introduit comme don ou com-

me souvenir, n'a pas la même signification qu'une importation massive de produits manufacturés: il touche les coutumes de plusieurs couches sociales. Cependant on ne peut exclure que le don d'un objet précieux n'ait pas servi de propagande commerciale.

L'approche économique peut aussi concerner l'effet produit par l'échange ou le commerce sur la qualité de vie de celui qui le pratiquait, mais aussi de celui qui produisait la marchandise à exporter, lorsqu'il s'agissait de groupes sociaux distincts. Des échanges ayant pour but la simple survie ont toujours eu lieu. De même certaines activités commerciales ont créé les plus grandes concentrations de richesse dont les vestiges sont encore visible, grâce à l'archéologie du bâti: non seulement les lieux où résidaient les marchands, mais aussi le long des voies parcourues pour ces trafics.

Plus on tente d'expliquer les causes complexes de ces phénomènes, plus les données archéologiques s'avèrent insuffisantes. Evidemment, les témoignages archéologiques des activités d'échange et de commerce ne constituent pas à eux seuls une véritable hypothèse historique. Aussi, en s'appuyant sur différents aspects du contexte étudié, on s'essaie à reconstruire les situations, de manière à comprendre quels ont été les choix effectués.

Cadre général des recherches

1. Jusqu'à aujourd'hui, la plupart des recherches archéologiques traitant des échanges ou du commerce, se sont toujours fondées sur la présence, dans les contextes archéologiques, d'objets provenant d'autres régions ou d'autres cultures. Cette affirmation est confirmée tout particulièrement pour ce qui concerne le matériel céramique. La raison est claire, mais peut-être vaut-il mieux la répéter, puisqu'elle dérive en réalité de plusieurs causes qui révèlent l'insuffisance d'études des autres indices commerciaux.

En premier lieu, dans tous les emplacements abandonnés ou ayant survécus, urbains ou de campagne, les habitations sont les plus nombreuses, même lorsqu'il s'agit de sites de productions spécialisées ou religieux, – si ce n'est dans les églises et dans les cimetières, où l'on trouve du matériel funéraire. Aussi est-il difficile d'exécuter des fouilles archéologiques sans porter attention aux concentrations formées, de façons différentes, dans le temps, par les ordures domestiques. Après un long séjour dans des terrains normaux, ces déchets ne sont plus constitués que par des objets cassés, inutilisables, ni même recyclables (comme le verre et les métaux) et résistants aux agents de dégradation présents dans le sol, comme le sont précisément les céramiques.

Deuxièmement, n'importe quel objet découvert dans les déchets des aires de consommation peut-être identifié comme n'étant pas un produit local et provenant d'une activité d'échange ou de commerce, s'il possède les caractéristiques intrinsèques qui permettent d'en retrouver l'aire de production. Lorsqu'il s'agit de matériel manufacturé, les éléments de reconnaissance relèvent de deux types d'analyse: l'étude des matières premières et des techniques de production, et celle, formelle, qui distingue la forme proprement dite, les dimensions, les motifs décoratifs; dans de rares cas, il existe des marques de fabrique.

En ce qui concerne le matériel céramique, puisque son étude se fonde sur les comparaisons chronotypologiques, il faut partir des caractéristiques les plus évidentes, donc celles formelles, de manière à établir la provenance. Cette méthode est encore valable à condition de l'employer avec beaucoup de prudence et d'expérience. Les dangers de ce type d'étude découlent d'éventuelles influences culturelles, ou de l'existence de véritables imitations qui ont pu être réalisées à chaque époque et dans tout territoire où un objet était fort employé. Mais les formes et les décorations, sans contact direct avec le lieu de fabrication d'origine, révèlent des techniques d'exécution qu'il n'est pas possible d'imiter parfaitement à distance, à la différence des motifs représentés. Elles permettent donc le constat de distinctions précises. Dans quelques cas, lorsque le rendu des techniques ne pouvait être imité, les potiers ont été "transférés", de façon à reproduire les mêmes récipients que ceux qu'ils créaient dans leur pays d'origine. Dès lors, quelques différences naturalistes dans les matériaux choisis subsistent et le style peut se modifier au contact des influences de la culture locale. Quand les différences stylistiques sont évidentes, elles ne posent aucun problème pour l'analyse. Au contraire, lorsqu'il n'y a pas de variation dans le style, le doute subsiste toujours qu'il puisse s'agir d'une production par des potiers "transférés" ou des imitations parfaites.

Depuis trente ans environs, on s'intéresse de plus en plus aux aires de provenance du matériel céramique, en s'appuyant sur les études archéométriques des matières premières, sur les analyses chimiques, minérales, et plus particulièrement pétrographiques. Ces recherches sont possibles car le commerce de la terre se limitait à des types de terre spéciaux – comme le kaolin –, ou à des régions isolées où l'argile manque, ce qui est plutôt plus rare. La précision de ces données analytiques est garantie par le type d'instruments employés pour ces études, qui sont ceux des sciences naturelles. Cependant la caractérisation des problèmes à analyser, le choix des échantillons et surtout l'interprétation archéologique

des résultats scientifiques font de l'archéométrie une nouvelle source d'information pour l'archéologie. En effet, si les nombreuses recherches effectuées démontrent que les indications chimiques ou minéralogiques sur la provenance ne sont pas toujours univoques, elles sont cependant fort utiles pour la confrontation avec les données archéologiques.

Étant donné que le matériel céramique est le plus abondant et le mieux étudié, il est également très utile de savoir quelles céramiques étaient commercialisées au niveau régional ou général, et en quelle quantité. Cependant les résultats ne pourraient être employés comme indices pour toutes les activités commerciales. L'étude des autres produits manufacturés présents quelquefois dans les déchets domestiques ne permet pas toujours de distinguer avec précision les aires de production. Seules les pierres ollaires ont fait l'objet d'analyses archéométriques sur la provenance. En ce qui concerne les objets en verre et en métal, le chercheur doit se contenter des études des formes et des styles, lorsqu'ils sont suffisamment caractéristiques.

Même si la recherche était étendue à tous les produits manufacturés employés, non périssables dans le sol, nous n'aurions toujours à faire qu'à quelques petits secteurs du commerce médiéval, par rapport à ceux connus par les sources littéraires. Pour certaines classes sociales, les produits les plus importants ont été les objets en peau et surtout les tissus, sans oublier l'orfèvrerie et certaines armes de valeur. Cependant ce genre de matériel ne finissait pas dans les déchets domestiques, mais seulement, dans quelques cas, dans les sépultures.

2. Dans les habitations, outre le matériel d'usage quotidien, on consommait aussi des produits alimentaires. Lorsqu'ils ont survécu à la dégradation, leurs restes indiquent la nature des espèces végétales et animales consommées. Les espèces sauvages reflètent les milieux naturels ou des éco-systèmes plus ou moins précis. Mais à l'intérieur d'une même espèce, on ne distingue pas les bêtes provenant de milieux différents, même distants entre eux. Pour l'instant, au vu des restes archéologiques, il est presque impossible de reconnaître une espèce domestique cultivée ou élevée sur place, de la même espèce cultivée ou élevée dans d'autres régions.

3. En ce qui concerne les matériaux de construction, les importations étaient rares. Elles provenaient de zones assez proches, en raison des difficultés et du coût du transport par rapport au volume et au poids nécessaires, si ce n'est pour les emplacements qui se trouvaient le long d'une voie d'eau. Seuls des matériaux précieux étaient quelquefois importés d'aires

lointaines, ainsi le marbre et les carreaux décorés. Les analyses archéométriques de ces produits autorisent à préciser les aires de production. Il en va de même dans le cas de la céramique décorative, grâce aux études typologiques. La présence de marbre peut poser problème car il faut considérer que, durant le moyen-âge, il provenait généralement de la spoliation de monuments antiques, plutôt que des carrières. Ces études entrent en ligne de compte plus particulièrement dans l'archéologie du bâti qui est devenu un secteur intéressant de l'archéologie médiévale. Dans ce domaine, depuis vingt ans, on étudie toutes les transformations subies dans les constructions du moyen-âge qui nous sont parvenues, toutes les méthodes de construction, leur organisation technique et économique.

4. Les productions médiévales les plus importantes provenaient de l'agriculture et de l'élevage. Les manufactures étaient toujours de petites dimensions, souvent dispersés au milieu des centres habités, ou bien concentrés dans certaines zones, du fait des nécessités en matière première et surtout en sources d'énergie thermique ou mécanique (bois ou cours d'eau). Pour les productions qui exigeaient de grandes quantités de matière première comme pour les briques, la poterie et la chaux, les établissements étaient construits à proximité de la source de celle-ci. Mais dans le cas de productions moins volumineuses, ainsi dans la métallurgie et la verrerie, la matière première pouvait provenir de loin, en volumes et emballages conditionnés pour le commerce. Les minéraux de fer ou de cuivre granulés, les sables quartzifères nettoyés ou les pierres en silex se trouvent exclusivement dans ces emplacements, et les analyses archéométriques permettent souvent de découvrir les mines et les carrières d'origine. Lorsque les "arts du feu" s'exerçaient dans les centres habités, ils impliquaient un commerce du bois ou du charbon de bois, nécessaires à cette occupation et dont les restes se découvrent dans les fouilles. Certains établissements livraient seulement des demi-produits comme les frites de verre, les barres de fer ou les saumons de cuivre, aux dimensions précises voulues par le marché. Ces objets pouvaient même être commercialisés à distance, de manière à toucher les centres de travail artisanal.

5. Depuis peu, la recherche archéologique s'intéresse aussi à l'étude des structures et des instruments marchands. Mais elle est moins développée que celle qui s'oriente sur les produits commerciaux employés dans les sites résidentiels. L'une des raisons est, comme nous l'avons déjà exposé, le nombre plus réduit de telles structures et leur concentration aux endroits

stratégiques, le long des grandes voies de communication.

Pour ces produits qui passaient d'un territoire voisin à un autre, ou de la campagne à la ville, il est difficile, voire même impossible, de saisir s'ils étaient l'objet d'échanges ou de commerce. De plus, ils ont rarement laissé des traces archéologiques de leur transport. Des éléments qui indiquent un commerce au détail, tels les poids et les mesures, sont présents dans tous les centres habités, à partir d'un certain nombre d'individus. De même, des transports par bateaux, par charrettes ou à dos d'âne s'effectuaient tant en ville que dans les campagnes, et également pour des activités autres que marchandes.

Certains éléments nous offrent pourtant des indications plus précises, ainsi la circulation de monnaies étrangères, la découverte de sceaux propres aux balles marchandes, la présence d'insectes caractéristiques d'autres régions arrivés avec les stocks importés, les récipients non périssables pour le transport de denrées, comme ceux en céramique, qui permettent de découvrir les aires de production grâce aux analyses archéométriques.

Les recherches archéologiques conduites aux points névralgiques des grandes voies de communication mettent au jour, en plus des éléments cités, les édifices publics ou privés où se déroulaient les principales opérations physiques, fiscales et de contrôle, liées au transport des marchandises de tout ordre. Abris pour les balances publiques et les opérations douanières, à proximité des portes, habitations avec entrepôts et grandes écuries pour les animaux employés pour les transports, ce sont des structures qui existaient dans tous les ports où l'activité marchande était développée, comme dans les grandes villes et dans les petits centres urbains frontaliers ou proches des cols de montagne. Le long des voies terrestres, on ne retrouve pas de vestiges archéologiques des marchandises, alors que le long des routes maritimes, on découvre, outre les quais, des épaves contenant encore leurs chargements, même si celles qui datent du moyen-âge ne sont pas nombreuses.

Suggestions pour la méthodologie

Les données sur les échanges et le commerce qui proviennent des fouilles de n'importe quel établissement, nous sont certainement utiles, au point qu'il faudrait même tenter d'augmenter ces recherches. Ce serait cependant une erreur de croire que la somme de ces éléments puisse constituer une véritable archéologie du commerce et des échanges. Ces informations doivent être utilisées dans un premier temps pour cerner deux types de problèmes: a) ceux concernant

les systèmes commerciaux pratiqués par les sociétés et que l'on étudie; b) ceux que rencontre actuellement l'archéologue qui tente de comprendre comment ces problèmes ont été résolus par le passé. Des hypothèses de travail et des programmes de recherches pourront être développés afin de mettre en évidence quelles sont les informations archéologiques utiles pour étayer ou invalider ces hypothèses.

Par exemple, très souvent, les chercheurs qui s'intéressent à la céramique médiévale requièrent des analyses archéométriques sur la provenance, seulement pour vérifier la classification de leurs trouvailles et non de manière à conduire une véritable recherche sur ce que pourrait être la signification d'une découverte, à un emplacement donné, de peu ou de nombreux fragments de céramique importée d'un autre pays. De plus, pour développer l'archéologie du commerce, il faut sortir du contexte étroit du simple établissement singulier, qu'il soit petit ou grand, pour établir des hypothèses sur les voies commerciales, sur leurs raisons d'être et, enfin, chercher d'autres preuves archéologiques.

Enfin, l'étude des routes doit intégrer les données des recherches en surface, de l'archéologie du bâti et des fouilles en des lieux choisis, où la présence continue de marchands, de transporteurs et de douaniers peut avoir laissé des traces, non seulement des produits commercialisés – plus aisés à découvrir dans les zones de consommation –, mais aussi des vestiges mobiliers spécifiques, liés à leurs activités.

Traduction Caroline Halm

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Orientation bibliographiques

Cette bibliographie concernant les échanges et le commerce ne prétend certainement pas être exhaustive, vu l'ampleur du thème. Elle peut toutefois servir de point de départ à une réflexion sur l'état actuel de la recherche. Aussi ne citerons-nous que les ouvrages significatifs et en délaierons-nous beaucoup d'autres, souvent en raison des problèmes de consultation et de traduction qu'ils posent. De surcroît, nous ne signalerons que les études relatives au commerce, fondées sur des données matérielles et ne prenons pas en compte les nombreux travaux de caractère historique qui s'appuient sur les sources littéraires.

Enrichi des méthodes archéologiques, l'étude du commerce s'est développée de façon différente, selon les types de produits manufacturés analysés. On distingue, en particulier, deux grandes catégories: celle des trouvailles "mobiles", le plus souvent découvertes lors de fouilles, attestant un commerce, et celle des vestiges "immobiliers", ouvrages routiers ou portuaires, conservés en élévation, qui signalent une viabilité. Au fur et à mesure, la recherche sur la production et la distribution des biens "mobiles" s'est accrue et s'est centrée sur des types de matériel différent: des récipients en céramique à ceux en pierre ollaire, des monnaies aux matériaux de construction. Pour ce qui concerne la céramique, les analyses se sont intéressées à des productions de plus en plus spécifiques. On a d'ailleurs effectué des synthèses non seulement au plan régional, mais aussi international. Il existe aussi des études historiques traitant du développement des marchés et de la distribution des matières premières et des produits manufacturés: des aires d'origine des matériaux, des zones de production jusqu'aux lieux où les produits étaient utilisés. De même, on travaille sur une série d'objets relevant du commerce au détail: balances, poids, cachets. Cependant, contrairement au monde romain, peu de synthèses ont été proposées à partir des données archéologiques pour ce qui concerne le commerce en Europe et en Méditerranée.

Dans le cadre de l'*archéologie du territoire* et de l'*archéologie de l'architecture*, l'étude des vestiges situés le long des routes maritimes et des réseaux routiers a permis d'élaborer une nouvelle méthode de travail, intitulée *archéologie et architecture des grandes voies de communication*. Pour l'instant, dans cette nouvelle discipline, les travaux demeurent peu nombreux et ils ne sont consacrés presque exclusivement qu'à la Ligurie (Italie) et à la chaîne des Alpes, champ de recherche de l'ISCUM de Gênes. Cet institut est d'ailleurs le lieu de naissance de ces nouvelles méthodes de recherche.

De nombreux travaux traitent de la viabilité et de la navigation, du point de vue historique, en se référant à des documents, des compte-rendus de voyageurs et de pèlerins. Certaines voies font plus souvent l'objet d'étude, comme la Francigène et actuellement, – en raison du Jubilé de deux mille ans –, les principaux itinéraires de pèlerinage. D'ailleurs, des centres d'études s'y intéressent et il existe des recueils bibliographiques très exhaustifs à ce sujet. Cependant, nous ne présenterons pas non plus dans ce contexte les études archéologiques, relatives aux édifices religieux du réseau routier, tels les hôpitaux, qui ne nous paraissent pas faire partie du sujet.

Durant ces dernières années, des colloques se sont tenus lors desquels historiens, archéologues et archi-

tectes ont réfléchi sur le thème de la viabilité au moyen-âge. Nombreux sont aussi les travaux qui s'intéressent aux tronçons de routes, découverts de façon sporadique, surtout dans les aires urbaines, durant des fouilles, bien qu'il manque souvent une interprétation des données plus générales sur la viabilité. On n'a pas encore prêté une attention constante, comme c'est en revanche le cas pour l'époque romaine, aux ponts et autres infrastructures routières.

Pour toute la Méditerranée, les recherches archéologiques relatives aux ports du moyen-âge ne sont que peu étendues. Cependant, les exemples étudiés, comme le port de Gênes, l'ont été de manière exhaustive. Dans l'Europe du Nord, les études sont plus fréquentes et, par ailleurs, il existe sur ce sujet des colloques périodiques. Au contraire, on traite généralement assez peu des bourgs marchands et des villes portuaires: nous citerons à ce propos les cas de Lubeck et de Gênes.

Au sujet des moyens de transport terrestre, on peut utiliser les différentes études traitant de l'époque romaine comme point de départ pour le moyen-âge. Mais il existe plusieurs travaux sur le système privilégié de circulation des personnes et des marchandises par transport sur animaux de somme, à cette époque.

Nous avons en outre remarqué que l'archéologie sous-marine s'est fort développée durant ces dix dernières années. On travaille de plus en plus sur ces thèmes dans les revues ou les rubriques spécialisées, surtout en ce qui concerne les moyens de transport flottants, très utilisés surtout pour les marchandises les plus encombrantes.

Nous présentons les différentes contributions spécifiques, en les subdivisant par types de produits manufacturés et par ordre chronologique, selon leur date de parution.

Le commerce

HODGES R., *L'archeologia medievale in Gran Bretagna: una rassegna critica, Archeologia Medievale* III, 1976, 355-361.

MANNONI T., *The Archaeological Evidence for Commerce: A Ligurian Case Study*, in: *Archaeology and Italian Society*, Papers in Italian Archaeology II, B.A.R. I.S. 102, Oxford, 1981, 125-130.

HODGES R., *Dark Age Economics. The Origins of Towns and Trade AD 600-1000*, Londres, 1982.

HODGES R., *Primitive and Peasant Markets*, Oxford, 1988.

HINTON D.A., *Archaeology, Economy and Society: England from the Fifth to the Fifteenth Century*, Londres, 1990.

RANDBORG K., *The First Millennium A.D. in Europe*

- and the Mediterranean. An Archaeological Essay*, Cambridge, 1991.
- MOLINARI A., La produzione e il commercio in Sicilia tra il X e il XIII secolo: il contributo delle fonti archeologiche, *Archeologia Medievale* XXI, 1994, 99-119.
- TANGHERONI M., *Commercio e navigazione nel Medioevo*, Rome-Bari, 1996.
- Produits manufacturés en céramique*
- EIVISON V.I., HODGES H. & HURST J.-G. (ed.), *Medieval Pottery from Excavations*, Londres, 1974.
- La céramique médiévale en Méditerranée Occidentale Xe-XVe siècle*, Colloques Internationaux du C.N.R.S. n. 584 (Valbonne sept. 1978), Paris, 1980.
- BERTI G. & TONGIORGI L., *Bacini ceramici medievali della chiesa di Pisa*, Rome, 1981.
- DAVEY P. & HODGES R. (ed.), *Ceramic and Trade. The Production and Distribution of Later Medieval Pottery in Nord-West Europe*, Sheffield, 1983.
- MANNONI T., MELLO E. & ODDONE M., Ricerche archeometriche sulle ceramiche mediterranee, *Faenza* LXIX, 5-6, 1983, 363-367, pl. XCIV.
- La ceramica medievale nel Mediterraneo Occidentale. Actes du Colloque International (Siena e Faenza 1984)*, Florence, 1986.
- Segundo Coloquio Internacional de Cerámica Medieval en el Mediterráneo Occidental*, Madrid, 1986.
- CHAPELOT J., GALINIÉ H., PILET-LEMIÈRE J. (ed.), *La céramique (Ve-XIXè s.) fabrication, commercialisation, utilisation. Premier Congrès International d'Archéologie Médiévale (Paris oct. 1985)*, Caen, 1987.
- AVELLINO GUTIERRE GONZALES J. & BOHIGAS ROLDAN R. (ed.), *La ceramica medieval en el norte y nortest de la península ibérica: aproximación a su estudio*, Madrid, 1989.
- DEROEUX D. & DUFOUR D., Réflexions sur la diffusion de la céramique très décorée d'origine française en Europe du Nord-Ouest (XIII-XIV siècle), *Archéologie Médiévale* XX, 1990.
- GAIMSTER D.R.M., REDKNAP M. & WEGNER H.-H., *Zur Keramik des Mittelalters und der beginnenden Neuzeit im Rheinland. Medieval and Later Pottery from the Rhineland and its Marks*, B.A.R. I.S. 440, Oxford, 1990 (II éd.).
- A ceramica medieval no Mediterraneo occidental. Actes du Colloque (Lisbone nov. 1987)*, Lisbonne, 1991.
- GAIMSTER D. & REDKNAP M. (ed.), *Everyday and Exotic Pottery from Europe. Studies in Honour of John G. Hurst*, Oxford, 1992.
- PAROLI L. (ed.), *La ceramica invetriata tardoantica e altomedievale in Italia*, (Siene 1990), Florence, 1992.
- GELICHI S. (ed.), *La ceramica nel mondo bizantino tra XI e XV secolo e i suoi rapporti con l'Italia*, Florence, 1993.
- Medieval Ceramics* 17, 1993.
- ORTON C., TYERS P. & VINCE A., *Pottery in Archeology*, Cambridge, 1993.
- Actes du 5ème Colloque sur la Céramique Médiévale en Méditerranée Occidentale*, (Rabat nov. 1991), Rabat, 1995.
- OLCESE G. & PICON M., Ceramica in archeologia e in archeometria: qualche riflessione metodologica sulle determinazioni di origine, *Archeologia Medievale* XXII, 1995, 429-432.
- Le ceramiche altomedievali (fine VI-X secolo) in Italia Settentrionale: produzioni e commerci, Actes du VI séminaire sur les emplacements de l'antiquité tardive et du haut moyen-âge en Italie du Nord et centrale*, (Montebarro (Lecco), avril 1995), Mantove, 1996.
- Les autres produits manufacturés*
- MANNONI T. & MESSIGA B., La produzione e la diffusione dei recipienti di pietra ollare nell'Alto Medioevo, in: *Actes du 6° Colloque International des Etudes sur le haut moyen-âge*, Spolète, 1980, 501-522.
- HUGGETT J.W., Imported Grave Goods and the Early Anglo-Saxon Economy, *Medieval Archaeology* XXXII, 1988, 63-96.
- BARBERA J. & VELDE B., A Study of French Medieval Glass Composition, *Archéologie Médiévale* XIX, 1989, 81-130.
- CAVADA E., Testimonianze di cultura materiale "slava" nelle alpi atesine: le fibule a disco con smalti (emailscheibenfibel), *Archeologia Medievale* XVII, 1990, 727-740.
- KAZANSKI M., Quelques objets baltes trouvés en Gaule, datés entre la fin du IV siècle et le VIII siècle. A propos des contacts entre l'Occident et le rivage oriental de la mer Baltique, *Archéologie Médiévale* XXI, 1991, 1-20.
- MENDERA M. (ed.), *Archeologia e storia della produzione del vetro preindustriale*, Florence, 1991.
- UBOLDI M., Diffusione delle lampade vitree in età tardoantica e altomedievale e spunti per una tipologia, *Archeologia Medievale* XXII, 1995, 93-145.
- Les matières premières*
- LOMBARD M., *Espaces et réseaux du haut moyen-âge*, Paris, 1972.
- MANNONI T., Primi probabili impieghi del marmo lunense e il Portus Lunae, *Quaderni del Centro*

Studi Lunensi 10-11-12, 1987, 395-403.

FRANCOVICH R. (ed.), *Archeologia delle attività estrattive e metallurgiche*, (V° ciclo di lezioni sulla ricerca applicata in archeologia, Certosa di Pontignano-Campiglia Marittima, sept. 1991), Florence, 1993.

MANNONI T., Le tradizioni liguri negli impieghi delle pietre, in: MARCHI P. (ed.), *Pietre di Liguria*, Gênes, 1993, 37-44.

Les monnaies

D'ANGELO F., Aspetti della circolazione monetaria nella Sicilia medievale, *Archeologia Medievale* III, 1976, 390-394.

BAUTIER G.-BRESC, *Les monnaies*, in: PESEZ J.M. (ed.), *Brucato. Histoire et archéologie d'un habitat médiéval en Sicile*, Rome, 1984, 473-496.

GAIMSTER M., Scandinavian gold Bracteates in Britain. Money and Media in the Dark Ages, *Medieval Archaeology* XXXVI, 1992, 1-28.

DHÉNIM M., L'or, l'argent, le bronze, métaux monétaires, in: *Marchés et marchands nell'Alto Medioevo. L'area euroasiatica e l'area mediterranea, Actes du Colloque des Etudes sur le haut moyen-âge XL*, (avril 1992), Spolète, 1993, 827-839.

TRAVIANI L., *La monetazione nell'Italia Normanna*, Rome, 1995.

Les elements du commerce au detail

KRUSE S.E., Late Saxon Balances and Weights from England, *Medieval Archaeology* XXXVI, 1992, 67-95.

WACHOWSKI K. & KAMINSKA H., *Sredniowieczne przybory kupieckie z Trzebnicy. Przyczynek do dziejów wymiany w Europie XIII wieku*, Kwartalnik historii kultury materialnej 1, Varsovie, 1993.

La viabilité

MANNONI T., Vie e mezzi di comunicazione, *Archeologia Medievale* X, 1983, 213-222.

La viabilità tra Bologna e Firenze nel tempo. Actes du Colloque de Firenzuola (S. Benedetto Val di Sambro, sept.-oct. 1989), Bologne, 1992.

CAGNANA A. (ed.), *Le "rotte terrestri" del porto di Genova*, Studi e ricerche. Cultura del territorio 7-8, Gênes, 1992.

BORIANI M. & CAZZANI A. (ed.), *Le strade storiche. Un patrimonio da salvare*, Milan, 1993.

CAGNANA A., Archeologia delle strade. Finalità di ricerca e metodo di indagine, in: *Archeologia dell'Architettura* I, 1996, suppl. à *Archeologia Medievale* XXII, 71-74.

Les ouvrages routiers

ORTALLI J., La tecnica di costruzione delle strade di Bologna tra età romana e medioevo, *Archeologia Medievale* XI, 1984, 379-394.

MESQUI J., A la découverte des ponts anciens. Réflexions sur l'exploitation archéologique des chantiers d'ouvrages d'art, *Archéologie Médiévale* XVII, 1987, 67-92.

PICHARD SARDET N., De sembrancher au col du Grand-Saint-Bernard: une approche archéologique des vestiges routiers, in: *Une Région. Un passage*, Martigny, 1988, 39-60.

BELLATALLA E., BERTINO A. & GARDINI A., Lo scavo dell'area suburbana di via S. Vincenzo a Genova, *Archeologia Medievale* XVI, 1989, 357-410.

GELICHI S. (ed.), *Ferrara prima e dopo il castello. Testimonianze archeologiche per la storia della città*, Ferrare, 1992.

VANNI DESIDERI A., Indagini archeologiche ed osservazioni storiche su manufatti stradali presso Fucecchio (Firenze), *Archeologia Medievale* XXI, 1994, 469-486.

BENATTI M., Piazza della Vittoria. Lo scavo stratigrafico, in: MELLI P. (ed.), *La città ritrovata. Archeologia urbana a Genova 1984-1994*, Gênes, 1996, 57-165.

CAGNANA A. & MANNONI T., Analisi archeologica e tecnica costruttiva del ponte detto "di Annibale" a Rapallo, in: BOZZO DUFOUR C. (ed.), *Medioevo a Rapallo. Actes du Colloque (Rapallo, nov. 1995)*, Gênes, 1996, 10-13.

COPPOLA G., *Ponti medievali in legno*, Rome-Bari, 1996.

SERGI G. (ed.), *Luoghi di strada nel medioevo. Fra il Po, il mare e le Alpi occidentali*, Turin, 1996.

Les bourgs routiers, les villes portuaires et les entrepôts commerciaux

PANTIN A., The Merchants' House and Warehouse of King's Lynn, *Medieval Archaeology* VI-VII, 1962-63, 173-181.

GROSSI BIANCHI L. & POLEGGI E., *Una città portuale del Medioevo. Genova nei secoli X-XVI*, Gênes, 1987 (II éd.).

FEHRING G.P., Archaeological Evidence from Lübeck for Changing Material Culture and Socio-economic Conditions from the 13th to the 16th Century, *Medieval Archaeology* XXXIII, 1989, 60-81.

POLEGGI E. (ed.), *Città portuali del Mediterraneo. Storia e archeologia. Actes du Colloque (Gênes 1985)*, Gênes, 1989.

CAGNANA A. & FALSINI S., Crescita edilizia e organizzazione della Cà de' Rossi (GE) dal XIII

- secolo. Il primo studio di una "volta" stradale, in: *Archeologia dell'Architettura* I, 1996, suppl. à *Archeologia Medievale* XXII, 101-116.
- MANNONI T., Archeologia di una città mercantile che ha dimenticato se stessa, *Polis* 5, 1996, 106-107.
- Les infrastructures portuaires*
- BERNIERI A. & MANNONI L. e T., *Il porto di Carrara. Storia e attualità*, Gênes, 1983.
- CABONA D. & FERRANDO I., Archeologia portuale: i resti del porto di Genova affiorati durante gli scavi di emergenza. Prime considerazioni sulla loro presenza nella realtà portuale dei secoli XII-XVI, *Porto e aeroporto di Genova*, 10 oct. 1983, 1163-1172.
- CONCINA E. (ed.), *Arsenali e città nell'Occidente europeo*, Rome, 1987.
- SCHOFIELD J., Scavi nella city di Londra: la città romana, sassone e medievale, in: FRANCOVICH R. & PARENTI R. (ed.), *Archeologia e restauro dei monumenti*, Florence, 1988, 195-202.
- CABONA D., GENOVA. Porto, in: MELLI P. (ed.), *Archeologia in Liguria III.2. Scavi e scoperte 1982-86*, Gênes, 1990, 129-132.
- GARDINI A., Genova. Darsena, in: MELLI P. (ed.), *Archeologia in Liguria III.2. Scavi e scoperte 1982-86*, Gênes, 1990, 360-365.
- GOOD G.L., JONES R.H. & PONSFORD M.W. (ed.), *Waterfront Archaeology. Proceedings of the Third International Conference on Waterfront Archaeology Held at Bristol (September 1988)*, Londres, 1991.
- WATKINS D.R., *The Foundry: Excavation on Poole Waterfront 1986-87*, Dorchester, 1991.
- BOATO A. & MANNONI T., Materiali e tecniche nella Genova portuale: i calcestruzzi alla pozzolana dall'età moderna alla rivoluzione industriale, in: *Calcestruzzi antichi e moderni: storia, cultura e tecnologia. Actes du Colloque (Bressanone juillet 1993)*, Padova, 1993, 11-20.
- Il porto, in: MELLI P. (ed.), *La città ritrovata. Archeologia urbana a Genova 1984-1994*, Gênes, 1996, 57-165.
- QUIROS CASTILLO J.A., La lettura stratigrafica dell'arsenale repubblicano di Pisa, in: *Dal sito archeologico all'archeologia del costruito. Conoscenza progetto e conservazione. Actes du Colloque (Bressanone juillet 1996)*, Padova, 1996, 133-143.
- VARALDO GROTTIN F. (ed.), *Archeologia del commercio. I porti antichi*, Gênes, 1996.
- Les moyens de transport terrestre*
- CAGIANO DE AZEVEDO M., *I trasporti e il traffico*, Rome, 1938.
- Medieval Catalogue London Museum*, Londres, 1940.
- PIPPONIER F., Les objets fabriqués, in: PESEZ J. M. (ed.), *Brucato. Histoire et archéologie d'un habitat médiéval en Sicile*, Rome, 1984, 497-614.
- VIGNERON P., *Il cavallo nell'antichità. Un fedele compagno in guerra, a caccia, nelle corse, sul lavoro*, Milan, 1987 (trad. de l'éd., *Le cheval dans l'antiquité greco-romaine*, Nancy).
- CAGNANA A., NIELSEN A. & FALSINI S., Il trasporto a soma nel Medioevo: osservazioni sul traffico terrestre fra Genovesato e Basso Piemonte, *Rivista di Storia, Arte, Archeologia per le provincie di Alessandria e Asti* CII, 1993, 77-89.
- Les moyens de transport flottants*
- BASS G.F., *Navi e civiltà*, Milan, 1974 (trad. de l'éd. London, 1972).
- BASS G.F., VAN DOORNINCK F.H., STEFFY J.R. et alii, *Yassi Ada. A Seventy-Century Byzantine Shipwreck*, Texas, 1982.
- PURPURA G., Un relitto di età normanna a Marsala, *Archeologia Subacquea* 2, suppl. du n. 29 *Bollettino d'Arte*, 1985, 129-136.
- MOLNO A., SOCAL A., TURCHETTO E. & Zanetti P., Il relitto del vetro. Relazione preliminare, *Archeologia Subacquea* 3, suppl. du n. 37-38 *Bollettino d'Arte*, 1986, 174-194.
- GUÉROUT M., RIETH E. & GASSEND J-M., Le navire génois de Villefranche. Un naufrage de 1516?, *Archaeonautica* 9, Paris, 1989.
- JONCHERAY J.-P., L'épave dite "des ardoises" au cap lardier. Un caboteur ligure de la fin du XVI siècle, *Cahiers d'archéologie subaquatique* X, 1991, 5-54.
- MARTIN BUENO M., *La nave de Cavoli y la arqueología subacuática en Cerdeña*, Saragossa, 1993.
- MCGRAIL S., *Medieval Boat and Ship Timbers from Dublin*, Medieval Dublin Excavation 1962-81, Series b, vol. 3, Dublin, 1993.
- CHAPELOT J. & REITHE E., *Navigation et milieu fluvial au XIe siècle: l'épave d'Orlac (Charentes-Maritimes)*, Document d'archéologie française 48, Paris, 1995.

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Some Considerations Regarding Byzantine Influences in the East of the Carpathians in the 10th-13th Centuries

The investigation of economic, political and cultural relations between different regions of Eastern Europe (including those in the Carpathian-Dniester area) and the Byzantine Empire during the Middle Ages constitutes one of the most pressing problems of historical research.

In spite of the repeated forays of some nomad populations from the East, who in the 10th-13th centuries destabilized for certain periods the natural development of socio-economical and political life in the region which is the forest-steppe zone of the East-Carpathian area, the archaeological investigations confirm the existence of a more or of less dense network of settlements and communities, the main occupations of which were agriculture and stock breeding.

The archaeological investigations over the past five decades allow us to determine the economical level of this population and its relations with the neighbouring populations and regions. Ethnological and sociological studies also made it possible to reconstruct the socio-political forms of the organization of this population.

By the end of the first millennium, the Romanic population in the regions which we have been investigating, was organized in rural communities. It formed a political nucleus, which looked like a union of communities, with some of the general characteristics known among those of the old Germans and Slavs (Iorga 1929, 2; Zaharia 1981, 543-553; Spinei 1994, 128-131). And it reached the level of some pre-state and state formations in the first centuries of the second millennium.

Although the debate has been opened, the chosen theme for study is far from exhausted. At the same time, the archaeological investigations relating to the East-Carpathian population offer new and various documentation concerning the contacts with and influence of the Byzantine Empire, and of different economic centres and states in Central and Western Europe.

The chronological limits of this study range from the period at the beginning of the 10th century, when

the penetration of nomads into this territory was intensified, to the 13th century when these regions were devastated by the Mongols. These events directly influenced the fate of the peoples of Europe as well as the economic, demographic, cultural and political situation of the affected regions.

After the Hun invasions of 375-376, the active and stable economic and cultural interrelations between the population, inhabiting the region to the North and North-west of the Black Sea on the one hand, and the Roman Empire on the other, were less intensive. The relations with economical centres in Asia Minor and Western Europe were temporarily interrupted.

In spite of the unstable political situation, Europe developed not in isolation, but rather within the context of more or less active contacts between medieval peoples and states. The influence of economic, political and cultural international relations were determined both by the economic and socio-political level of some of the separate regions from Eastern Europe and by the politico-economic situation in major centres in Western and Central Europe, particularly by those in the Byzantine Empire. These circumstances make it impossible to investigate the economic relations and cultural confrontation without an understanding of the socio-political situation in the above-mentioned regions.

The period of relative political calm in the 8th-9th centuries, when the region was partially protected from attack by some migrating groups, had favourable consequences for the economy of the region. The recent investigations make it possible to get an idea of the important demographical changes which affected the local communities of this period. In the Carpathian-Dniester region, nearly one thousand archaeological sites of the 8th-10th century are known.

The trade routes which passed through the Eastern-Carpathian area, following the major rivers, were very important for the growth of the economic relations between the communities. The trade routes offered to the natives the possibility to establish contacts with different regions in Europe with a view to

market their surplus of products and to import things they needed.

The restoration of the border of the Byzantine Empire along Lower Danube at the end of the 10th century was the reason why the contacts were intensified between the Balkan Peninsula, Central and Western Europe and the territories located to the East of the Carpathians.

The intensification of economic life recorded in the regions to East Carpathians during the 8th-9th centuries manifested itself through economic change materialized through the appearance of highly efficient technologies. This intensification influenced the relations with the Byzantine Empire and its impact was beneficial for the development of economic relations.

In the first millennium and in the first centuries of the second millennium and more particularly because of their geographical position, the East Carpathian territories constituted a gateway and path of penetration for many migrations coming from the East. These migrants were attracted by the prosperity of the Byzantine Empire.

The territories situated north of the Lower Danube attracted the Greeks Emperors because of two essential reasons: first as territories which could serve as a buffer zone against penetration by nomads, and secondly, as territories with certain economic resources useful to the Empire.

In turn, the Romanic communities north of the Lower Danube were striving to maintain the economic relations with the Byzantine Empire, whence better quality goods or goods which were not produced locally, penetrated this territory (Fig. 1).

In this respect, archaeological investigations provide us with a number of different solid testimonies related to the 10th-13th centuries. Ceramic amphorae and other forms of thin-walled pottery turned on a quick wheel, as well as varnished ceramics occur in large numbers and are found as frequently as in the previous period. In Moldova, ceramics were imported from Byzantine centres on the Danube as well as from centres situated on the northern Black Sea coast. Fragments or complete vessels have been discovered in Hansca, Molesti, Lucaseuca, Poharniceni-Petruha, Echimauti, Branesti, Durlesti-Valea Babei, Cigârleni and elsewhere (Fig. 3, 16-17).

An example illustrates this. At Hansca, the most completely investigated settlement dating from the first century of the second millennium and located in the centre of Moldova, almost every archaeological complex yielded Byzantine imports. According to some calculations, it could be established that fragments of Byzantine amphorae were present in 70 % of the dwellings and their premises. As compared to

local ceramics, their volume in each complex was not that large, making up only 0.2-3.4 % of the total, but their omnipresence is very convincing (Postiké 1988, 15; 1994, 104).

Among the imported products, we can also mention the glass vessels found in the necropoles and settlements at Branesti, Dancenii and Hansca, situated in the central part of Moldova, as well as in the cultural strata at Rudi and Mereseuca in the northern part of the country (Tentiuc 1996, 132). There were also glass beads and bracelets which penetrated into the region we are studying, coming in from the centres along the Lower Danube or from the Byzantine cities and maybe from some of the Byzantine centres in Crimea. These objects were discovered mainly in the graves in the necropoles at Hansca and Branesti, but they also occur in the settlements.

Coins are particularly representative and useful for investigating the economic relations between the Romanic population and the Byzantine Empire (Fig. 2, 1-6). Chronologically bounded by Arabian coins of the early 10th century discovered at Alcedar and Echimauti, and by the western European ones of the early 13th century discovered at Hotin, the Byzantine coins had an older tradition and a longer and intensive circulation in areas populated by Romanic communities to the East of the Carpathians. The frequent finds of Byzantine coins in the East-Carpathian area, as well as all the other categories of imported objects – as mentioned before – depended on both the economic and political situation, and the internal socio-economic and political developments of the Byzantine Empire.

Thus, for example, the archaeological finds from settlements of the 8th-9th centuries suggest this region to have been relatively prosperous, although Byzantine coins are present only sporadically and in insignificant quantities. North of the Danube, an increasing circulation of coins is observed only in the early 10th century together with the re-establishment of Byzantine Empire northern border along the Danube, during the reign of Ioan Tzimiskes the First and Vasile the Second. For the 10th century, the coins most frequently found are bronze ones and they mostly are isolated finds; this suggests the existence of some operations of exchange using small Byzantine coins with little intrinsic value.

At the end of the 10th and during the 11th century, the coins used most often are the so-called anonymous *folles* minted at Constantinople. The lack of precision characteristic for the chronology of these coins makes it difficult to try and carry out a comparative analysis of the circulation of the coins for each of the *folles*' minters. From now on we will keep to the well-known coin classifications.

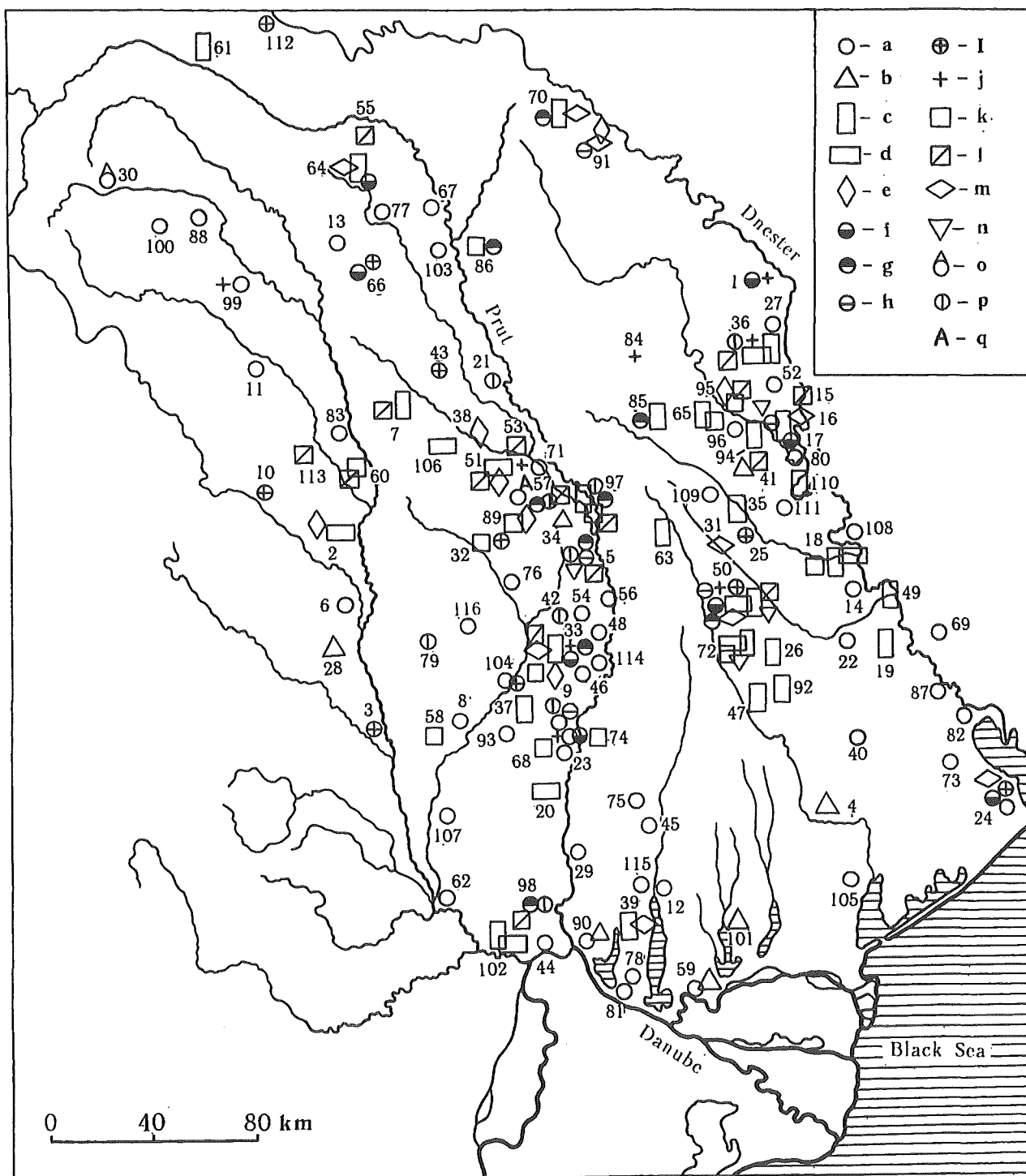


Fig. 1. - The Byzantine imports in the East-Carpathian area in the 10th-13th centuries:

a: isolated coins; b: coins from hoards coins; c: amphorae; d: pottery; e: buckles; f: glass bracelets; d: metal bracelets; h: beads; i: pectoral double crosses (relics); j: small crosses; k: plates; l: earrings; m: glass vessels; n: buttons; o: censer; p: rings; q: ampulia.

1: Alcedar; 2: Aldesti; 3: Adjutul Vechi; 4: Arciz; 5: Arsura; 6: Bacau; 7: Baiceni; 8: Birlad; 9: Birlalesti; 10: Bitca Doamnei; 11: Bogdanesti; 12: Bolgrad; 13: Botosani; 14: Bender (=Tighina); 15: Branesti; 16: Branesti X; 17: Branesti XIII; 18: Calfa; 19: Caplani; 20: Cavadinesti; 21: Calarasi; 22: Causeni; 23: Cîrja; 24: Cetatea Alba (=Belgorod-Dnestrovskij); 25: Chisinau; 26: Cigîrleni; 27: Cinisauti; 28: Cleja; 29: Colibasi; 30: Cosna-Floreni; 31: Danceni; 32: Danesti; 33: Dodesti; 34: Dolhesti; 35: Durlesti-Valea Babei; 36: Echimauti; 37: Epureni; 38: Erbiceni; 39: Etulia; 40: Faraonovka; 41: Fauresti; 42: Fedesti; 43: Focuri; 44: Galati; 45: Gavanoasa; 46: Giurcani; 47: Gradiste; 48: Grumezoaia; 49: Gura Bicului; 50: Hansca; 51: Hlincea; 52: Holercani; 53: Holboca; 54: Horga; 55: Horodistea; 56: Husi; 57: Iasi; 58: Ivesti; 59: Izmail; 60: Izvoare-Bahna; 61: Lencauti-Cernauti; 62: Liesti; 63: Loganesti; 64: Lozna; 65: Lucaseuca; 66: Lunca-"Biznoasa"; 67: Manoleasa; 68: Manastirea; 69: Merenesti; 70: Mereseuca; 71: Miroslava; 72: Molesti; 73: Mologa; 74: Murgeni; 75: Musaitu; 76: Negresti; 77: Nicolae Balcescu; 78: Novosel'skoe; 79: Oncesti; 80: Orheiul Vechi (=Trebujeni); 81: Orlovka (=Kartal); 82: Palanca; 83: Pascani; 84: Pepeni; 85: Poharniceni-Petruha; 86: Proscureni; 87: Purcari; 88: Radauti; 89: Raducaneni; 90: Reni; 91: Rudi; 92: Sagaidac; 93: Sarateni; 94: Scoc; 95: Seliste; 96: Sloboda-Hodorogea; 97: Spinoasa; 98: Stoicani; 99: Suceava; 100: Sucevita; 101: Suvorovo; 102: Sendreni; 103: Stefanesti; 104: Suletea; 105: Tatarbunar; 106: Tirgu-Frumos; 107: Tecuci; 108: Teia; 109: Trusenii; 110: Ustia; 111: Vadul lui Voda; 112: Vasileu; 113: Valeni; 114: Vetrisoaia; 115: Vinogradovka; 116: Voinesti.

Following the typology proposed by Margaret Thomson the following types of *folles* were identified: coins of the A2 type, discovered at Bacau, Bogdanesti, Giurcani, Grumezoaia, Negresti, Nicolae Balcescu, Panciu, Pascani, Moldova (?) and two pieces from the Arciz deposit; coins of the B type discovered at Faraonovka, Izmail, Miroslava, Orlovka, Palanca, Sarateni, Sendreni, Reni, Moldova (?), including one coin kept at the History Museum and coming from Iasi; coins of the C type found at Bender, Galati, Orlovka (three pieces), Tatarbunar, Tecuci (two pieces) and Stefanesti (one piece); coins of the D type are known from Bolgrad (two coins), Cîrja, Galati, Horga, Merenesti, Mologa, Novosel'skoe, Trebujeni, Orlovka, Suletea, and Voinesti; one single coin of the E type was found at Orlovka. Two coins of the F type were discovered in Bolgrad and Ismail and only coin of the G type was found in Pascani deposit of the 10th-13th centuries (Spinei 1984, 77-83). Except for the anonymous coins mentioned above, many other bronze, silver or gold coins circulated in the Carpathian-Dniester territory (Fig. 3, 1-6).

The limited space available does not allow us to present a more detailed analysis of these categories of coins. We will limit ourselves to a general presentation, mentioning that so far 108 isolated coins were discovered; 86 of these, *i.e.* 79.63 %, are bronze and copper pieces. Less than 10 % (9.26 %) are silver coins and gold coins represent more than 10 % (11.11 %).

The statistical calculations show us that the number of coins evidently increased, particularly during the 11th century. For the 10th century – and particularly the first half of the 10th century – we are confronted with a very characteristic and frequent burying of deposits. A number of these deposits are dated from the end of the 10th century to the beginning of the 11th century: they are all related to the nomads penetrating this territory and warring with the Byzantine Empire.

As to the 11th century, there is practically no evidence for the burying of hoards. The large number of isolated 11th-century coins discovered is followed by a regression of their circulation. This becomes particularly characteristic towards the end of the century, when the majority of the coins were buried.

The decreasing number of Byzantine imports at the end of the 11th and in the early 12th century in the Carpathian-Dniester area is related to the massive penetration of this territory by the Cumanians (Diaconu 1978, 35-61; Dobroljubskij 1986, 54-61).

But in the course of the Cumanian period, the politico-military forces from Constantinople along the Danube gradually developed new dimensions, became more offensive, and re-established the borders and the equilibrium in region of the river estuary

(Diaconu 1976, 295). The Byzantine presence at the Istros river was dictated by political reasons as well as by economic needs. Being involved in a fight with the Cumanians, Constantinople counted on its friendship with Russia and on Russian support.

The good relations with the Russian principalities started in the time of Alexios the First and were continued until the reign of Andronic the First. At the beginning of the 12th century, the Russian princes Vladimir the Monomah and Svjatopolk organized victorious campaigns against the Cumanians, driving them back into the steppes.

The conflict of 1116, which is mentioned only by the Russian sources, was stopped by the engagement of Vladimir the Monomah granddaughter Dobrodea, Mstislav's daughter, to the son of King Alexios I. Vladimir the Monomah himself was the son of a Byzantine princess named Maria, the daughter of Constantine the IX the Monomah. Vladimir the Monomah's daughter Maritsa, in turn, was married to Leon, the son of Emperor Roman Diogene IV. In 1162, the Emperor Manuil I the Comnenes (1143-1180) gave the lands along Danube to the nephews of Vladimir the Monomah. These dynastic relations brought together the Russian and Byzantine Empires and removed the Cumanian danger.

It is worth mentioning that the Russian troops sent by Vladimir the Monomah to the Danube, led by his son Vjaceslav and by Toma Ratiborovic only reached the Dniester river, from where they had to return. The Russian chronicle '*The Stories of Former Years*' does not indicate the reasons why they did not reach the Danube. V. Tatischev believes that when he found out about the companies, Alexios sent a delegation to Kiev which was to intercept Vladimir's claims. This gesture was not in contradiction with the tradition of Byzantine diplomacy considering moreover that the Byzantine Empire wanted friendly relations with Russia. When Ioan became Emperor, these relations improved owing to his marriage to Mstislav's daughter (Tolocko 1987, 105). The fact that the Russian army was within easy reach of the Dniester (according to other sources: Dristra = Dorostol = Silistra) is very important. We believe that some authors are right when they say that in this period the territory to the North and South of the Danube mouth was held more or less firmly in Byzantine Empire hands (Diaconu 1976, 295).

Telling in this respect is the example of Ivan Rostislavic called the Berladnik who went 'to the Cumanians, and from there he went with them to the cities on the Danube'. It is clear that in order to reach the Danubian cities – whether they were situated on the right or the left bank of the river – Ivan had first to go to the Cumanians. The fact that the Cumanians

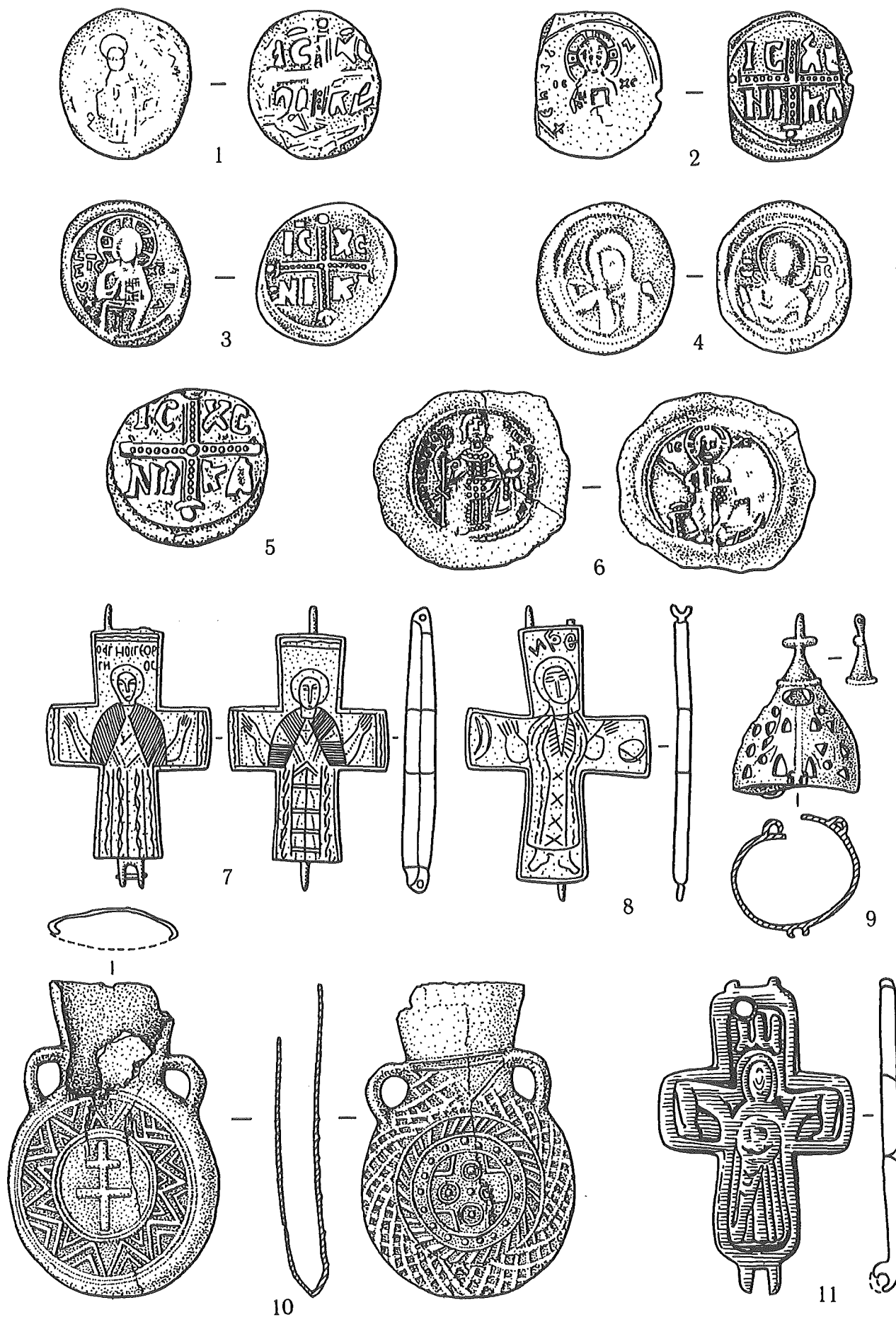


Fig. 2. - The Byzantine coins (1-6), pectoral double crosses (relics) (7-8, 11), censer (9) and ampulia (10). 2: from Stefanesti; 3-4: Pascani; 5: Tecuci; 7: Abjudul Vechi; 8: Banesti; 9: Cosna; 10: Iasi; 11: Hansca.

in the second half of the 12th century were placed near Dnieper can be deduced from Ipatievsk's chronicle, which states that in 'this winter, Svjatoslav with Rjurik have thought to send the black caps to the troops which were situated along the Dnieper. And they have conquered those troops and come back with honour and glory. At that moment the Cumans were on the Danube and not at home in their camps' (Ipat'evskaja letopis' 1959, 444).

Of great importance are also the worshipping objects of Byzantine type which have been discovered in this region. First of all, these include the pectoral double-crosses (relics) (Fig. 2: 7-8,11; 3: 15) and small crosses (Fig. 3: 1-2,5,11) which arrived in this territory mostly during the 11th and 12th centuries. Simultaneously, these objects reflect the religious prestige of Constantinople. It seems that after the 10th century, under Byzantine influence, the small crosses also started to be produced by the native population.

Among the Byzantine worshipping objects, we can mention the double-crosses discovered at Adjudul Vechi, Bâta-Doamnei, Cetatea Alba, Danesti, Focuri, Hansca, Lunca-"Bâznoasa", Moldova (?), Suletea, Vasiliiev, and so on. The surface of these pieces is engraved or incruited with niello ornament depicting different religions scenes (Spinei 1992, 155-160).

The buckles for books (Fig. 3: 9), discovered in some settlements of the central part of Moldova (I.H 4i Oncu 1974, 140; Teodor 1984, 108), are a testimony of the Byzantine cultural and spiritual influence. These are made of bronze and the books belong among the worshipping objects which penetrated the North-Danubian and East-Carpathian areas together with Christian missionaries. According to historians, these books did not only circulate, but were also copied in Greek and Slavic in the North-Pontic zone during the first centuries of the second millennium (Vornicescu 1994, 98).

The investigations made it possible to discover rupestral cloisters and churches. The signs, cut into the walls of these rooms dug into the banks of the Raut and Dniester rivers, near Butuceni, Tipova, Saharna, Jabca, Bechir-Sorooca, etc., indicate an early origin for some of the Christian communities in the central part of Moldova. The study of the materials associated with the earliest religious edifices indicate that the cloisters on the Dniester and Prut figure among Christian communities of the 8th-10th and 11th-13th centuries. Some were discovered in the circumponic regions: Krym, Caucasus, Dobrogea and the North-Bucovina.

The archaeological investigations allowed us to reconstruct the general features of the intensive relations between the Romanic population of the

East-Carpathian region and the Byzantine Empire. We may assume that the exchanges were also in kind. The natives from the Carpato-Dniester area offered to Byzantine merchants the products the latter needed, among them cereals, cheese, furs, leather, salt, honey and so on.

The objects discovered during the archaeological investigations show us that in spite of the fact that Byzantine law did not allow for the export of wine, oil and weapons, these products found a large market in the territories to the East of the Carpathians.

Apart from the economic and spiritual influences, the lasting contacts with the Byzantine Empire also had an impact on the Romanian language and on the local vocabulary, leading to the adoption of new words. The specialists point out words which reflect general economic activities such as to work, chip, surplus and others and also identify words which define products which were not typical for the East-Carpathian area, like lemon, pepper, silk, pearl, and so on. Also of Byzantine influence are words like dish, pan, cup, litre, wedding coronets and other.

Finally, we can mention that from the analysis of the Byzantine influence reflected in the material and spiritual culture of this population, we can deduce that the involvement of the Carpathian-Dniester area in the economical and political sphere of interest of the Byzantine Empire, the Catholic Occident, and the Russian states, led to the assimilation by the local communities of a large number of cultural elements and to the adaptation thereof to realities conforming to their psychic state and perceptions, which corresponded to their socio-economical and political level of development.

Particularly where economy, culture and spiritual life were concerned, the international and interstate relations influenced the autochthonous people throughout the Middle Ages. Even if the political situation was not always the most favourable one – being as we have seen earlier interrupted by the military actions on the part of the nomads and their invasions as well as those of the neighbouring states – the local Romanic population of the East-Carpathians nevertheless adopted incontestable values, which forever took root in their spiritual inheritance.

References

- CONSTANTINESCU R. 1973: Note privind istoria bisericii române în secolele XIII-XV, *Studii si materiale de istorie medie* VI, Bucuresti.
- DIACONU P. 1976: Despre situatia politica la Dunarea de Jos în secolul al XII-lea, *Studii si cercetari de istorie veche si archeologie* 27, 3, Bucuresti.

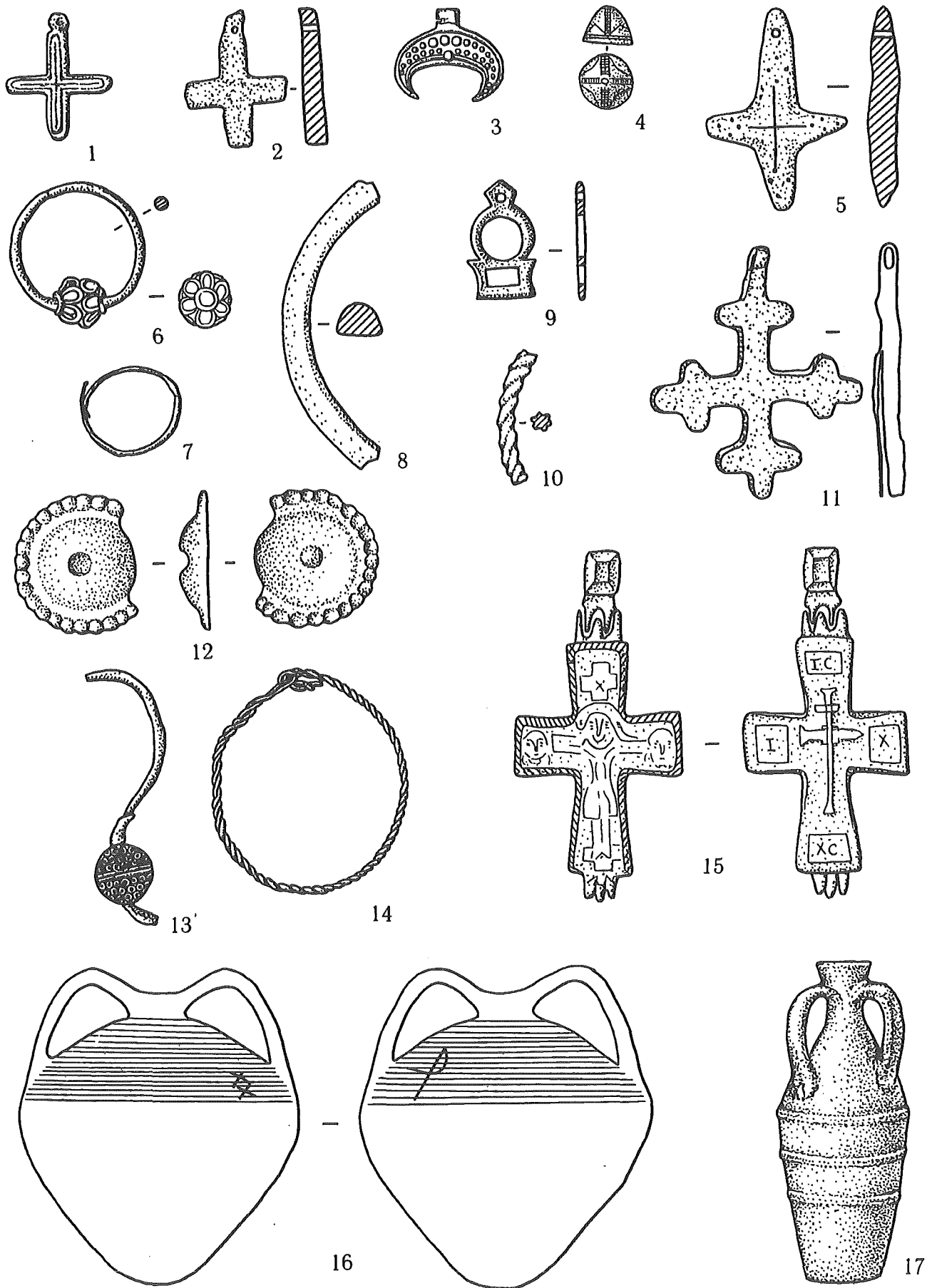


Fig. 3. - Byzantine import in the 10th-13th centuries from the Carpatian-Dniestr area.

- DIACONU P. 1978: *Les Coumans au Bas-Empire aux Xie et XIIIe siècles*, Bucuresti.
- DOBROLJUBSKIJ A.O. 1986: *Kocevnikii severo-zapadnogo pricernomorija v epohu srednevekov'ja*, Kiev.
- HYNJU I. 1974: Pamjatniki balkano-dunajskoj kul'tury (X-XIV vv.), in: *Drevnjaja kul'tura Moldavii*, Kisinev.
- IORGA N. 1929: *Evolution de la question rurale en Roumanie jusqu'à la réforme agraire*, Bucuresti.
- IPAT'EVSKAJA Letopis' 1959: in *Polnoe sobranie russkich letopisej*, Moskva-Leningrad.
- POSTIKÉ G. 1988: *Glinjanaja posuda tzentralinoj Moldavii konca I – nacala II tysjaceletijab kak istoriceskij istocnik*, autoreferat disertatcii, Moskva.
- POSTICA Gh. 1994: Româniii din codrii Moldovei in evul mediu timpuriu, *Studiu arheologic pe baza ceramicii din asezarea Hansca*, Chisinau.
- SPINEI V. 1992: Monede bizantine in spatiul est-carpatic, *Studii si cercetari de numismatica VIII*, Bucuresti.
- SPINEI V. 1992: Curculatia unor piese de cult in regiunile românesti nord-dunarene în secolele X-XVII, *Arheologia Moldovei XV*, Bucuresti-Iasii.
- SPINEI V. 1994: *Moldova in secolele XI-XIV*, Chisinau.
- TENTIUC I. 1996: *Populatia din Moldova Centrala in secolele XI-XIII*, Iasi.
- TEODOR D.Gh. 1984: *Continuitatea populatiei autohtone de la est de Carpati in secolele VI-XI e.n. Asezarile din secolele VI-XI e.n. de la Dodesti-Vaslui*, Iasi.
- TOLOCKO P.P. 1987: *Drevnjaja Rus'. Ocerki social'no-politiceskoj istorii*, Kiev.
- VORNICESCU N. 1984: *Primele scrieri patristice în literatura noastra. Secolele XI-XVI*, Craiova.
- ZAHARIA E. 1981: Über die frühmittelalterlichen Dorfgemeinschaften. Die sozial-ökonomische und militär-politische Rolle, *Revue des études sud-est européennes XIX.3*, Bucuresti.

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Trading Equipment in Old Russia (9th-11th century)

Trade was very important for the social and economic development of the territories that were included in the borders of Old Russia up to the middle of the 11th cent. The vast area from the Carpathian mountains in the west to the Upper Volga region in the east and from the region of Lake Ladoga in the north to the Middle Dnepr region in the south was inhabited by different Baltic, Finno-Ugrian and Slavonic tribes. To a considerable degree, their economy depended on the local conditions of the forest and forest-steppe zones. The northwestern and the northeastern parts of the Old Russian territory were covered by forests, which had rich reserves of fur-bearing animals. Consequently fur trade was very important for the local economy.

The appearance of the cubic silver coins on this territory started in the 70s to 80s of the 8th century. This is evidence for the trade connections between the Arabic East that was interested in getting precious fur and Eastern Europe, but in the Ural region the first traces of these contacts appeared earlier - in the 6th century¹. The quantity of hoards with silver Arabic coins grew during the 9th century. These hoards are found to the southwest from the Ural region, in the region of the rivers Oka and Sejm. In addition, 9th-century hoards were found in the western and the northwestern parts of Russia. In that period, these territories were settled or had been settled Slavonic tribes. In the 10th century, the area of the distribution of arabic coins expanded, including notably the Middle Dnepr region.

According to the specialists, the spread of arabic coins in the territories of Eastern Europe was first and foremost related to the need for the local population to get silver coins and raw silver. On their side, the Arabic merchants did their best to get the products of the hunting and gathering operations². Traditionally, these products (such as furs, bees wax or honey) are

considered to be the main types of exported goods from Eastern Europe while textiles and spices are considered to be the main import goods. But it is difficult to detect and document these two kinds of products through archaeology, and sometimes they left no trace whatsoever. Apart from the imported and exported goods themselves, however, the metal trading equipment (such as, particularly, scales and weights) are archaeological evidence for these commercial relations.

Scales and weights were found in 45 sites in the Old Russian territory. These sites include settlements, graves and hoards. Sometimes, both types of objects are found together as a set.

The distribution map of these finds shows clearly that most of these sites are situated in the forest zones and near or along the river routes used for trading.

The beginning of the growing number of scales and weights is dated to the middle of the 10th century, when the frequency of chopped silver coins in local coin circulation increased sharply³. But this kind of trade equipment also appeared in Eastern Europe much earlier – in the 9th century⁴.

The earliest finds of weights come from the northwestern part of Old Russia. Two weights from Old Ladoga are dated to the second half of the 8th to the second half of the 9th century and one weight from Rurykovo Gorodishche near Novgorod is dated to the second half of the 9th century. Some finds from the region of Lake Ladoga, of the Upper Volga and of the Upper Dnepr are just a little younger. There are 11 weights from the barrows of the end of the 9th - second quarter of the 10th century. These early finds are not numerous but their shapes and weights are different: they are round with flattened poles, octahedral or cylindrical.

The larger part of all the finds are dated to the 10th century. The round weights with flattened poles are

¹ JANIN V.L., *Denezno-Vesovije sistemy russkogo srednevekovja (domongol'skij period)*, 1956, 85.

² JANIN V.L., *op.cit.*, 90.

³ JANIN V.L., *op.cit.*, 174; FOMIN A.V., *Obrasheniye oblom-*

kov kuficheskikh monet v Vostечноj Evrope v 10 - nachale 11 vv., *Numizmatika i epigraphika* 14, 1984, 134.

⁴ PUSHKINA T.A., *Torgovij inventar' iz kurgano v Smolenskogo Podneprov'ja*, in: *Smolensk i Gnezdovo* 1991, 232-233.

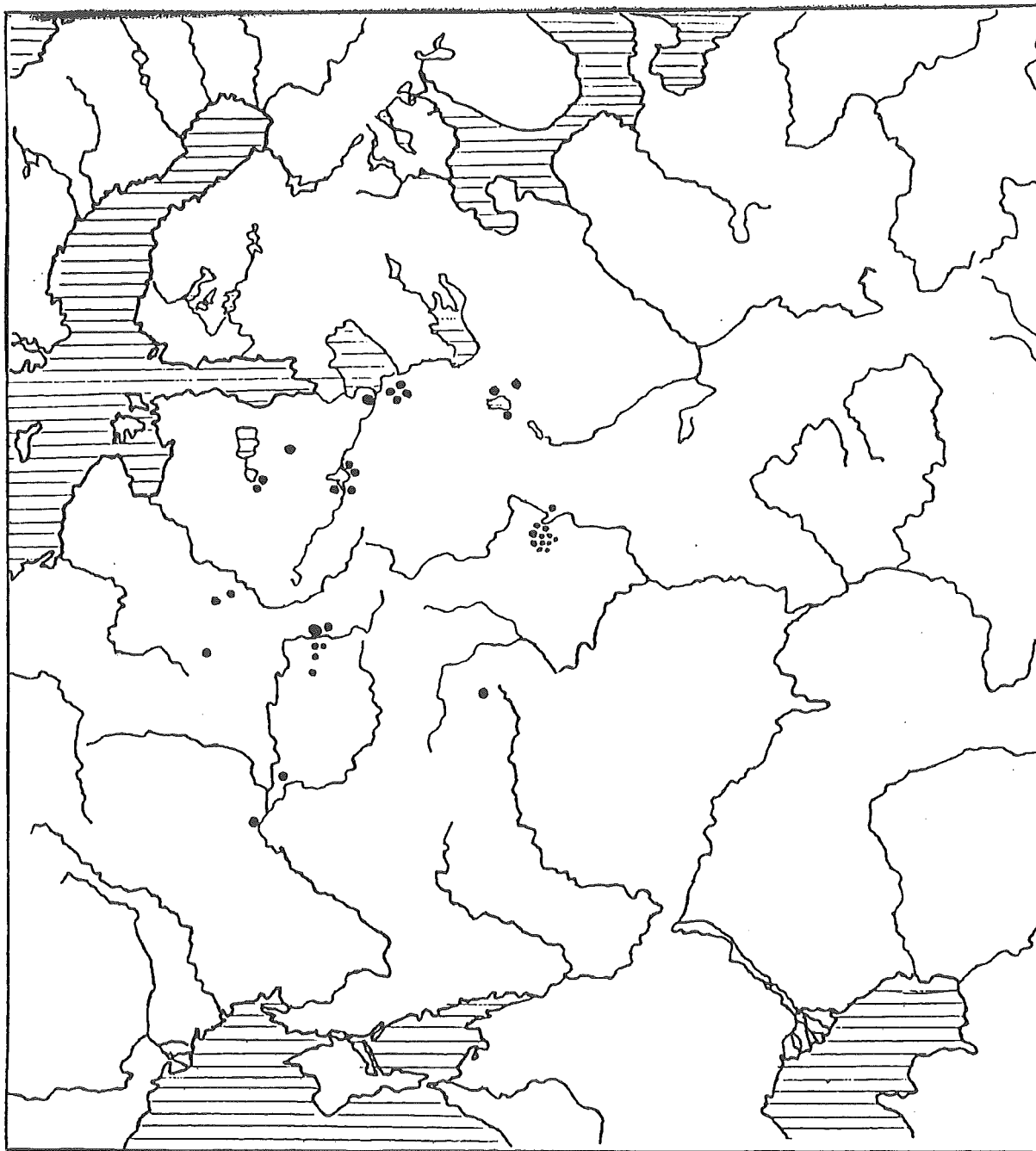


Fig. 1. - Finds of the trade equipment in Old Russia.

predominant. Apart from the indication of their weight, their bronze surface is decorated with a geometrical ornament. The weight of the iron ones varies between 2.47 and 50.5 grams; some round lead weights vary between 3.9 and 98.11 grams.

As regards the quantity of finds, the octahedral weights take the second place. Generally, they are bronze or iron weights and sometimes their surfaces are also decorated with simple geometric ornaments. Their weight varies from 0.65 to 8.53 grams.

Finds of weights with various other shapes (cylindrical, bi-pyramidal, conical, cubic, multi-faceted or figure-shaped) are rare and their weights vary widely. Usually, these are bronze or lead weights.

Most of the weights have been found in Old Ladoga (39 examples) and in Gnezdovo (about 110 examples in settlement contexts and in barrows). Their shapes and weight vary widely. The round and octahedral weights are well represented in many other Old Russian sites; the others are far less common and have analogies in Volga Bulgaria and in Northern Europe.

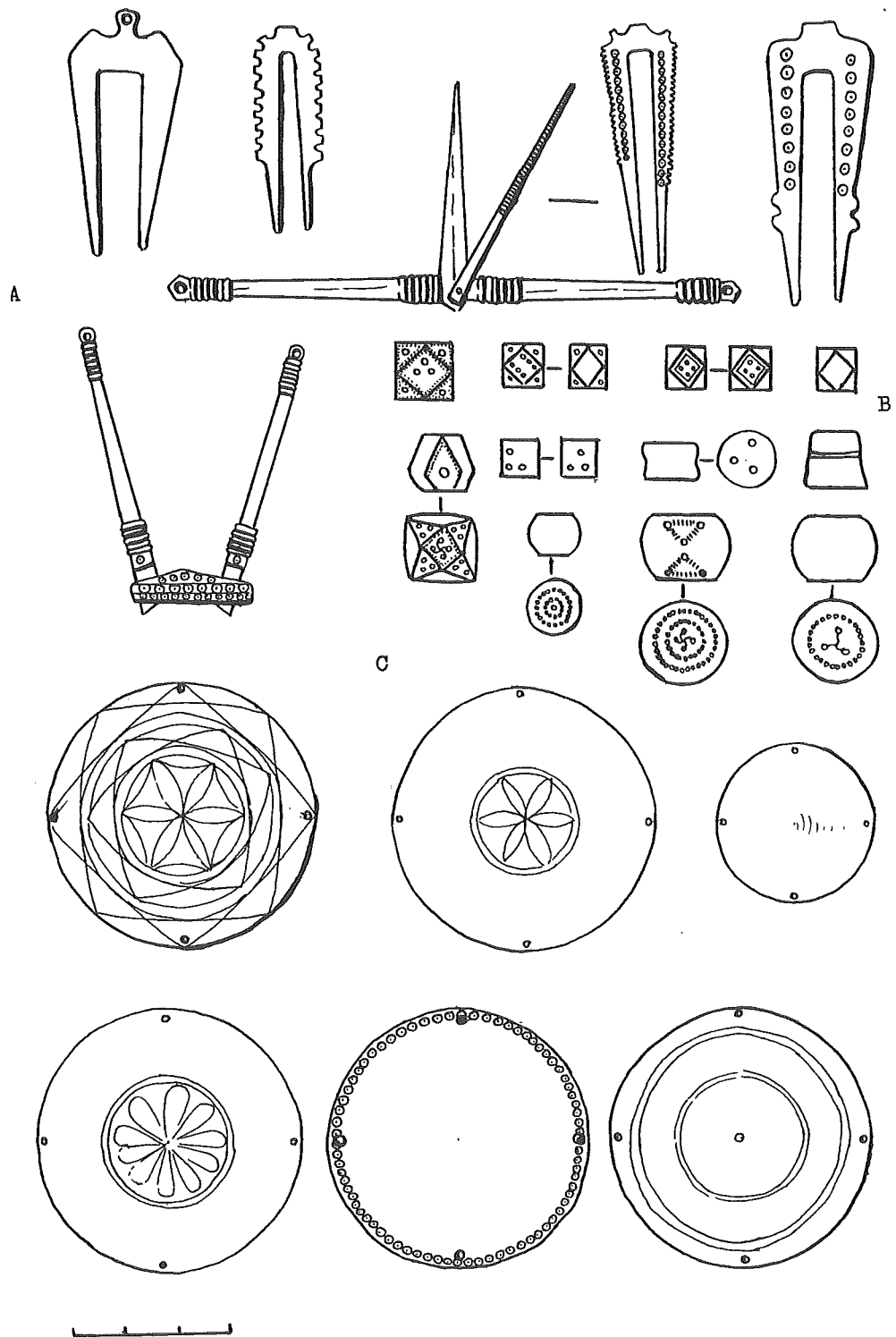
As a rule, only one weight occurs in a grave, but sometimes there are two. The find of more than two weights in a single grave is rare too and in this case the set consists of different round weights. The find of 5 round weights in the barrow in Ust' Rybezna (end of the 9th - beginning of the 10th century) and

Fig. 2. - Trade equipment from Old Russia of the IXth-XIth century.

A: Scales;

B: Weights;

C: Cups of scales.



12 round weights from a children's grave in Udray (11th c.) constitutes a good example of the later case.

As said earlier, weights were also part of a few hoards. The round weights were found in two coin hoards of the end of the 10th century in Novgorod and Podborovka and in the mixed ornament and coin

hoard of the middle of the 10th century in Gnezdovo⁵.

All scales discovered so far are beam balances. This type was widely distributed in Europe in Merovingian times⁶. Many fragments and no less than 20 complete sets of arms and cups were found in the

⁵ PUSHKINA T.A., Novij Gnezdovskij klad, in: *Drevnejshije gosudarstva Vostochnoj Evropy. 1994. Novoje v numizmatike*, 1996, 185-186.

⁶ WERNER J., *Waage und Geld in der Merowingerzeit*, München, 1954, 10.

graves and settlements of the 10th-11th centuries. The main part of the finds come from graves of the 10th century and a small part comes from settlements.

Most of the beam balances have folding arms. The length of the functional arm is 10 to 13 cm. Their cross-sections are roundish or rectangular and they have tapering terminals. The terminals are roundish, triangular or rectangular and there are 3 to 7 relief ribs on the base of the arm and in front of the hole on the terminal. Sometimes, the base of the arm is faceted and decorated with a circular ornament, but as a rule, beams have no ornamentation. The central part of the folding arm consists of a double bronze plate with trapezoid cross-section and it is decorated with circular ornament.

The balances are secured in a flat bronze fork which has the shape of a roundish or trapezoid arc. The edges of the arc are usually smooth, but sometimes they are irregularly shaped. In addition, the surface of the fork is decorated with a circular ornament.

The diameter of the round bronze cups amounts to about 3.5 to 6.5 cm, their depth to about 1.7 cm. Most cups have a circular ornament along their outer edge. Some cups from the 9th-century barrows at Gnezdovo, Vladimir and Berezivec are decorated on both sides with an engraved geometrical ornament. Usually the scales were kept in leather containers and in round wooden or bronze boxes, which are sometimes decorated with circular ornaments.

In terms of shape and size, balances are strongly standardized, but it seems that from the 10th to the late 11th century, they became more massive.

Particularly in the case of the finds from Old Russia, there are no important differences with the contemporary finds from other countries. But our collections harbour no scales with chains for holding cups or scales with multi-faceted knobs on the arms, whereas such finds are common in the Baltic countries as well as in Poland and Scandinavia.

The most interesting finds are those of beam balances with straight unfolding arms. Two examples of this type of balances were found in the Upper Dnepr region in Gnezdovo and in the Supruty hillfort in the region of the river Oka. The length of these bronze balances is 11 and 20 cm. Their beams were moulded together with straight arms. They are dated

in the 10th century. There are no analogies in Old Russia, but somewhat earlier, the same type of balance occurs in Norway.

The sizes of the balances show that they were used for weighing of coins or of small quantities of precious metals. The use of threads instead of chains to hold the cups probably points in the same direction.

The problem of the origin of the East European scales with folding arms remains unsolved. One may assume that this type of balance came from the East. There are some indirect indications in favour of this assumption. These include, for instance, the find of scales with the arabic inscription 'tax' or 'customs' in one of the warrior's graves of the 70s of the 10th century in the Upper Volga region as well as a second comparable find of scales with the arabic inscription 'God' from Latvia⁷.

The identification of the graves with trading equipment as graves of merchant-warriors or members of the upper social strata is a consequence of the recognition of the important role of trade in the social and economic development of early medieval society. The analysis of the finds from such important sites as Gnezdovo and Timerevo in the Upper Volga region shows us that about 26 % of all barrows with weapons yielded scales or weights as well. About 63 % of the finds of trading equipment come from burials with very inexpressive or single grave goods.

Probably, the fact that these graves belong to members of the upper social strata can be confirmed only by the combination of the trading equipment with a definite set of other objects; among the latter, weapons, expensive imports or various types of stock may probably be included. In this connection it is important to note that in all the larger 10th-century cemeteries studied (Gnezdovo, Timerevo, Shestovica) about 7 % of the graves had the trading equipment. This proportion is typical for all settlements, which were the centres of the prince's retinue. The collection and realization of tribute was concentrated at these sites and that is why these centres were oriented towards the external connections of the early feudal state rather than towards the internal ones. This proportion must doubtlessly provide information on the correlation between different segments of the population which took part in trading either from time to time or on a regular basis⁸.

⁷ BERGA T., Waagen zum Wagen von Münzsilber in Lettland, *Acta Universitatis Stockholmiensis. Studia Baltica Stockholmiensis*, 1992, 38.

⁸ PETRUKHIN V.Ja. & PUSHKINA T.A., K predistorii drevnerusskogo gorada, *Historija SSSR* 4, 1979, 100-112.

Ribe, a North Sea town and its Baltic relations A survey of the long lines of the town's late medieval trade

Introduction

The question of Ribe being a Hansa town was raised on the general meeting – the “Hansetag” of the Hanseatic League in 1407 by the Hanseatic “Contor” in Bruges. In the records of the negotiations, the “Rezess”, it appears that the same question was asked concerning the towns of Oslo in Norway and Lödöse in Sweden. And that it had to do with the use of the freedoms and privileges, which had been acquired by the Hanse merchants, and whether these should also be valid for the three towns in question. The answer in fact, was positive, although it appears that a division was made between the towns as such and their merchants.¹ It is stated that merchants enjoy their freedoms in these three towns. But only those merchants of the three towns in question, who belonged to the Hanse, were allowed to use the merchant freedoms and rights – those people who did not belong to the Hanse should not enjoy these rights. This answer is not very clear. This has to do with the fact that times and the idea of what was the Hanse had changed around 1400. Earlier, the merchant rights of the Hanse belonged to individual merchants who formed groups of traders. Now the towns as such became the Hanse-members and a certain town could lead on the Hanse rights to its burghers and residents.

According to the “Rezess” of 1407 neither Ribe nor Oslo or Lödöse were considered members of the Hanse in that sense. But it seems clear that these towns, maybe along with others, were looked upon as places of a certain interest for the Hanseatic merchants and the Hanseatic League. Taking up the subject of Ribe, this seems a fairly interesting background for a discussion of the reasons why their relationship was

debated by the Hansetag in 1407. By doing so I hope to point out some decisive factors behind the triangular interdependency between town topography, social topography and trade history, which forms a major interesting theme of medieval Ribe – this town being the prime example of medieval urban culture on the West Coast of Jutland.

At a conference in Ribe 1992 I demonstrated the ability of archaeological town finds as sources for describing a certain town.² Later on I have had the opportunity to strengthen these views and to discuss to what extent the archaeological finds of imported pottery in Ribe from the 12th to the 14th century may or may not be able to contribute to the general picture of Ribe's trading activities in the Middle Ages. By doing so I have found reasons to define the imports of foreign pottery as a kind of companions, souvenirs, or even fairings, which were brought along on the ships, which carried the real merchandise of that time.³ Generally speaking I do not consider medieval pottery as that fine end evident marker of trade routes crossing the North Sea which it was thought to be by Gerald Dunning in his initial studies of North Sea pottery and trade.⁴ This is illustrated by the almost totally missing finds of imported medieval pottery, which is characteristic for the town of Lübeck. Although this town was second to none in the Baltic, when trade and economic activity is concerned, it has until this very day not produced as much imported pottery from its numerous town excavations as has just one single, ordinary excavation in the centre of Ribe. It might be that West European lead-glazed jugs and early Rhenish stoneware did not mean very much to the wealthy Lübeck merchants, although they maintained intensive contacts with the west, simply be-

¹ “Item also he begert, to weten van den van Ludehusen, Rypen unde Anslø, aff man se in des copmans vreyheit vordedingen(n) sulle: in den steden heft de kopman vriehheit, dar umme, we van sodanen copluden in der hense sin, de mach des copmans vriehheit bruken; adder de gene, de nicht in der hense sin, de sullen des copmans recht nicht bruken”, *Recesse* V, 296.

I am indebted to professor, Dr. Klaus Friedland, Kiel, who kindly drew my attention to this, cf. K. Friedland 1958, 36 f.

² P.Kr. Madsen 1993 with references, cf. E. Roesdahl 1995.

³ P.Kr. Madsen 1994, 271, 276.

⁴ G.C. Dunning 1968.

cause they had enough table ware made of other prestigious materials. But still, one could ask, why the "Middle class merchants" then did not take up some cheaper way of demonstrating their social standards?

A part of the explanation to this is probably the difficulties in transporting pottery over land that is along the route between Hamburg and Lübeck, which acted as a main connection of the Baltic and the North Sea trade. On the other hand seaborne transportation around the Skaw, known from at least the middle of the 13th century (see below), and a possible exchange of goods on the yearly fairs of Skanør ought to have been a fairly good compensation for this. I believe that a good deal of the reason behind the almost total absence of Highly Medieval pottery imports in Lübeck lies within the definition of pottery as a carrier of luxury and specific social signals,⁵ which it seems not to have been able to carry on into Lübeck – contrary to its higher esteem in the North Sea trading towns.

The situation in Lübeck must also be seen as a result of the division of Late Medieval Northern Europe into two main trading zones, the one being the North Sea area, the other one the Baltic – and their interdependent relationship.⁶ Paul Enemark states it in his latest surveys of Danish Late Medieval trade⁷ – the export of grain from German towns on the Southern Baltic coast meant a considerable and consistent feature in the trade pattern of Late Medieval Northern Europe. This trade followed the east-west orientated so-called "long lines", as Enemark calls them,⁸ and it was as contributors to this main traffic along the long lines that Danish producers and traders of bullocks were able to make a living by exporting their animals out of Denmark.⁹

Concerning the earlier period, the 13th century, Kristian Erslev and Erik Arup saw the rise of German towns along the Baltic coast as the great chance for Danish farmers and towns, which in their view got a whole new market by exporting their grain to the new

German towns, where good prices were given.¹⁰ The inspiring thesis of Erik Arup may correspond to his ideas about the Danish position in the Baltic trade around 1200, i.e. the Danish supremacy of Lübeck, until the battle of Bornhöved in 1227, a period which according to Arup caused the uprising of a Danish citizenry.¹¹ He may also have been inspired by the fact that Danish export of agricultural products from various harbours is known to have been quite extensive during the Late Middle Ages, although this traffic probably did not take place during the earlier period in question. Arup's bold statements seem the less convincing as it must imply a surplus of Danish grain being so large that it could feed the growing Danish population of the High Middle Ages as well.¹²

Poul Enemark argued that the rise of towns around 1200 was caused by intensified trade between town and countryside or hinterland. This way of trading took place on the marketplace of the new towns and it was dominant until the breakthrough of the Late Medieval trading system with its long lines of communication.¹³ The two quite different views – as well as the medieval way and understanding of trade and bargaining¹⁴ – ought to be considered when discussing trade as the determining factor behind the founding of towns. These were probably only engaged in international trade to a very limited degree during their initial years. Most Danish towns probably arose as Enemark suggests that is as the result of local trade and exchange on their market, which was mainly used by the burghers and the people of the hinterland.

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Ribe – however, was an exception to this, so far that it seems almost always to have moved on along the "long lines". Not only because of its ancient position as main port of trade towards the North Sea,¹⁵ but also – and now we are at last moving back to the real theme of this paper – because it seems to have been

⁵ P.Kr. Madsen 1993, 25 ff.; P.Kr. Madsen 1994, 270 with references.

⁶ B. Poulsen 1988, 201 ff.

⁷ P. Enemark 1991 & 1994, 242 f.

⁸ P. Enemark 1991, 364 ff. especially about the shipping of grain. Another route, which combined sea and land traffic, seems to have been known already during the 13th century. It took the way from the Baltic via Haderslev on the East coast of Schleswig to Ribe, see O. Ventegodt 1982, 85. Also B. Poulsen 1988, 205 ff. points to the importance of land transportation across the Duchies of Schleswig and Holstein, not to mention the Hanseatic route between the towns of Lübeck and Hamburg. The importance of this route between the North Sea and the Baltic was also stressed by P.A. Meilink 1912, 237 f.

⁹ P. Enemark 1994, 247 f.

¹⁰ E. Arup 1926, 227 f.; *Ibid.* 277-281. Arup argues, that the growth of old and new Danish towns implied the increase of Danish farming.

¹¹ E. Arup 1926, 280 f., connects the growth of new Danish towns with the agricultural development.

¹² Concerning the population number and the growth of the Danish population in the High Middle Ages, see P. Enemark 1994, 241 f., N. Hybel 1994, 50 ff., and Sv. Aakjær in *KVJ* 1, 1, 209 ff. Late medieval export of livestock from Denmark to Lübeck and other Hanseatic towns, see P. Enemark 1991, 373 f.

¹³ P. Enemark 1991, 362, 366. P. Enemark 1994, 242.

¹⁴ Cf. P.Kr. Madsen 1993, 13ff.

¹⁵ S. Jensen 1991. P. Kr. Madsen 1992.

able not only to participate in North Sea trade, but also to profit from the trade between the Baltic and the North Sea region. In other words, it is my thesis that a part of the reason for asking the question in 1407 about Ribe and its Hanse relations, lies within this participation – and that we ought to see the history of the trade of Ribe not only as a part of the North Sea region but within that much wider system, which was briefly touched upon earlier. Although this present paper emerges from a research project, which has its roots in the West, wearing the title “Facing the North Sea”, one ought to say that writing local history or archaeology is fine, regional research is even better and an overregional view is simply necessary.

In order to exemplify this, a few important sources concerning the trade of Ribe have to be mentioned – although they are almost all of a prescriptive character. They have to be treated carefully, and due to their general character they certainly do not produce any reliable statistic figures for us to count.¹⁶ A special example is the Cadastre of King Valdemar from about 1231. It counts the royal income in Ribe from the duty on horses and on salt, 350 marks or more, respectively 40 marks of silver.¹⁷ These numbers may in fact only reflect less than half of the total royal duty income, which had to some extent been shared equally with the bishop of Ribe.¹⁸ Maybe the figures in the Cadastre were fixed on the basis of a qualified guess, or they may even represent a leasing rent more than the exact amount of merchandise passing through Ribe. Anyway – it has been estimated that the astonishing amount of some 8500 horses were exported out of Ribe per year, and older sources state that the duty on salt was already known in the end of the 12th century, whereas the royal taxation on horse export seems not be older than the 13th century.¹⁹

The horse trade may in fact be considered as a specialized production, which made its impact on the

town plan itself. 1224 is the first mention of the market place for horse trade inside the southern gate of Ribe.²⁰ From Ribe much of the export found its way to the Flemish area. According to a treaty from 1252 between the Countess of Flanders and the German towns, fixed duty was put on horses and oxen sold in Damme. This duty includes Frisians and Danes, who also had to pay, even when they had not been able to sell their animals.²¹ They were probably competing with the Germans in the trade on Brugge, to which Damme was one of the outports. Seen against this background it becomes more understandable that some of the only pieces of Danish medieval pottery which is known to have been found in Flanders, really did occur in Damme, and that these few sherds belong to a distinctive group of lead glazed pottery, which is believed to have been produced somewhere in the Ribe area. The dating of this pottery lies after 1300 or maybe a little earlier, and it was probably brought to Damme not to be sold but as part of the domestic utensils of some Danish ship.²²

The salt duty may have been put on salt which came to Ribe from Frisia or from further down North-Western Europe, for instance Baie-de-Bourgneuf in North Western France, and which was resold via Ribe into the Baltic. There it occurs as “Ribe-salt”.²³ This pattern of trade seems to show how Ribe maintained its function as a stable port and that this certainly included trade interests in the Baltic area.

In 1271 the burghers of Ribe were allowed to export lard, grain and horses which they had bought, to Flanders or to any other place, they would like.²⁴ This list of export goods is repeated and added to (herrings, horses, bacon, fat, butter and grain of any kind) in 1283 and 1293, when the king fixes the duty which foreign merchants had to pay in Ribe. It shows the role of Denmark as a supplier to North Western Europe of agricultural products – as well as of her-

¹⁶ O. Ventegodt 1982, 71 ff. gives a detailed account of the sources, which deal with the trade and export of Ribe, cf. also H. Matthiessen 1927, 74 ff. and P. Enemark: article *Handelsveier*, Danmark, KHLNM, 6, sp. 171ff. Only at the end of the Late Middle Ages some numbers and figures, mostly concerning the export of bullocks, are kept, see P. Enemark 1971, and P. Enemark: article *Øksnehandel*, KHLNM, 20, sp. 674 ff.

¹⁷ KVJ 1,2, 8.

¹⁸ DiplDan 1,3, no. 215 (1196, 18/3) confirms these old rights. 1234 the bishop lost his half of the mint income, DiplDan 1,6, no. 182 (1234, 6/7).

¹⁹ I. Nielsen 1981, 28. O. Ventegodt 1982, 77 f.

²⁰ DiplDan 1, 6, no. 30 (1224). I. Nielsen 1981, 17 f. I. Nielsen 1985, 66 f. The importance of this market place, called “Horstov”, may be indirectly reflected by the founding of the Franciscan Friary of Ribe in 1232, which may have had to put up with a place somewhat north of the market place itself, see C.

Jantzen; J. Kieffer-Olsen & P.Kr. Madsen 1994, 28.

²¹ DiplDan 2,1, no. 64 (1252, May), cf. KHLNM, 20, art. *Øksnehandel* (P. Enemark). In addition to this O. Ventegodt 1982, 77 (with references) mentions, that the payment of Peter’s Pence (*census beati Petri*) from Denmark and eventually also Sweden were to be delivered in Ribe, from where the money was shipped to Flanders, cf. H. Nielsen: article *Peterspenge*, KHLNM, 13, sp. 249 ff.

²² These sherds were identified by Bieke Hillewaert, Brugge. Concerning this type of pottery in Ribe, see M. Bencard 1979; P.Kr. Madsen 1980,1 and 1988.

²³ E.H. Madsen 1977, 274 and 283 ff. The “Ribe-salt” is mentioned in the town code of Söderköping along with other types of salt, which were brought around the Skaw and into the Baltic Sea.

²⁴ DGK 2, s. 61, no. 10/DiplDan 2,2, no. 162 (1271, 6/4), cf. *ibid.* no. 163 of the same date.

rings.²⁵ Once more, in 1368, it is allowed to export such goods from Ribe that is, as Poul Enemark has pointed out, still no living animals, such as bullocks, except for the early sources, but only agricultural products.²⁶

This range of Danish export goods is reflected by an unknown poet of the Netherlands who wrote a poem on the legend of the Holy Cross of Breda sometime in the 15th century, see Appendix 1.²⁷ As a part of this local legend about a holy cross, one finds a story about a ship which was equipped in Ribe for a trip to Scotland, but which by accident ended up in the Netherlands. Within its poetical limits this text may give a glimpse of the variety of different kinds of foodstuff which could be carried onboard a ship – or as stated at the very end of the passage quoted, what could be expected to be found in a port or a town. Of course beer from Lübeck is among them, and Danish sides of bacon and beef. Loaves of bread came from Ribe, it is said, and from Scania the ship got beans, peas and two kinds of eel – but apparently no herrings, as would otherwise be suspected.

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Although this lack of herrings may be due to the poet's need for proper rhymes, it could after all be more than a mere coincidence. Ole Ventegodt has assumed that herrings from the market of Scania may have lost their importance for the Ribe merchants already during the later part of the 13th century. This should be due to the larger expences for the transport of the fish from Scania to Ribe, instead of using the cheaper route around the Skaw that is the so-called "*Ummelandsfart*" which appears in the sources for the first time in 1251.²⁸ The "*Ummelandsfart*" did not only deal with herrings; linen and salt are also mentioned in 1251, and this means that the eventual absence of herrings from the cargoes of Ribe merchants

should not necessarily be seen in the way Ventegodt suggests. By writing about "the rather difficult route from Scania to Ribe and henceforth",²⁹ he probably alludes to that main East-West route of trade and communication across medieval Denmark which was a major theme in the works of Hugo Matthiessen. This theory is clearly reflected in Ventegodt's general concept of the trade of Ribe – at least as he saw it in his 1982 paper. The following year he seems not to accept the ideas of Matthiessen any longer.³⁰ There is, however, still fairly good reasons to believe in the existence of land transportation of goods in the Middle Ages, not at least during the later part of this period,³¹ and Ventegodt himself points to the probable existence of a route from Haderslev (i.e. the Baltic Sea) to Ribe already in the 13th century.³² The probable existence of these routes – no matter, how old they may be – should not be underestimated when considering the possibility of Ribe having Baltic connections. That of course does not mean that going by sea was in itself out of the question, and these as well as other sources indicating Ribe's interest in trade out of the Baltic ought to be considered and compared to the town's North Sea activities.

The burghers and town of Ribe were granted a whole series of royal privileges during the 13th century, allowing them to trade all over the kingdom without paying customs.³³ The maintenance of these general rights was considered valuable throughout The Middle Ages, as they were continuously renewed by the kings, for instance as late as in 1517.³⁴ None of these privileges does, however, mention the markets in Skanør, nor any other particular market or town, and of course they do not tell anything at all about where the Ribe merchants really went. But in 1283 the king freed the burghers of Ribe from all kinds of royal customs on the markets at Skanør. It is said that this corresponds to the exemptions which they already had all over Denmark so in fact, the 1283 privilege may have been issued as a further confir-

²⁵ DiplDan 2,3, no. 67 (1283, 15/7). DiplDan 2,4, no. 111 (1293, 8/8). P.Kr. Madsen 1994, 280.

²⁶ DGK 2, p. 69f, no. 22 (1368 20/5). P. Enemark: article *Øksnehandel*, KHLNM, 20, sp. 674 ff with references.

²⁷ Mr. P.L.J. Giesbers of Breda has kindly drawn my attention to this legendary source, see P.L.J. Giesbers (in manuscript): *Het heilige Kruis en de Denensage te Breda*, where the relevant quotation given in Appendix 1 runs from p. 5,97 to p. 6,130. Dr.phil. Tue Gad, Copenhagen, has kindly made the Danish translation.

²⁸ DiplDan 2,1, no. 50 (1252, 24/9), cf. *ibid.* no. 51 and 52 of the same date. O. Ventegodt 1982, 60 ff. and 81 ff.

²⁹ O. Ventegodt 1982, 77.

³⁰ H. Matthiessen 1927, 109 f, 114. Ventegodt 1982, 71 ff. and 1983, p. 81f. Cf. also P. Enemark: article *Handelsveier*, Danmark, KHLNM, 6, sp. 174.

³¹ An outstanding example is from 1510, when the citizens of Middelfart are allowed to bring their grain and other goods to Ribe in order to sell it, without being disturbed by their own town council, see DGK 3, p. 578, no. 2, (1510, 23/4).

³² Cf. note 8. In 1570 Ribe had 16 hauliers, in 1640 it had 19 and in 1682 only 4, O. Degn 1983, 88.

³³ DGK, 2, p. 3-7, no. 1 (1202-14) - 7 (1266, 15/3). O. Ventegodt 1983, 77 f points out, that by these privileges the king restrained from taking goods, which Ribe burghers had lost because their ship was wrecked. This kind of privilege was only granted to Ribe and two other Danish medieval towns. Ventegodt assumes that this was a kind of special subsidence for Ribe, being the only North Sea port of Denmark, *ibid.* 1983, 81 f.

³⁴ DGK, 2, 102 ff, no. 50 (1517, 26/2), cf. *ibid.*, 95 f, no. 41 (1491, 29/12).

mation of something which had perhaps taken place for some time.³⁵ Compared with other towns in North Jutland, Funen and Sealand, from where royal privileges about customs are kept, this privilege was in fact something unusual. The general rule seems to have been that these towns were freed from all royal customs except those concerned with the fairs at Skanør – or as it is very often expressed in the Late Medieval texts – the markets or fisheries at Skanør or in Scania etc.³⁶ Only Stege seems to have enjoyed this freedom, according to a privilege issued by king Erik Glipping between 1259 and 1286 which is however only known from a late and shortened version.³⁷ The only parallel to the privilege of Ribe may be found within the Duchy of Schleswig, where the town of Schleswig was freed from paying any customs in Skanør in 1282, one year earlier than Ribe. This may reflect the old interests of Schleswig in the Baltic trade and the town's connections with the North Sea Trade. Schleswig's Town Code from 1200-1250 also mentions those merchants who sailed from Schleswig to Gotland.³⁸ Flensburg does not seem to have got that kind of privilege. In 1320 it was stated that its burghers only had to pay the usual customs all over the Danish reign, including Skanør.³⁹

The rights that Ribe had got in 1283 concerning the fairs at Skanør, as well as the general privileges of the town were renewed in 1288.⁴⁰ This last document was confirmed as late as in 1506 by king Hans, and it seems to have been held in quite a high esteem by the town which took care to have it certified at least twice during the second half of the 15th century.⁴¹ The eventual Baltic affairs of Ribe during the Late Middle Ages probably had less to do with Ribe merchants being particularly interested in trade in herrings at that time, as it may reflect their dominant position in the import of cloth from Western Europe

which since the High Middle Ages brought them and their textiles all around the country.⁴² That could be the reason why Danzig was visited by a ship from Ribe in 1476, and why in 1537 two burghers of Ribe were bound for Danzig, Riga or Reval.⁴³ Besides this the bullock trade became a matter of far more than local importance to the Ribe merchants. In 1518 Christiern the Second allowed burghers and merchants of Ribe, who sold their silver at the Royal Mint in Malmö to use the money they had obtained by doing so to buy bullocks all over the country and to export them.⁴⁴ No wonder that the Ribe merchants acted as a kind of royal purveyors, for instance to Queen Christine as shown by her account books from the first decades of the 16th century.⁴⁵

This interdependant relation between Baltic and North Sea trade which seems to lie behind these sources, may be somewhat further elucidated by the evidence of Danish merchants and ships operating on the East Coast of England. In 1919 Bering Liisberg published a list of five entries of Ribe ships in the customs accounts dating from 1303 to 1323 from the harbour of King's Lynn. Based on this he as well as Ole Ventegodt pointed out that trade between Ribe and England was, as they saw it, still maintained into the 14th century, although clearly declining.⁴⁶

Whether these entries should be understood exactly in that way, may be questioned. Concerning the different cargoes which these five ships are believed to have carried from Ribe, Poul Enemark has suggested that apart from the herrings they may not represent Danish products but may have been purchased at the market in Skanør and brought to England by the Ribe merchants. In that case these ships may have gone around the Skaw, even though the possibility of land transportation across the northern part of the Duchy of Schleswig also has to be considered.⁴⁷

³⁵ DGK, 2, 62 f, no. 12 (1283, 15/7): „...sicut ubique infra terminos regni nostri...sunt exempti...“.

³⁶ In a chronological order, reflecting the dates of the preserved sources, which in some cases may reflect older regulations: From North Jutland: Randers 1302, 8/3 (DGK 2, p. 233, no. 1) and 1321, 4/5 (DGK 2, 234 f, no. 3). Skive 1326, 15/8 (DGK 2, 255, no. 1) and 1443, 22/1 (DGK 2, 255 f., no. 2). Kolding 1327, 22/7 (DGK 2, 109 ff, no. 2) and 1442, 21/12 (DGK 2, 111 f, no 3). Vejle 1327, 16/8 (DGK 2, 143 ff, no. 2). Viborg 1442, 11/6 (DGK 2, 213). Funen: Fåborg 1413, 17/9 (DGK, 3, 562f, no. 10), cf. 1251, 13/7 (*ibid.* 555, no. 1). Bogense 1445, 23/2 (DGK 3, 585 f, no. 5).

³⁷ DGK 3, 437, no. 2 (1259-1286).

³⁸ DGK 1, 42, no. 8 (1282, 16/12) and *ibid.* 9, no. 1 <30>.

³⁹ DGK 1, 185, no. 9 (1320, 16/8).

⁴⁰ 40. DGK, 2, 63 f, no. 13 (1288, 28/12).

⁴¹ DGK, 2, 86 f, no. 31 (1465, 25/3) and 95 f, no. 41 (1491, 29/12).

⁴² P. Enemark: article *Klede, Handel med klæde*, Danmark,

KHLNM, 8, sp. 464 f.

⁴³ P. Enemark: article *Östersjöhandel, Danmark*, KHLNM, 21, sp. 46 with references.

⁴⁴ DGK, 2, 104 f, no. 51 (1518, 29/11).

⁴⁵ Dronning Christines Hofholdningsregnskaber, for instance 205 f., 257 ff.

⁴⁶ The decline of Ribe's trade on for instance Groningen during the 14th century is discussed by P.A. Meilink 1912, 238 f. The view of B. Liisberg 1, 1919, 147, was probably based on A. Bugge 1906, 264 f, but without considering Bugge's remarks about those of the merchants, who seem not to have been residents of Ribe. Bering Liisberg's list is reprinted with a few changes in O. Ventegodt 1982, 74. *Ibid.* 72 concerning connections Ribe-England during the first quarter of the 13th century, cf. P.Kr. Madsen 1994, 277 ff. concerning the archaeological evidence. Also Hugo Matthiessen.

⁴⁷ P. Enemark: article *Englandshandel*, Danmark, KHLNM, 3, sp. 672, cf. P.Kr. Madsen 1994, 278 and note 8.

Due to the courtesy of Dr. Wendy Childs, University of Leeds, a more detailed list of the relevant customs accounts, not only compiling the five entries from King's Lynn, could be included here as Appendix 2,1.⁴⁸ This completed list does not, however, allow the conclusion that the ships, nor the merchants onboard them, actually did participate in a direct cross traffic between the English East Coast ports and Ribe, nor that the merchants did actually live there – they might only have carried a name which showed some family relation to Ribe. The list enlarges the known number of ships, shippers and/or merchants, but perhaps the peak of probable Danish or maybe Ribe merchants during the period 1303-05 is in fact only temporarily. It coincides with a Hanseatic blockade of King's Lynn from 1303-07 which caused Gotlandic merchants to sail to England via Norway.⁴⁹ And, indeed, one should notice the peculiar name "Nicholas de Ripe, called the Gother", who left the harbour of Yarmouth in 1326.⁵⁰

Anyway – as Poul Enemark stated, the customs accounts seem to support the idea that the operation ratio of the Ribe merchants covered the North Sea region as well as the Baltic. It is, though, worth considering whether the Ribe merchants did participate in the "Ummelandsfart" rather early, and to try to establish an idea about the nature of this participation.

The "Ummelandsfart" is first mentioned 1251, when the Danish king Abel fixed the duty for ships taking part in this traffic,⁵¹ but when it was actually started, and by whom, remains unknown. However, in 1224 the English king allowed Gilbert of Schleswig, merchant of Denmark, to go with his ship, his belongings and his merchandise to England. This was done to the benefit of the Duke of Lüneburg, and this may indicate some Baltic connection, for instance con-

cerning salt trade.⁵² So, if Gilbert is considered to have been Danish, and if he intended to go around the Skaw, this could be an evidence of Danish participation in the "Ummelandsfart". According to Ole Ventegodt such participation is not otherwise known of before the registration in 1303 in King's Lynn of the ship "Cayserinne" which he considers to be from Haderslev – although it is only its master Henry, who carries a name which may have derived from that North Schleswig town (see Appendix 2,1).⁵³ In either case, however, the names of these two men do not inform us about the home port of the ships or their actual sailing route, nor does the mention in 1285, and in 1297 of a Danish merchant being plundered in England and a Danish cog in the harbour of Holm.⁵⁴ Concerning the privileges of 1251 Ole Ventegodt writes that they were set up by the Royal Danish Chancellor Esger, who was at the same time bishop of Ribe. Whether this meant anything towards the case of the foreign merchants, is difficult to tell. Ventegodt suggests that the merchants of Ribe may have been against any privileges to the "Ummelandsfart", because they wanted to concentrate as much of the trade as possible in Ribe.⁵⁵ Even so, the Baltic interests of Ribe are clearly demonstrated, and by that it seems fairly clear that if the merchants of Ribe had already at that time found their way into the route around the Skaw. That they were exempted from royal customs at the Skanør markets in 1283, which as I pointed out may be seen as a further confirmation of status quo or was maybe not the first letter of its kind could in fact reflect a permanent interest of theirs in the Baltic area in the 13th century and by that, also in the "Ummelandsfart".

A further, hypothetical answer to the questions raised so far may to some degree be derived from the

⁴⁸ The custom in question was inaugurated in 1303 and called the "New Custom". It replaced the "Great Ancient Custom" which started 1285 and which was only put on wool. The "New Custom" was put on all goods which was imported by foreign merchants. A primary list of the relevant entries concerning Ribe was presented by Dr. Childs, Senior Lecturer in Medieval History, University of Leeds, on the Second Symposium "West Jutland and The World", Lemvig 1995. In its present, final issue it was kindly placed for my disposal by Dr. Childs. In her lecture to the Symposium in Lemvig Dr. Childs pointed out that the customs accounts did not include English merchants, and that foreign customs were suspended from 1311 to 1322.

⁴⁹ H. Yrwing: article *Östersjöhandel*, KHLNM, 21, sp. 41. A. Bugge 1899 about the Gotlandic trade on England, especially p. 155 ff. focuses on the customs rolls. Nothing is said concerning Ribe, but compare A. Bugge 1906, 264 f., and A. Bugge 1899, 155 ff., who used the same records to make his list of Gotlandic merchants and ships.

⁵⁰ Cf. T. Rafto: article *Englandshandel*, Norge, KHLNM, 3,

sp. 662f. Concerning the finds of English pottery in Bergen and its evidence for the English-Norwegian trade, see H. Lütke 1991, cf. comments by P.Kr. Madsen 1994, 269 f.

⁵¹ See note 28.

⁵² DiplDan 1, 6, no. 18 (1224, 11/7), cf. *ibid.* no. 201 (1224, 23/7), cf. O. Ventegodt 1982, 73, who suggests, that Gilbert perhaps used "the old trading route Schleswig-River Ejder".

⁵³ O. Ventegodt 1982, 82. Following H. Matthiessen 1927, 107 he writes (*ibid.* 74), that the "Cayserinne" in fact was from Haderslev. Matthiessen in turn cited A. Bugge 1899, 156, who in fact does not mention Master Henry of Haderslev, but only that a certain Salomon from Gotland was on board the ship.

⁵⁴ DiplDan 2, 3, no. 136 (1285, 10/5), no. 142 (1285, 17/6) cf. *ibid.* 2, 4, no. 254 (1297, 15/4) - both mentioned by O. Ventegodt 1982, 82, who assumes, that they came from Ribe.

⁵⁵ O. Ventegodt 1982, 62 and 1983, 83 f. Concerning bishop Esger as a royal Chancellor, see N. Skyum-Nielsen 1963, 228 ff., 239 ff. and 241 f. concerning the "Ummelandsfart".

distribution pattern of the medieval pottery imports which I described in more detail three years ago: perhaps the merchants of Ribe took part in a kind of triangular or even squaresided trading from Skanør, maybe via Norway to England or directly to Flanders or Northern France, and from there via the Rhine estuary back towards Denmark. It is worth considering, whether these ships may have carried cargoes of salt or building stones as their last cargo back to South Western Jutland, and that the reason for the unusual large representation of imported pottery in Ribe was that the pottery was brought along almost exclusively from the last harbour before Ribe – as a kind of souvenir, as I believe it was. If a triangular or squaresided traffic of this kind was effective, the very restricted amount of English pottery in Ribe and the much greater number of pottery sherds from Northern France, Flanders and the Rhineland seem the more understandable.⁵⁶

On the other hand, this does not mean that pottery, nor other kinds of merchandise, only or always went strictly from its production area to the consumer, nor that Denmark as a producer of farming products would not import such goods itself. Four English royal decisions, three of which concern the English East coast port of Yarmouth, show this.⁵⁷ In 1224 the ship of Rikvin of Ribe, a Danish merchant, was allowed to leave Yarmouth, and the same year Danish merchants are allowed to come to England for a period of two years.⁵⁸ In a separate letter, also from 1224, the English king gave his permission to trading vessels and fisher boats from Scotland, Norway, Iceland, Frisia, Cologne, Denmark and “the Eastern parts” – (of Denmark?) – to go into the harbour of Yarmouth. French ships and those from Poitou are excluded which may have been the general idea instead of promoting Danish merchant activities.⁵⁹ Still in 1224, the English king allowed grain to be exported from King’s Lynn to Norway, Denmark and Flanders or to other places, except the French domains.⁶⁰ Both Yarmouth and King’s Lynn were by that time probably such

international ports that most of the goods which were circulated within the North Sea Area trading system could be obtained there. This in fact demonstrates that there was probably no single main centre within this trade, although the range and amount of different goods of course did differ from port to port. In fact, one could feel tempted to consider the English king’s expression “the Eastern parts”⁶¹ as an allusion to the fairs at Skanør and by that to the existence of the interrelations between the North Sea and the Baltic, maybe by means of the so-called squaresided traffic which I suggested above.

Later sources of the 14th century which were investigated by Ole Ventegodt, suggest that a trading route as just sketched may have been efficient. Ventegodt shows⁶² that a kind of tramp shipping evolved, and that the merchants often did not use or possess their own ships, but commissioned their goods to other, professional transporters. The end of this was the emergence of ship owners who neither went with their ships nor used these only for their own cargoes but had to rely on the crew and on those people who eventually chartered a ship or a part of it. In the spring of 1365 a Danish cog, owned by a certain Claus Limbek, took in a cargo of coal in England which was then sailed to Dordrecht.⁶³ The coal was sold, and a company led by a merchant chartered the ship which took onboard a cargo of salt, destined for Reval. Unfortunately the ship was not able to leave Dordrecht, because of some financial circumstances, and eventually the owner’s agents decided to sell it. This was clearly done against the will of its owner, but he probably never got back his ship, nor the money he had involved in it, although he tried also to blame the town of Lübeck for his loss. This case in fact shows the emergence of a market for transport and of ship owners, who had to run the risk of relying on their servants. Another example is from 1385, when an English shipowner lost a ship that his servants had sailed from Estonia to Scania. There it got a cargo, bound for England, but it never got there, because the

⁵⁶ This hypothesis was launched in P.Kr. Madsen 1994, 278 f. English pottery imports in Ribe, see A. Vince forthcoming. Concerning the salt trade, see E. H. Madsen 1977 or B. Poulsen 1991.

⁵⁷ O. Ventegodt 1982, 73 f.

⁵⁸ DiplDan 1, 6, no. 20 (1224, 23/7), *ibid.* no. 21 (1224, 26/7).

⁵⁹ DiplDan 1,6, no. 24 (1224, 23/8). 1226 the English king postponed his grant with another year, DiplDan 1,6 no. 61 (1226, 31/8).

⁶⁰ DiplDan 1,6, no. 28 (1224, 29/12).

⁶¹ DiplDan 1,6, no 24 (1224, 23/8): “...*de terra regis Dacie et de partibus illis orientalibus...*”.

⁶² O. Ventegodt 1982, 66 ff.

⁶³ O. Ventegodt 1982, 69. DiplDan 3, 7, no. 392 (1366, 18/6)

and no. 421 (1366, 15/8) from the City Council of Dordrecht to the Council of Lübeck. The last letter gives the date of the sale of the cog in Dordrecht, which was 1365, in May (“...*uel circiter...*”). One of the two men, who had to sell the cog, which really belonged to Claus Limbek, was in fact a special servant of his, whom Limbek had sent out in order to reclaim his cog, but certainly not to sell it, see DiplDan 3, 7, no. 331 (1365, 25/11), as confirmed by the Council of Ribe 1366, DiplDan 3, 7, no. 389 (1366, 5/6). The last letter in this case is from the Council of Lübeck to Claus Limbek, with copies of the two letters from Dordrecht, and telling him, that Lübeck was not to be claimed for the loss, which his servants had caused him, DiplDan 3, 7, n°450 (1366, 11/11).

vessel was shipwrecked.⁶⁴ One year earlier a company of eight merchants from York lost a ship, belonging to a man in Hull, when they were on their way from Scania to Hull with herrings.⁶⁵

Ribe merchants: Town councillors, lords and burgomasters

The exceptionally well preserved information concerning the lost cog of Claus Limbek ought to be compared with the sparse knowledge that we have about Claus Limbek and a few other 14th century characters. Common to these men was that they were connected to Ribe and engaged in trade and other financial affairs of a large extent. What we know about them may in fact to some degree draw up the background of the question of Ribe being a Hansa town in 1407.

Claus Limbek himself, who was he really? He was in fact almost everything. He was a nobleman from the Duchy of Schleswig, who entered Denmark in the company of Count Gerhard of Holstein before the middle of the 14th century. He managed to serve not only him, king Valdemar Atterdag and the Holsatian counts – and as it seems – not least himself. Being in high charge of the king, having the function of the King's seneschal (Latin: *dapifer* and Danish: *drost*), he changed party several times, but eventually managed to get the castle of Riberhus as his fief together with his two sons in 1368. At that time he had allied himself with the counts of Holstein, but it seems that he must have died shortly after that, maybe in 1368.⁶⁶ That the position of the Counts and the Limbeks in Ribe may have been rather solid, emerges from the fact that the town took care to get its privileges confirmed by the Counts in the same year 1368. Their confirmation cites the older privilege of 1261 which allowed the town's export to Flanders in general, although this export was otherwise totally forbidden in 1368.⁶⁷

I believe that this exemption was in the interest of Claus Limbek and his sons. Based on the possessions of their own and the fiefs, they obtained from the

Duke of Schleswig, the Danish king and the Counts of Holstein they ended up having more or less permanent possession of larger parts of the Duchy of Schleswig and of South Western Jutland which lasted up until around 1425.⁶⁸

Claus Limbek was the owner of that cog which ran into troubles in Dordrecht in 1365, and in 1350 the bishop of Roskilde had promised him the bishop's own ship after his death.⁶⁹ Limbek may have possessed and operated more than one vessel, and maybe his home base for this was in fact the town of Ribe. In 1350 Hans Limbek, who was an uncle of Claus, was buried in the Cathedral of Ribe.⁷⁰ Relations concerning trade between Claus Limbek and Ribe were established before 1368, as for instance in 1366, when the Town Council issued its letter of confirmation concerning the trouble Limbek had in order to reclaim his cog in Dordrecht.⁷¹ His family interests in the trade from Ribe seem clearly reflected in 1368, when Claus Limbek and his sons as lords of the castle and town of Ribe agreed to owe a certain Henrik Andersen, burgher of Ribe, the sum of 80 marks of silver which had been handed over to the Limbeks.⁷² In turn Henrik Andersen got the right to enjoy the income of the royal customs of Ribe for the next four years. In addition, the Limbeks promised not to give up the castle or the town before the debt had been paid off – either by means of the custom income or directly by themselves. They also promised something quite unusual – that no merchant should be allowed to export any goods from the two towns Varde and Ringkøbing, unless they took the goods to Ribe and paid the customs there – that is, the town of Ribe could by this claim staple rights towards the other two towns.⁷³

The Limbeks were at that time allies of the enemies of the Danish crown, and nobody knows whether Henrik Andersen would have been able to get his money back if the Holsatian Counts and their vassals lost control of Ribe. He eventually died in 1369, but the Limbek family stayed in the area. Henneke, the son of Claus Limbek, gave back the fief and castle of Riberhus to Queen Margrethe in 1399 for the large sum of 8000 marks.⁷⁴

⁶⁴ DiplDan, 4,2, no. 550 (1385, 8/2).

⁶⁵ DiplDan 4,2, no. 518 (1384, 24/11).

⁶⁶ H. Bruun: Claus Limbek, DBL vol. 9, 1981, 45.

⁶⁷ DGK 2, p. 69 f, no. 22 (1368, 20/5).

⁶⁸ Cf. note 67, DBL p. 45 f. J. Kinch 1869, 245 ff. Danmarks Adels Aarbog, 1902, 263 ff.

⁶⁹ See note 59. DiplDan 3, 3, no. 285 (1350, 13/5).

⁷⁰ P.Kr. Madsen 1980,2, 41 with references. Danmarks Kirker, Ribe Amt, 108.

⁷¹ DiplDan 3, 7, no. 389 (1366, 5/6), cf. note 59.

⁷² DiplDan 3, 8, no. 187 (1368, 6/7).

⁷³ In a way this should be compared to the outstanding privilege of 1292, which gained Ribe the free possession of the waters and beaches between List, Mandø and Ribe etc., as well as the jurisdiction of this area, corresponding to the Town Code of Ribe – a kind of „contado“, so to say, DGK 2, 64f, no. 14/ DiplDan 2, 4, no. 82 (1292, 25/8).

⁷⁴ In 1388 Henneke and his wife Jutta planned to have their burials in the Cathedral of Ribe. He, however, was buried in Meldorf, being a victim of the battle at Meldorf on the 4th of

Perhaps the document of 1368 shows an alliance between the actual lords of the Ribe area and an outstanding member or even a representative of the merchants of Ribe at that time. Henrik Andersen, who is known as a Town Councillor in 1368,⁷⁵ was probably no ordinary burgher of Ribe. His first known relative – maybe his uncle – was perhaps that burgher of Ribe, Jon Bonde, who in 1335 declared to have got an estate in the parish of Framlev south of Århus from the Chapter of Ribe.⁷⁶ In return for that estate Jon Bunde promised to give the chapter another estate in the “syssel” of Varde and to add to this something more, if the estate in Framlev proved to be of a greater value. So he did six years later, in 1341 which was the year of his death, when a farm in the parish of Henne was laid out as a suitable compensation.⁷⁷

A few years later, that man appears in the sources who was the father of our Henrik Andersen. His name was Anders Bundesen, and perhaps he was related to Jon Bunde, maybe his younger brother. Anyway, in 1351 Anders Bundesen was already a Town Councillor of Ribe, when the son of Jon Bonde, called Hergert, conveyed him a stone-house of his on the eastern side of Grønnegade in Ribe as well as yet another small stone-house in the back of the same plot which had its own free passage to the river.⁷⁸ A year later Anders Bundesen had his acquirement of this whole property confirmed by the Town Council, who adds that Anders Bundesen had in fact had a mortgage in that same property of 22 marks of silver from the widow and sons of Jon Bonde.⁷⁹ What happened, was that a mortgage which the heirs of Jon Bonde had not been able to redeem, was now taken over by the unsatisfied holder. Even within a family such transactions are not uncommon. Now, the essential thing is that Anders Bundesen could lend out the sum of 22 marks – and that the plot in question lies within that area of Ribe where the finds of imported pottery from the 12th and 13th century are most common. I told quite a lot about that in my lecture to the 1992 conference, asking whether this archaeo-

logically-based indication of an older social topographical division of the town might still be reflected in the 14th century.⁸⁰ Furthermore we know that the stone-house in question was kept by the Bundesen family until 1394, when the grandson of Anders, who was called Anders Henriksen – the son of course of that Henrik, who took over the royal customs income in 1368 – sold it to the town of Ribe.⁸¹ The town used it as its town hall, and according to later descriptions it was – or became – a magnificent structure, consisting of no less than three storeys and with three large pinnacled gables towards the street – as we can imagine it from the prospect of Ribe by Braunius and Hogenberg from 1598. It is said that this house was originally the bourse of Ribe, and that its cellars were divided into store rooms of an equal size. The street which it belonged to is still called the street of the Groningers, Grønnegade, and the presumed bourse is said to have been used primarily by the merchants of that town.⁸² Again one must ask the question about the possible continuity between the High and the Late Middle Age social topography.

Anders Bundesen, himself, did not live in the stone-house in Grønnegade, but on the main street that is on the Dam which crosses the river. In 1361 he – with Claus Limbek and others – witnessed a document issued by the duke of Schleswig,⁸³ and there he is called burgher of Ribe and perhaps as the Ribe historian J. Kinch saw it, also an “armiger” which means that he was considered a member of the lower noble class – however, this remains a little doubtful.⁸⁴ But the way that Anders Bundesen appears with his wife on his brass effigy, certainly underlines the position he had and wanted to show.⁸⁵ The aspirations Anders may have had seem to have been fulfilled by his grandson, who had his own coat of arms in his seal matrix which he used in 1394, when selling his grandfather’s stone-house in Grønnegade.⁸⁶

Anders Bundesen then had been dead since 1363. This is the date which is given of his and his wife’s magnificent golden brass which was placed on their

August 1404, Danmarks Kirker, Ribe Amt 108 f. In 1398 Margrethe had paid a dept of 2000 marks to Henneke, Rep 1, nr. 4228. Cf. note 68 and J. Kinch 1868, 245 ff. V. Etting 1986, 137-138.

⁷⁵ DiplDan 3, 8, no. 221 (1368, 1/9), where he lends out 20 marks of silver.

⁷⁶ DiplDan 2, 11, no. 205 (1335, 28/3). The estate was a wine-yard, which meant, that its income was to be used for supplying the church with wine and bread for the Holy Communion.

⁷⁷ DiplDan 3,1, no. 136 (1341, 16/1). Jon Bunde had already sold the Framlev estate in order to pay his depts – concerning his death, see J. Kinch 1869, 179 and 214, note 2.

⁷⁸ DiplDan 3, 3, no. 497 (1351, 29/10).

⁷⁹ DiplDan 3, 3, no. 597 (1352, 8/12).

⁸⁰ P.Kr. Madsen 1994, 275.

⁸¹ Kinch 1869, 212.

⁸² P. Terpager 1736, 460. Cf. M. Bencard 1977 concerning the Town Hall and the role of the Bundesen family. P.A. Meilink 1912, 238 f.

⁸³ DiplDan 3, 6 no. 2 (1361, 9/1) with no traces of a seal of Anders Bundesen.

⁸⁴ The Latin “armiger” corresponds to Danish “væbner”, which may be translated as esquire or perhaps baronet.

⁸⁵ Concerning this and other Ribe brasses, see P.Kr. Madsen 1980 and Danmarks Kirker, Ribe amt, 635 ff, both with references.

⁸⁶ See note 77.

grave in the Cathedral.⁸⁷ The brass itself was destroyed in 1790-93, but a drawing shows it to have been an excellent example of the Flemish or Bruges school of brasses from the mid 14th century. It had its first position within that newly build chapel of St. Barbara which Anders Bundesen had erected on the northern side of the High Choir of the Cathedral. The foundation document is still known in its full extent, issued by the Bishop, the Chapter of Ribe and the town in 1363 shortly before Anders died.⁸⁸ I shall not go into details about the wealth, out of which Anders created the financial substance for his eternal foundation. But yet another stone-house of the old Jon Bonde in Grønnegade, now belonging to the Chapter, is mentioned, and a separate bathhouse owned by Anders Bundesen opposite to this which he donates to the Cathedral, as well as estates in the village of Vilslev north of Ribe, valued 32 marks, which he had in mortgage from the knight Niels Bugge. No wonder that Anders Bundesen was not only a town councillor, but that he also appears as the first known burgomaster of Ribe.⁸⁹

People like Jon and Hergert Bonde as well as the Bundesen family were certainly not ordinary burghers, nor may they have been totally representative of their fellow townsmen in Ribe. On the other hand – the main reason why we still do know a little about them is that some of their activity was directed towards the Cathedral of Ribe, whose archives are still kept to such a degree that details like this can occasionally be found. One might like to know about those other Ribe councillors, who chose to secure their aftermath and their souls by gifts to other institutions, whose archives we do not know, for instance the two mendicant Friaries of Ribe.

It should be remembered that even today the Cathedral of Ribe houses several supporting slabs of black or blue sandstone from Namur which were once wearing the same type of memorial brass as the one which commemorated Anders Bundesen and his wife. One of these carried the brass which was laid on the grave of King Christopher I (died 1259) somewhere in the middle of the 14th century. Others among them were perhaps destined for members of the clergy, but we do know for sure that at least one of them was commemorating another burgher of Ribe, and that yet another was made for Johannes Limbek (died

1350), and his wife or perhaps Henneke Limbek (died 1404) and his wife.⁹⁰

The existence of burghers using coat of arms, or being granted them by the king, is not unknown.⁹¹ We cannot know, if some of them were in fact members of families from the hinterland, who had taken up the risky business of the merchants. In the Ribe area the preponderant power of the bishop almost totally destroyed what may have been left of High Medieval nobility, and some members of those families had in the 14th and 15th century no other chance than to become the bishop's bailiffs or officers. This in its turn again made it possible for some of them to start reclaiming the stairs of society, but that is another, and later, story.⁹²

What we do know about the Bonde and Bundesen families by the middle and the later part of the 14th century, and their association with the powerful and enterprising clan of the Limbeks, brings us a glimpse of that outstanding level of burghers and lords, who – being active as merchants on a grand scale – did enjoy “the freedom of the merchants” in Ribe – as the Rezess of the Hansetag in Brugge 1407 puts it. By doing so, they attracted foreign Hanseatic merchants to Ribe – and by that they placed the town in such a position that the mere occurrence of the question of Ribe merchants enjoying the benefits of the Hansa rights may at that time have been nothing but reasonable. A main point behind this seems to have been what was launched as the focal thesis of this paper: Ribe's participation in the trade between the Baltic and the North Sea – still the town was “Facing the North Sea”, but that certainly did not mean that it was unaware of what happened behind its back. Maybe it moved along the long lines, playing the role of a Janus, so to say?

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⁸⁷ P.Kr. Madsen 1980,2, 41. Danmarks Kirker, Ribe Amt, 635ff. transcribes the Latin text.

⁸⁸ DiplDan 3, 6, no. 289 (1363, Jan 1st - July 6th).

⁸⁹ J. Kinch 1869, 216.

⁹⁰ P.Kr. Madsen 1980,2, 41, cf. note 68 and 74. Danmarks Kirker, Ribe Amt 108. *Ibid.* p. 635 transcribes the Latin text and points out, that the primary position of the memorial in the

Cathedral is not exactly known – it was, however, not in the Chapel of St. Barbara, cf. note 68 and 74.

⁹¹ 1459, 3/6 the king raised Torbern Jepsen, burgomaster of Ribe, to the peerage, granting him his personal coat of arms. The royal letter is shown in Achen 1973, 13.

⁹² H. Fangel 1985, 220 ff. H. Fangel and L.S. Madsen 1988, 372 ff.

Literature

- ACHEN S.T. 1973: *Danske Adelsvåbener - En heraldisk nøgle*, København.
- ARUP E. 1926/1961: *Danmarks Historie, Første bog. Land og folk til 1282*, København.
- BENCARD M. 1977: Om Ribes Rådhus, Skibbroen, en udgravning, og et formodet stavbægerværksted, *Hikuin* 7, 59-80.
- BENCARD M. 1979: En middelalderlig pottemager fra Ribe, *Folk og Forskning*, nr. 2-3. *Festskrift til Thorkil Kristensen*, Esbjerg, 38-50.
- BUGGE A. 1899: Gotlændingernes Handel paa England og Norge omkring 1300, *Historisk Tidsskrift, Tredie Række, Femte Bind*, Kristiania, 145-180.
- BUGGE A. 1906/1968: Die nordeuropäischen Verkehrswege im frühen Mittelalter und die Bedeutung der Wikinger für die Entwicklung des europäischen Handels und der europäischen Schifffahrt, *Vierteljahrschrift für Social- und Wirtschaftsgeschichte*, IV. Band, Berlin/Stuttgart/Leipzig (reprinted New York/London), 227-277.
- Danmarks Adels Aarbog*, 18??, København.
- Danmarks Kirker, Ribe Amt, 1979 ff., København.
- DBL - *Dansk Biografisk Leksikon*, 1979-, 3rd ed., København.
- DEGN O. 1983: *Ribe 1500-1959*, Scandinavian Atlas of historic towns no. 3 Denmark, Odense.
- DGK - *Danmarks gamle Købstadlovgivning*, Bind 1-5, 1951-52, KROMAN E. (ed.), København.
- DiplDan - *Diplomatarium Danicum*, Det danske Sprog- og Litteraturselskab (eds.), København, 1938-.
- Dronning Christines Hofholdningsregnskaber*, CHRISTENSEN W. (ed.), København, 1904.
- DUNNING G.C. 1968: The trade in medieval pottery around the North Sea, *Rotterdam Papers, A contribution to medieval archaeology (1)*, Rotterdam, 35-58.
- ENEMARK P. 1971: *Studier i toldregnskabsmateriale i begyndelsen af 16. århundrede. Med særligt henblik på dansk okseeksport*, 1-2, Århus.
- ENEMARK P. 1991: Vesteuropa, Lybæk og dansk handel i senmiddelalderen, *Historisk Tidsskrift*, Bind 91, Hæfte 2, København, 361-401.
- ENEMARK P. 1994: Danmarks handel i senmiddelalderen, in: *Danmark i senmiddelalderen* Ingesman, P. & JENSEN J.V. (eds.), Århus, 241-258.
- ETTING V. 1986: *Margrete den første*, København.
- FANGEL H. 1985: Vesterbæk - en forsvundet hovedgård i Vestslesvig. Et bidrag til belysning af lavadelens krise i 1400- og 1500-årene, in: *Festskrift til Troels Dahlerup*, Århus, 209-230.
- FANGEL H. & MADSEN L.S. 1988: Voldsteder og herremænd i Nordslesvig, in: *Kongemagt og Samfund i Middelalderen. Festskrift til Erik Ulsig*, Århus, 363-90.
- FRIEDLAND K. 1958: Kaufleute und Städte als Glieder der Hanse, *Hansische Geschichtsblätter*, Köln, 21-41.
- HYBEL N. 1994: Teorier om de vesteuropæiske godssystemers afvikling i senmiddelalderen, in: *Danmark i senmiddelalderen*, Ingesman P. & JENSEN J.V. (eds.), Århus, 47-68.
- JANTZEN C., KIEFFER-OLSEN J. & MADSEN P.K. 1994: De små brødres hus i Ribe, in: *Mark og Montre*, Ribe, 26-36.
- JENSEN S. 1991: *Ribes Vikinger*, Ribe.
- KHLNM - *Kulturhistorisk Leksikon for nordisk middelalder*, Bind 1-22, 1956-1978, København.
- KINCH J. 1869: *Ribe Bys Historie og Beskrivelse indtil Reformationen*, Ribe.
- KINCH J. 1884: *Ribe Bys Historie og Beskrivelse fra Reformationen indtil Enevoldsmagtens Indførelse (1536-1660)*, Odder.
- KVJ - *Kong Valdemars Jordebog*, Bd. 1-3, AAKJÆR S. (ed.), København - reprinted København, 1926-1945/1980.
- LIISBERG B. 1919: Søfart og Søhandel i Middelalderen, in: *Danmarks Søfart og Søhandel 1. Bind*, LIISBERG B. (red.), København, 129-163.
- LÜDTKE H. 1991: *The Bryggen Pottery I. Introduction and Pingsdorf Ware*, The Bryggen Papers, Supplementary Series No. 4, Bergen.
- MADSEN E.H. 1977: Salt og salthandel i østersøområdet i tidlig middelalder, *Hikuin* 3, Højbjerg, 269-294.
- MADSEN P. Kr. 1980,1: På sporet af en ripensisk middelalder-pottemager, *Hikuin* 6, Højbjerg, 189-220.
- MADSEN P. Kr. 1980,2: Christoffer den førstes grav i Ribe domkirke, in: *Mark og Montre - Fra sydvestjyske museer*, Ribe, 37-54.
- MADSEN P. Kr. 1988: En udkant af middelalderbyen Ribe, in: *Mark og Montre - Kulturhistoriske museer i Ribe Amt 1988*, Ribe, 61-64.
- MADSEN P. Kr. 1992: Ribe und der Westen, Archäologische Zeugnisse des 8.-11. Jahrhunderts, in: H. MENKE (ed.), *Die Niederlande und der europäischen Nordosten, Ein Jahrtausend weiträumiger Beziehungen (700-1700)*, Vorträge, Symposium Kiel, 8.-11. Oktober 1989, Neumünster, 73-90.
- MADSEN P. Kr. 1993: Aspects of Medieval Pottery Finds as Evidence of Town Development, Social Stratigraphy and Trade Contacts, in: *Facing The North Sea, West Jutland and the World, Proceedings of the Ribe Conference, April 6-8, 1992*, Fiskeri- og Søfartsmuseets studieserie, nr. 2, Esbjerg, 13-34.

- MADSEN P. Kr. 1994: Byarkæologiens genstandsfund. Kilder til handels- og innovationshistorie, socialtopografiske ledetyper eller blot dagliglivets tilfældige affald?, in: *Danmark i senmiddelalderen*, INGESMAN P. & JENSEN J.V. (eds.), Århus, 259-281.
- MATTHIESSEN, H. (1927) *Middelalderlige Byer. Beliggenhed og baggrund*. (København).
- MEILINK P.A. 1912: *De Nederlandsche Hanzesteden tot het laatste kwartaal der XIVe eeuw*, 's-Gravenhage.
- NIELSEN I. 1981: Torvene i Ribe, *Hikuin* 7, Højbjerg, 15-32.
- NIELSEN I. 1985: *Middelalderbyen Ribe*, Århus.
- POULSEN B. 1988: *Land - By - Marked. To økonomiske landskaber i 1400-tallets Slesvig*, Flensburg, 201-209.
- POULSEN B. 1991: Wirtschaftliche und rechtliche Aspekte des nordfriesischen Salzes im Spätmittelalter und in der frühen Neuzeit, in: *Das Salz in der Rechts- und Handelsgeschichte*, J.C. HOQUET & R. PALME (eds.), Schwaz, 279-292.
- Recesse - *Die Recesse und andere Akten der Hansetage von 1256-1430*, Band V, 1880, Leipzig.
- Rep - *Repertorium diplomaticum regni Danici mediævalis. Fortegnelse over Danmarks Breve fra Middelalderen med Udtog af de hidtil utrykte. 1. rk.*, København, 1894-1912.
- ROESDAHL E. 1995: Handel og middelalder-arkæologien - et debatoplæg, *By, marsk og geest* 7, Ribe, 11-14.
- SKYUM-NIELSEN N. 1963: Den danske konges cancelli i 1250'erne, *Festskrift til Astrid Friis 1963*, København, 225-245.
- TERPAGER P. 1736: *Urbis Ripensis in Cimbria Descriptio*, Flensburg.
- VENTEGODT O. 1982: Skibe og Søfart i danske farvande i det 12.-14. århundrede, *Maritim Kontakt* 3, København, 46-92.
- VENTEGODT O. 1983: Strandretten i Danmark indtil 1365, *Maritim Kontakt* 6, København, 59-103.
- VINCE A. (forthcoming): English Pottery Imports in Medieval Denmark, *By, marsk og geest* 8, Ribe.

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Appendix 1

From: „*Het heilige Kruis en de Denensage te Breda*“ – with a translation into Danish by dr.phil Tue Gad lines 97 to 130:

- | | | |
|---|--|--|
| <p>100</p> <p>105</p> <p>110</p> <p>115</p> | <p><i>Die coninc hadde een scip doen reken
 daermen wonder af mocht spreken.
 In deenmerke bleef gheen soe vast.
 Daer in stont die scoenste mast.
 Diemen binnen noorweghen vant.
 Die ree dat zeyl ende dat ghevant
 ne mochte gheen man volprisen.
 Die coninc hadde dat scip doen spisen
 dat soude hi node hebben ghelaten.
 Men droech daer bier in met vaten
 dat te lubeke was ghebrouwen.
 So dedemen oec te minen trouwen
 vele broets met groten sacken
 dat te ripen was ghebacken
 deensche baken deensche vlecken
 die harde dicke waren van specken
 rentvleesch ende scapen mede
 dat herde wit was inden snede
 wilbraet ende venisoene
 boter kese wit ende groene
 erweten ende bonen
 die daer comen waren van sconen
 stocvissche ende makrel</i></p> | <p><i>Kongen havde ladet udruste et skib
 som man omtalte med beundring.
 I Danmark var der intet (andet) så stærkt.
 Deri stod den skønneste mast
 som man fandt i Norge.
 Råen, sejlet og vanterne
 kunne ingen prise nok.
 Kongen havde ladet skibet proviantere,
 det kunne han næppe have ladet være.
 Man bragte der fade med øl ind
 som var brygget i Lübeck.
 Så bragte man også min tro
 meget brød i store sække,
 det var bagt i Ribe,
 dansk bagværk, danske flæskesider,
 som var meget tykke af spæk,
 oksekød og får tillige,
 som var helt hvidt i snittet,
 vildt og venison,
 smør, ost hvid og grøn,
 ærter og bønner,
 som var kommet fra Skåne,
 stokfisk og makrel,</i></p> |
|---|--|--|

- 120 *paeldringhe ende pinperneel
soete water borninchout
loec ayuyn asijn ende sout
peper was comijn ende kersen.
Van allen desen voersiden mersen*
- 125 *was herde vele binnen den kiele
op aventure oft gheviele
dat si yewer waren verstecken
dat hem niet en mochte ghebreken
si en hadden van allen binnen der boort*
- 130 *recht oft ware in een poort.*
- ål og pimpernel,
ferskvand, brændsel,
løg, ajuin, eddike og salt,
peber, voks, kommen og kærter.
Af alle disse nævnte varer
var der vældig mange i skiber,
for det tilfælde at det skulle ske,
at de blev drevet et eller andet sted hen,
så de intet skulle mangle,
men havde af alting om bord,
ligesom om det var i en stad.*

115: *Venison er et andet ord for vildt, måske hare.*

118: *Skåne rimer på bøkker. Om det kun er ærter og bøkker, eller også det foregående, der kommer fra Skåne, fremgår ikke.*

120: *Pimpernel er en slags ål.*

122: *Ajuin er et andet ord for løg eller en anden slags løg.*

APPENDIX 2

Danish merchants in English customs accounts of the middle ages

1 MERCHANTS OF DENMARK IN ENGLISH PORTS IN THE EARLY FOURTEENTH CENTURY⁹³

Date	Port	Shipper	Goods	Val. in £sd sterling
1303				
8 Jun	Lynn ⁹⁴	On the <i>Orilaund</i> , inward		
		Peter de Ripe	'heydukes', wadmal	£52
		Osgen de Ripe	ashes, wadmal	£24
		Pope de Ripe	pitch, wadmal	£ 2
		On the <i>Orilaund</i> , outward		
		Peter de Ripe	corn (<i>bladum</i>), other goods	£38
6 Aug	Lynn ⁹⁵	Osgen de Ripe	lead, corn (<i>bladum</i>), other goods	£24.10s.
		On the <i>Cayserinne</i> , master Henry de Hadresclive, inward		
		Henry de Hadresclive	boards	£28.16s.
		On the same ship, outward		
16 Aug	Boston ⁹⁶	Henry de Hadresclive	salt	£28
		Salamannus de Gutland	2½ cloths without grain	
		On the ship of Walter Stipel of Harderwijk, outward		
		The said Walter	lead	£ 5
		Radulfur de Ripe	lead, English cloth (<i>pannus anglicanus</i>) and 1½ scarlet cloths	£33.10s.
Mathew de Grening ⁷	worsted cloth	£ 2		

⁹³ All the accounts are in the Public Record Office, London, and all are in Latin. They have been tabulated in English here. To provide the fullest context the whole recorded inward and outward cargoes have been given of ships with any apparent Danish merchants aboard.

⁹⁴ E122/93/2: 24 Feb 1303-26 June 1304. Possibly should be read *Crilaund*. (Listed as the "Crilaund" by O. Ventegodt 1982,

74. He writes that the five ships in his list were from Ribe, but this may not be so, cf. the following entry from Boston).

⁹⁵ *Ibid.*

⁹⁶ E122/5/7: 10 Feb-29 Sep 1303; printed in Gras, *Customs System*, 279. There is no trace of Radulfus with an inward cargo on this account.

5 Sep	Boston ⁹⁷	On the ship of Saier de Ripe, inward		
		John de Rode	grey-work, wadmal, ashes	£60
		Snithewynd	wadmal, ashes, old cloth (<i>veterus pannus</i>)	£30
10 Sep	Boston ⁹⁸	On the ship of Saier de Ripe, outward		
		John de Rode	lead, English cloth (<i>pannus anglicanus</i>) and 1½ scarlet cloths	£30
		Snythe Wynd	lead, corn (<i>bladum</i>), cloth	£33
		Henry Suart'	lead, corn (<i>bladum</i>)	£34
		Hermann de Vale	English cloth (<i>pannus anglicanus</i>)	£23
1304				
22 Apr	Lynn ⁹⁹	On the ship of Reginald de Rypon, inward		
		Godescalk de Nunore	fish and oil	£24
		On the ship of Reginald de Rypon, outward		
		Godescalk de Nunore	English cloth (<i>pannus anglicanus</i>)	£24
8 May	Lynn ¹⁰⁰	On the <i>Roukenbergh</i> , inward		
		Hisberk de Harderwijk	wadmal	£7.12s.
		Mathew de Denemark	wadmal, ashes	£90
		On the <i>Roukenbergh</i> , outward		
		Hisberk de Harderwijk	salt	£7.12s.
1305				
29 Aug	Blakeney ¹⁰¹	On the <i>Welifare</i> , inward		
		Falcone de Ripe	old cloth (<i>veterus pannus</i>)	£2.10s.
14 Nov	Burnham ¹⁰²	On the <i>Wilfare</i> , inward		
		Richard de Ripe	nuts, herring	£18
1306				
23 May	Blakeney ¹⁰³	On the <i>Lichfot</i> , inward		
		Nicholas de Ripe	rye	£14
no date	Blakeney	On the <i>Lichfot</i> , outward		
		Nicholas de Ripe	say	£1.17s.
2 Dec	Lynn ¹⁰⁴	On the <i>Blyelef</i> , outward		
		Reyner de Rype	144 quarters of wheat 2 pieces of say	£28.4s. 16s.
1310				
16 Sep	Boston ¹⁰⁵	On the ship of John Stac', outward		
		Ringbold Teers	catskins, worsted cloth and 1 scarlet cloth	£13
		Jacobus de Ripe	English cloth (<i>pannus anglicanus</i>) and 5 cloths of Beverley	£ 3

⁹⁷ E122/5/9: 10 Feb-29 Sep 1303; printed in Gras, *Customs System*, 298.

⁹⁸ E122/5/7: 10 Feb-29 Sep 1303; printed in Gras, *Customs System*, 285-6.

⁹⁹ E122/93/2: 24 Feb 1303-26 June 1304; if not an Englishman, then Reginald de Rypon may be identified with Reyner de Rype at Boston in 1306.

¹⁰⁰ E122/93/2: 24 Feb 1303-26 June 1304.

¹⁰¹ A member port of Lynn: E122/93/3: July 1304-29 Sept 1307. (Inward listed as the „Wilfaire“ by O. Ventegodt 1982, 74).

¹⁰² A member port of Lynn: E122/93/3: July 1304-29 Sept 1307.

¹⁰³ A member port of Lynn: E122/93/3: July 1304-29 Sept 1307. (Inward listed as the „Lithfot“ with wheat by O. Ventegodt 1982, 74).

¹⁰⁴ E122/93/3: July 1304-29 Sept 1307. (Inward listed as the „Blyelefe“ with wheat and wool cloth by O. Ventegodt 1982, 74).

¹⁰⁵ E122/6/8: 2 Aug-29 Sep 1310. There is no trace of Jacobus with an inward cargo on this account.

¹⁰⁶ E122/93/17: 22 Jul 1322-1 Oct 1323; printed in Oven, *King's Lynn*, 359. (O. Ventegodt 1982, 74, lists a ship by the name „Maynkyn“ with herrings, wheat and barley and states, that no shipper is known).

¹⁰⁷ *Ibid.*; and 348.

¹⁰⁸ E122/148/31: 25 March 1326-26 Feb 1327: exports only.

¹⁰⁹ E122/96/36: 6 March 1456 to 24 January 1457. The cargo is given in the mixture of Latin and English vocabulary found in the record.

1323

11 May	Lynn ¹⁰⁶	On the ship of Maynkyn de Rypen, inward	
		Maynkyn de Rypen	14 lasts of herring £14
			20 quarters of barley £4
			6 barrels of rye £1
12 May	Lynn ¹⁰⁷	On the ship of Maynkyn de Rypen, outward	
		Maynkyn de Rypen	in coin sterling £30

1326

15 Jul	Yarmouth ¹⁰⁸	On the ship of Nicholas de Ripe, called the <i>Gother</i> , outward	
		Ludekin de Ripe	English cloth (<i>pannus anglicanus</i>) £12

2 THE CARGO OF BORAS RYPE DE HANSE¹⁰⁹

The surname Rype is rare among aliens visiting England in the fifteenth century. It may indicate man of Ribe working from the town; or it may indicate that a family from Ribe had emigrated to Hamburg or some other Hansard city taking their placename with them.

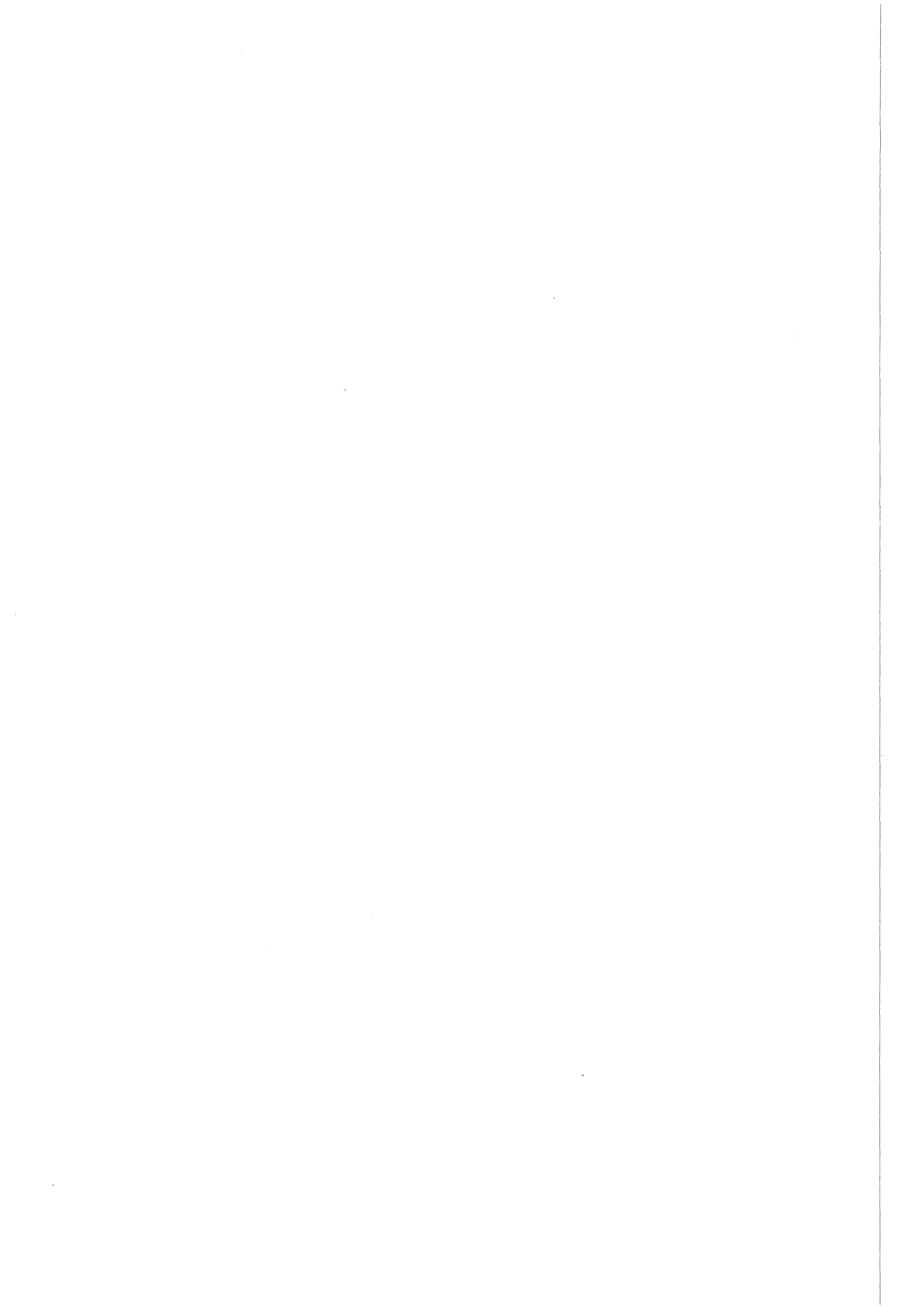
1456 6 Aug at Lynn

In nave Johannis Taunte	£ s d	£ s d
Boras de Rype de Hanse pro		10 C pitelyng 5.0.0
2 doliis ferri	4.0.0	
32 wawe glasse	20.0.0	
3 last' osmond'	12.0.0	
4 barellis hony	1.0.0	
1 barell' cum spicid cakys	1.8	
12 sadilles	13.4	
1 barell' cum drynkyng glasys	6.8	
26 litill basons	6.8	
2 C 37 scopys	3.4	
1 cista cum 10 ellys et 2 peciis lewent	10.0	
		= 43.11.8

Other merchants aboard, all designated as of the Hanse and therefore paying lower Hansard custom duties, had the following goods:

Hennyng Buryng de Hanse*	woad, pitch, bitumen	14. 0.0
Roloff Egbricht de Hanse	woad, osmund	14. 0.0
Clays Amleger de Hanse	wainscot, bitumen	2. 0.0
Hans Snecoppe de Hanse	woad, skins, linen, osmond, trenchers, tables, purses	34. 0.0
Hans Piker de Hanse	glasses, bottles	1. 0.0
Rasmus Esken de Hanse**	osmond, pitch	7.10.0
Corte Gunshot' de Hanse	lewent, 'skevens'	2. 0.0
Hans Nelle de Hanse	saddles, purses, buck skins, gloves	2. 1.8
Luder White de Hanse	glass, osmond, iron, lewent	12.10.0
Johan Gorys de Hanse	hemp, Flemish linen, featherbeds, cushions, skins, yarn, etc.	10.18.0
Walter Gorys de Hanse	kettles, pewter jars, old sheets etc	5.14.4
Gerard Dusterhope de Hanse	hats, glasses, slick-stones	1. 0.0
Total value		150. 5.8

* Of Hamburg; ** of Soest; all others are recorded only on this ship, and are unidentified by Jenks, *England, die Hanse, und Preussen*, III.



Jonathan M. Wooding

Long-distance Imports and Archaeological Models for Exchange and Trade in the Celtic West AD 400-800

The ‘Exchange and Trade’ session at the first ‘Medieval Europe’ conference, five years ago, was the occasion of a sustained assault upon the prevailing model of exchange and trade in western Britain, Ireland and Scotland in the pre-Viking period (henceforth, for convenience, the ‘Celtic West’, with due deference to the shortcomings of this term). At that 1992 session David Griffiths presented a brief critique of the tendency for archaeological discussion to focus on the evidence for long-distance exchange at the expense of investigation of short-distance resource gathering and redistribution (Griffiths 1992b). Peter Hill (1992) presented detailed evidence of resources which had evidently been gathered to Whithorn through traffic along the Solway and contrasted these with the proportionately smaller site-presence of goods, notably imported ceramics and glass, which had arrived through long-distance traffic. The latter, though a large assemblage by insular standards, he saw to be of less economic importance than the material from local sources. Thus, along with Griffiths, he proceeded to question the preoccupation of most studies of exchange and trade in the Celtic West with the long-distance imports (e.g. Dark 1997). My own contribution on that occasion was to re-examine some of the research issues concerning long-distance ceramic and glass imports, and to strongly question the tendency to see some of them, notably the glass imports, as evidence of ‘production’ (Wooding 1992; also 1996, 83ff).

The reception of the polemical views outlined in the 1992 session has so far been limited. This may in part be due to their development in short papers in relatively obscure publications (Griffiths 1992a, 1992b, 1994; Hill 1992 – but note Hill forthcoming). Harold Mytum has added some judicious observations along similar lines in his broad post-processual analysis of material life in early Christian Ireland (Mytum 1992, esp. 252ff), but there has been only limited debate on exchange except where it pertains to the more lively debate on urbanism (for bibliography see Etchingham 1996, 137-8). In most respects the *status quo* on exchange and trade is still

where it was in 1992. Five years on, then, I would like reconsider this debate with respect to the imports. Has ‘external trade become central to an all-embracing social model in archaeological research’ (Griffiths 1994, 187)? In what ways may it have prevented us from formulating other pertinent questions concerning exchange and trade in the Celtic West?

It must be accepted from the outset that, whatever the circumstances of its adoption into models of economy or cultural intervention, the evidence of external exchange, in the form of ceramic and glass imports in particular, remains central to archaeological research in the Celtic West, as these are our primary diagnostic artefacts for sites in the AD400-800 bracket. The Celtic West in this period was essentially anumismatic and the alternatives of materials for dendrochronological or radiocarbon dating are neither as accessible or consistently present as ceramic and glass fragments. It is therefore an obvious, but still pertinent, point to make that some aspects of the dating of Hill’s evidence for local exchange at Whithorn would not be possible without the evidence of long-distance imports. The Mediterranean dishes and amphorae, *palaeochrétienne grise*, E ware and ‘Merovingian’ glass vessels found at sites such as Whithorn are, in Charles Thomas’ words, a ‘chronological liferaft’ (Thomas 1976, 255; see Wooding 1996, 41-92 for recent discussion of dating issues). What Griffiths and Hill are questioning, however, is not the centrality of the detritus of external trade to the dating of other economically significant evidence, but whether this dependence on imports for establishing archaeological chronology may have exaggerated the potential role of overseas contacts in economy and in social transformation. Has such a confusion arisen?

Through the work of, in particular, David Peacock, and more recently Richard Hodges, the distributions of ceramics of all types have become accepted as evidence of trade and ‘indicators through characterisation’ (Hodges 1989) – and, as such, central to critique of models of trade in the late-Roman and sub-Roman eras. It might be argued, however, that in

such critique their most valuable role has not been as indicators of representative trade patterns. Rather, their primary importance has been to provide a chronological platform from which to demonstrate discontinuity in such sweeping models as the Pirenne Thesis (Hodges & Whitehouse 1989; Fulford & Peacock 1984). Arnold (1983), reviewing Hodges' work, has rightly observed that the link between transportation of ceramics and trade should not be exaggerated. Marx – thinking in terms of tool-making industries and the Three Age system (Marx 1930, 172) – stressed that the importance of archaeology was that it focused attention on production, through uncovering its 'osseous systems' (tools). What we are dealing with in the imported ceramics, however, is not evidence of the osseous systems, but of the 'vascular' systems (containers and distribution mechanisms) of production, which Marx saw as less representative of entire economic processes. Marx's distinction, if made with no profound knowledge of archaeology, still serves as a worthy reminder that the imported ceramics need to be clearly related to a context of consumption or production before being taken as evidence of trade *per se*. Mytum, for example, while downplaying the centrality of ceramics to economic debate, accepts their utility 'because they can be provenanced, their distributions plotted and the mechanics of trade and distribution suggested' (Mytum 1992, 252). Can we always be certain, however, that *trade* is indicated? Or, indeed, can we be sure that such routes as are indicated had more than marginal social or economic importance?

The focus on external trade to the Celtic West arises from models which pre-date the modern interest in ceramics and trade. The interest in the possibility that there was trade in elite commodities to the Celtic West commenced with Heinrich Zimmer's 'Weinhandel' thesis (1909-10). Zimmer argued that Ireland and western Britain maintained large-scale trading links with the Continent in an unbroken continuity from the pre-Roman era. It was assumed, perhaps on the basis of Polybius' testimony that Celts were always 'greedy for wine', that Roman goods and tastes would have been well established amongst Iron Age elites in Ireland by contacts with Roman traders. Zimmer's thesis played much the same role in insular studies as Henri Pirenne's did in studies of sub-Roman Europe, by arguing that these 'Roman' market demands and supply of these demands carried over virtually unchanged into the sub-Roman era and beyond. Zimmer's method was heavily coloured by Mommsen's positivist model of history (on Zimmer and Mommsen see Ó Lúing 1994, 259). In the absence of actual diplomatic sources, much emphasis was placed upon the selective use of hagiography (on the

'historical' edition of which for the MGH see Knowles 1962, 3-32; for subsequent studies on this model, see Levison 1948, 1ff; Doehaerd 1978, 149ff) and even heroic literature as evidence of *gesellschaft*, which because of the demands of their genres included references to wine and other elite goods, perhaps disproportionate to their historical presence, as well as to mariners travelling long distances, often with convenient bounty. Hodges' critique of Pirenne's thesis, that 'documentation central to his model is limited and, to some extent, ambivalent' (Hodges 1989, 7), can be applied *mutatis mutandis* to Zimmer's thesis (Wooding 1996, 32-34). The references which Zimmer saw as indicating continuous contact over several centuries can now, especially with the assistance of ceramic distributions and chronologies, be seen to indicate a range of quite differing patterns of contact from century to century (Wooding 1996, 1997). This revision of Zimmer's model of continuing Roman trade is similar to the revision which was made to Pirenne's model of continuing sub-Roman east-west trade in the light of sixth-century ceramic sequences – of which those found in the Celtic West are a subset (Fulford & Peacock 1984, 259ff).

With its focus on trade, Zimmer's thesis, like Pirenne's, subsequently played a greater role in archaeology than in history, as historians of the Celtic West, even more than their continental counterparts, came to focus on problems of source edition and intellectual history at the expense of economic history (Byrne 1971, 1-2; Davies 1983, 67-68). In the 1930s the Harvard Archaeological Mission in Ireland, under Hugh Hencken, along with the associated work of Seán P. Ó Riordáin, turned up numerous finds of the ceramic types which were to become known (after Radford 1956) as 'A' (now 'PRS and ARS': Phocaeen and African Red Slipwares), 'B' (Mediterranean amphorae) and 'E' (Gaulish) wares. These were tied to the commodity trading model provided by Zimmer – though initially only to the 'wine trade' in a vague sense, without explicit or detailed reference to Zimmer's model (Ó Riordáin 1947, 70).

It would be fair to say that there was little macroscopic debate on the political or maritime contexts of the importation of these wares, which were found in increasing numbers throughout the region from the 1950s onwards. Research initially by Ó Riordáin (with the advice of Mortimer Wheeler, Gerald Dunning and Donald Harden), and then by Ralegh Radford, Charles Thomas and Bernard Wailes, followed the reasonable policy of seeking parallels abroad in a range of locations – though direct references to Zimmer's thesis show how much these researchers ultimately came to be guided by his basic model (Radford 1956, 67; Peacock & Thomas 1967, 39;

Thomas 1976, 252-253). Ironically, as recent studies have noted (James 1982; Wooding 1997), these references take account of Zimmer's largely discredited model of cultural diffusion as much as his evidence for trade *qua* trade. The focus on religious exchange and ecclesiastical sources in Zimmer's thesis may have encouraged subsequent speculation that the imports had a specifically 'Christian' character. The personal interests of Radford, however, as well as the concurrent tendency to label the period AD400-800 'Early Christian' (Graham 1993, 19), may be equally responsible. The 'Christian' importation theory, which was based on circumstantial details such as the occurrence of the imports on 'monastic' sites and the presence of Christian symbols on a minority of the finds, was later demolished by Burrow (1973), as part of his rejection of Tintagel as a monastic site.

In this somewhat distracted archaeological debate, the arrival of the substantivist critique in the Celtic West was more an historical than an archaeological revolution. The lack of coins from the Celtic West had largely excluded the region from wider debates regarding sub-Roman trade, such as the all-important polemic of Morrison (1963) on Pirenne's idea of 'international' economic structures, and the critique by Grierson (1959) of the assumption that all exchange equalled 'trade'. Not until two decades later would Charles Doherty (1980) make a similar critique of exchange and trade in the Celtic West. Doherty identified the potential evidence for levelling mechanisms in Irish documentary sources and this evidence has been developed subsequently in the work of Gerriets (1983; 1987) and Patterson (1991). Doherty also noted the evidence for a range of goods in legal definitions of ships' cargoes, of which wine is only one many items discussed (see Wooding 1996, 32-4, 69-70; 1997, 69-71). This, along with subsequent post-processual theoretical debate, has been held to suggest that Irish society, at least, may even have been too tightly controlled to permit of conventional trade driven by external contacts (e.g. Mytum 1992, 261).

Should we downplay the importance of external trade in the Celtic West? The narrowness of some of the questions asked in the 1950s through 1980s should not lead us to abandon the subject altogether. Ethnogenesis cannot be held to explain the entire range of cultural changes which occurred in the Celtic West in the Roman and sub-Roman periods. Some changes – the arrival of Christianity must be one of these – occurred through external contact, and evidence for external trading contacts must be accepted as having the potential to explain some aspects of this process. Griffiths, for example, comments that the evidence of Roman contact with Ireland is not very substantial in archaeological terms and he interprets the finds from

around Dublin Bay, for example, as 'primarily the result of interchange of people (such as migrants and mercenaries) rather than any substantial trade' (Griffiths 1994, 184). Finds from sites in North County Dublin, however, mostly unpublished, suggest that we do not yet have a sufficiently representative picture of the archaeology of this area to downplay external contacts and their influence. The quantity of material from Loughshinney (Warner 1995, 26 for discussion of the site) is especially suggestive of strong Roman commercial contact and this supports evidence from historical and onomastic sources (e.g. Mac an Bhaird 1991-2) for Romano-British traffic centring on the east and south east of Ireland. A few finds, then, may dramatically change our thinking on the importance of external contacts.

There are other areas in the study of external contacts in which we are far from having said the last word. Post-Pirenne, the debate concerning long-distance traffic in Europe became fixated on monetary policy – a line of approach suggested by Pirenne himself. This to some extent excluded discussion of contacts in terms of any process except commerce and effectively excluded the – anumeric – Celtic West from discussion. Only A.R. Lewis, in a series of mostly confused studies (e.g. Lewis 1978), was willing to see in the Celtic West an impact of the same policies by European monarchs as affected currency and trade across Western Europe. The presence in the Celtic West of imports of probable Byzantine origin in the sixth century, and Gaulish imports in the late sixth through seventh, parallels possible evidence for Byzantine (Whitehouse 1992) and Gaulish (Wood 1991) influence upon Anglo-Saxon England in the corresponding centuries. The goods found from the Celtic west are not the same sorts of imports of valuable metalwork and coins found at sites such as Sutton Hoo, and they may have come in through connections of a quite different character. If Ian Wood (1991, 13) would describe Frankish influence in East Anglia as evidence of 'the world dominated by the Franks' in the seventh century, however, we might also consider the presence of Gaulish wares in the west as broadly suggestive of the same influence (Wooding 1996, 66-8). Equally, the presence of Eastern ceramics on sites in the Celtic West in the sixth century must be suggestive of what we might term the 'world dominated by Justinian'.

If Griffiths is correct to say that the importance of external contacts is overrated, it must be said that the manner in which they have been overrated has in these cases studiously avoided some pertinent questions. Discussion of the eastern imports frequently sought an historical dimension in a fanciful story of a storm-driven Byzantine merchant (for recent dis-

cussion see Knight 1995, 45; Wooding 1997, 82), but it was not until 1989 that these imports were considered in the light of more historical evidence for the influence of Justinian's policy in the West (Fulford 1989). In such cases we should not throw the baby out with the bathwater. There is nothing incompatible in this with Griffiths' ideal. These contacts merit study their own right, not as an assumed backdrop of continuous commerce which acts as a *deus ex machina* in cultural debates. Raftery (1969, 199) was unwise to deny the possibility of direct links to the Mediterranean altogether in the period AD400-800, but he was justifiably critical of the tendency to see interventionist contacts as the cause of every exotic-seeming feature of insular culture. Analysis of these contacts in a broad context of economy and society will better define the limits of their cultural impact. Putting their study to one side will not.

Griffiths, Hill and Mytum, however, rightly stress that the imports themselves have become too central to all debates concerning exchange; reanalysis must seek to remove itself from the tendency to see the imports as indicating economic activity. An example of this problem is the application of the theoretical terminology which attempts to identify 'gateway communities', 'ports of trade' and *emporium* in the Celtic West – though it must be noted that few such discussions have so far gone beyond superficial parallels. Richard Hodges would identify Dalkey Island as a likely exchange site in terms of the model which argues for the inherent social neutrality of islands and the degree of control that a ruler could exercise in terms of access routes to the site (Hodges 1978, 115). The evidence for regular occupation of the island in the period AD400-800 (Liversage 1967-8, 165) and the range of imports present – including Mediterranean wares, E ware and glass – adds some weight to this argument, though in view of the variety evinced in the morphology of high-status sites in Ireland this site, which is a promontory fort on the northern tip of the island, might also be explained simply as a highly defensible settlement site. In the case of both Dalkey and Nendrum, the other frequently cited 'port of trade' (Hodges 1989, 67; Graham 1993, 24), one suspects that the fact that both sites are islands with imported artefacts is the principal basis for identifying them as such (which is the conclusion of Mytum 1992, 263). In the case of Nendrum, its supposed find of E ware can now be shown to be a later medieval ware. Does the absence of E ware leave any other strong criterion for seeing Nendrum as a trading site? Certainly Nendrum has evidence of craft production which may be early medieval, but this is true of other monastic sites (Ryan 1988) and the dating of the evidence from Nendrum

to the AD400-800 bracket is questionable without the E ware.

Alan Lane's identification of Dunadd as a 'gateway community' to Dalriada commands greater attention, based on his and Ewan Campbell's important discoveries over several years work at the site, as well as the location of the site on a key portage (Lane 1994, 109ff; Wooding 1996, 107). Whether the functioning of Dunadd in this role is more than a process of geographical circumstance, by which occasional imports – such as key pigments for use in ecclesiastical art (Lane 1994, 111) – passed through the site, may remain to be proved from further regional study. That the quantity of E ware at Dunadd is greater than from any other site (Lane 1994, 109), for example, could certainly have been determined by the greater scale of excavation at Dunadd than at most other sites in the Celtic West. This seemingly large quantity of evidence for external trade at Dunadd should not then distract attention from the extensive evidence for local production and redistribution *within* the Hebridean zone (Harding 1990, 7ff), to which Dunadd, as a 'gateway community' for occasional imports, may be peripheral. Here Hill's critique seems especially relevant.

The presence of scatters of glass and other finds in sixth/seventh contexts in the Celtic West draws misleading comparison with similar detritus on trading sites in eastern Britain, or with sites from later periods. Recent study of the glass finds from the Celtic West by Campbell and others (Campbell 1995; Wooding 1996, 44ff), however, has disproved the long-held thesis that they were imported as 'cullet' – i.e. in a fragmentary state for use in production of artefacts decorated with glass. Henderson and Ivens (1992) further, have questioned the centrality of the recycling of the fragments of imported glass to the decorative glass industries in the Celtic West. This removes the glass imports from any inherent value-adding process. Similar cases of artefacts which have been described as 'reworked' or found in a context of value-adding may be noted. Finds of Samian ware in fragmentary form from early medieval contexts now suggest that it was brought in as fragments to be used as relics (Lynn 1984, 29ff). No convincing argument has yet been made that these objects were reworked on site or used in any production process. Sherds of Bi (Peacock & Williams Class 43) amphorae have been found reworked into discs (e.g. Rahtz 1974, 110, fig. 3, no. 20). These were in fact reworked off-site and came to Britain as stoppers for filled amphorae (cf. Bass & Van Doorninck 1982, 160-161). Again their insular economic context is passive in production terms – the recycling took place abroad. There is a tendency – inherited from the study of prehistoric

industries – to present glass vessels and even ceramics in archaeological reports as substances, rather than the remains of objects. In fact, however, it is increasingly being shown that materials such as the glass were being imported as objects of use which had no direct connection to local production. The disproving of Harden's thesis must be seen as having wide implications for the assumptions which have been made regarding the functions of find sites in the Celtic West. On an *emporium* in eastern England, or Viking Age Ireland, the fragmentary remains of glass or even ceramics may be seen in the context of an on-site production process. Here they cannot.

The exclusion of imports from possible processes of production might be held to suggest that they arrived in relatively culturally-neutral contexts. Namely they were either pre-purchased and therefore had a proscribed consumer context; or, perhaps, they were sold at point of importation on a speculative basis. Any individual reuse of the vessels which was made is hence relatively unimportant in economic terms. Yet at times the discussion in archaeological reports has an air of special pleading in seeking a socially consistent context of reuse (e.g. Liversage 1967-8, 167). The same is also true of many artefact reports which attempt to define odd or damaged pieces as attempts at 'local copies' of imports. Such speculations perhaps hint at a discomfort with the idea that imported goods do not have an 'impact' in terms of promoting production or social change.

E ware has only lately come to be appreciated in terms of its actual form: a coarseware, in the form of 'cooking pots', beakers, plates, pitchers and small jars. The social function which these pots were expected to perform has too often been treated as incidental to the contacts which they indicate, probably from western Gaul in the seventh century, which have been inevitably ascribed to the 'wine trade' (Wooding 1988). Campbell, in a mostly as yet unpublished study, has identified patterns of staining on E ware vessels, which he argues may imply that they were not used for cooking, or at least not consistently so. On the basis of this Campbell has argued instead that these imports entered Britain as containers for valuable commodities (see Lane 1994, 110). The assumption that these vessels are kitchen wares is rightly questioned (Lane 1994, 110). The idea that they were mainly containers, however, is not conclusive either and it is probably safest for the moment not to attempt to link them too closely to the processes of trade or production. Ei and Eii vessels are not self-evidently containers, for all that Ei would make a suitable vessel for such relatively stable substances as honey, or even perhaps salt. It should be observed that whereas the other Mediterranean imports have a

definite context as containers abroad, this not demonstrable in the case of E ware in any Gaulish context. Campbell's close analysis of the vessels, which contains valuable references to a range of other imports, is yet to be published, however, and may have more to add to the picture so far presented.

The problem here still might reside in the attempt to explain the E ware vessels in terms of the economics of the 'trade' which brought them in. Comparison with the Mediterranean wares may be misleading, if made on the assumption that, being external trade goods, they have more in common with each other in economic terms than they do with other objects in use in the society around them. Caroline Earwood has looked for parallels between E ware forms and the forms of lathe-turned wooden vessels of seventh-century date in Scotland and Ireland (Earwood 1990, 85). None of these parallels is so close, however, as to make the exercise entirely conclusive and here we might question the need to place the imported E ware at the beginning of a sequence of production. This might imply that the appearance of E ware brought about market changes which eventually necessitated the finding of alternatives to supplement or replace it. The appearance of E ware in the seventh and eighth centuries might be better explained, however, in terms of a broad change in consumer patterns – which may occur with only subsequent reference to the imports. Here is where Griffiths' critique is salutary. Finbar McCormick's researches would suggest a pattern of economic change across this period, with greater hierarchy emerging (McCormick 1995; Graham 1993, 21ff). A text such as *Crith Gablach*, written around the eighth century, details household structures involving many small vessels (Wooding 1988; 1996, 82). The emergence of local ceramics soon after the appearance of E ware, in the form of Souterrain Ware, along with the wooden vessels, might suggest in broad terms a market demand for a variety of small vessels which were not previously needed. To attempt to identify E ware amongst these, or to argue for its causal influence on some forms, would perhaps be to assume that E ware is closer in economic terms to the cause, rather being simply one of the many indicators, of this process of change. This may be to overrate the influence of coarse pottery with a relatively limited distribution.

The hierarchical nature of Irish society may have put strong limitations on the functioning of external exchange. There are sufficient sources of evidence for goods in transit, however, that we must assume commercial movement of goods. Who was ordering such goods and how? Recent debate has tended to favour the idea that a network of high-status secular

sites was responsible (Thomas 1988, 1990; Lane 1994, 112). Fragments of an early Irish law text *Muirbretha* ('sea judgements') imply that importation of goods to designated persons was legally possible, providing for penalties to the crown when they went elsewhere (Wooding 1996, 68ff; an edition is in preparation). In the light of this it is reasonable to accept the archaeological arguments for royal jurisdiction over trade (e.g. Lane 1994). To claim that trade was controlled by royalty on the basis of distributions of imports, however, is not an end in itself. We must not limit discussion to the distribution processes of the imports. Burrow disputed the exclusivity of the model whereby the imported ceramics were understood as 'religious' in association, a view which he questioned in terms of their occurrence on a majority of sites without overtly religious function. The legacy of his polemic, however, has perhaps been the questionably critical model whereby one simply adds up the number of sites where such ceramics are found and dissects them in terms of a 'secular/religious' dichotomy. This cannot be taken as disproving a role of religious networks in importation or distribution and Mytum has argued that the religious community was in many ways well placed to play a role in importation. In the light of our still poor understanding of the structure and practice of early Christianity in the Celtic West we cannot even safely assume that a hillfort, for example, may not have been the setting for some religious practice or residence. The site at Whithorn, at which historical reasons suggest church control in the period AD500-700, is one of the few sites which has so far demonstrated evidence of value-added production. This seems to add weight to the idea that we need to consider distributions in more than morphological equations, but in a network of hinterland relations and with some attempt at a picture of the social-economy as a whole.

In conclusion, we may not be too critical of a field in which a handful of workers have rightly prioritised the study of imports which are central to the interpretation of field archaeology. Nonetheless, Griffiths' and Hill's critiques have a great deal to offer in the interpretation of a regional archaeology that *has* made external contacts central to a social model, at the expense, perhaps, even of a full understanding of the imports themselves.

Bibliography

- ARNOLD C. 1983: Review of Hodges, *Dark Age Economics*, *Scottish Archaeological Review* 2, 80-81.
- BASS G. & VAN DOORNINCK F. 1982: *Yassi Ada: A Seventh Century Byzantine Shipwreck*, College Station, Texas.
- BYRNE F.J. 1971: Ireland Before the Norman Invasion, in: T. MOODY (ed), *Irish History 1945-70*, Dublin, 1-15.
- CAMPBELL E. 1995: New Evidence for Glass Vessels in western Britain and Ireland in the 6th/7th centuries AD, in: D. FOY (ed), *Verre de l'Antiquité Tardive et du Haut Moyen Age*, Musée Archéologique du Val d'Oise, 35-39.
- DARK K.R. (ed) 1997: *External Contacts and the Economy of Late-Roman and Post-Roman Britain 400-800 AD*, Woodbridge.
- DAVIES W. 1983: An Historian's View of Celtic Archaeology, in: D. HINTON (ed), *25 Years of Medieval Archaeology*, Sheffield, 67-73.
- DOEHAERD R. 1978: *The Early Middle Ages in the West: Economy and Society*, trans. W.G. Deakin, Amsterdam.
- DOHERTY C. 1980: Exchange and Trade in Early Medieval Ireland, *Proceedings of the Royal Society of Antiquaries of Ireland* 110, 67-89.
- EARWOOD C. 1990: The Wooden Artefacts from Loch Glashan Crannóg, Mid Argyll, *Proceedings of the Society of Antiquaries of Scotland* 120, 79-94.
- ETCHINGHAM C. 1996: Early Medieval Irish History, in: K. McCone & K. Simms (edd), *Progress in Medieval Irish Studies*, Maynooth, 123-154.
- FULFORD M. 1989: Byzantium and Britain: a Mediterranean Perspective on Post-Roman Mediterranean Imports in Western Britain and Ireland, *Medieval Archaeology* 33, 1-6.
- FULFORD M. & PEACOCK D.P.S. 1984: *Excavations at Carthage: The British Mission Volume 1.2*, Sheffield.
- GERRIETS M. 1983: Economy and Society: Clientship according to the Irish Laws, *Cambridge Medieval Celtic Studies* 5/6, 43-61.
- GERRIETS M. 1987: Kingship and Exchange in Pre-Viking Ireland, *Cambridge Medieval Celtic Studies* 13, 39-72.
- GRAHAM B.J. 1993: Early Medieval Ireland: Settlement as an Indicator of Economic and Social Transformation, in: B.J. GRAHAM & L.J. PROUDFOOT (edd), *An Historical Geography of Ireland*, London, 19-57.
- GRIERSON P. 1959: Commerce in the Dark Ages, *Transactions of the Royal Historical Society* 9, 123-124.
- GRIFFITHS D. 1992a: The Coastal Trading Ports of the Irish Sea, in: J. GRAHAM-CAMPBELL (ed), *Viking Treasure from the North West: The Cuerdale Hoard in its Context*, Liverpool, 63-72.
- GRIFFITHS D. 1992b: Territories and Exchange in the Irish Sea Region 400-1100, in Hall *et al.* 1992, 9-12.

- GRIFFITHS D. 1994: Trade and Production Centres in the Post-Roman North: the Irish Sea Perspective, *Arkeologiske Studier* 10, Copenhagen, 184-188.
- HALL R. *et al.* (ed) 1992: *Exchange and Trade, Medieval Europe 1992, Proceedings, Volume 5*, York.
- HARDING D.W. 1990: Changing Perspectives on the Atlantic Iron Age, in: I. ARMIT (ed), *Beyond the Brochs*, Edinburgh, 5-16.
- HENDERSON J. & IVENS R. 1992: Dunmisk and Glass-Making in Early Christian Ireland, *Antiquity* 66, 52-64.
- HILL P. 1992: A Thousand Years of Contact: the Economy of Whithorn from 450-1450, in: Hall *et al* 19-24.
- HILL P. forthcoming: *Whithorn* (Phillimore).
- HODGES R. 1978: Ports of Trade in Early Medieval Europe, *Norwegian Archaeological Review* 11, 97-117.
- HODGES R. 1989: *Dark Age Economics*, 2nd Edition, London.
- HODGES R. & WHITEHOUSE D. 1989: *Mohammed, Charlemagne and the Origins of Europe*, London.
- JAMES E. 1982: Ireland and Western Gaul in the Merovingian Period, in: D. WHITELOCK *et al.* (edd), *Ireland in Early Medieval Europe: Studies in Memory of Kathleen Hughes*, Cambridge, 362-386.
- KNIGHT J. 1995: Hen Gastell in its Contemporary Setting, *Archaeologia Cambrensis* 143, 36-45.
- KNOWLES D. 1962: *Great Historical Enterprises*, London.
- LANE A. 1994: Fifth to Seventh-Century Trading Systems in western Britain and Ireland, in: B. CRAWFORD (ed), *Scotland in Dark Age Europe*, St Andrews, 104-115.
- LEVISON W. 1946: *England and the Continent in the Eighth Century*, Oxford.
- LEWIS A.R. 1978: Byzantine Lightweight Solidi and Trade to the North Sea and the Baltic, in: IDEM., *The Sea and Medieval Civilisation*, Variorum, Section V.
- LIVERSAGE G.D. 1967-8: Excavations at Dalkey Is. Co. Dublin 1956-9, *Proceedings of the Royal Irish Academy* 66c, 53-233.
- LYNN C. 1984: Some Fragments of Exotic Porphyry found in Ireland, *Journal of Irish Archaeology* 2, 19-32.
- MAC AN BHAIRD A. 1991-2: Ptolemy Revisited, *Ainm: Bulletin of the Ulster Place-name Society* 5, 1-20.
- MCCORMICK F. 1995: Cows, Ringforts and the Origins of Early Christian Ireland, *Emania* 13, 33-37.
- MORRISON K. 1963: Numismatics and Carolingian Trade: a Critique of the Evidence, *Speculum* 38, 403-432.
- MYTUM H. 1992: *The Origins of Early Christian Ireland*, London.
- Ó LÚING S. 1994: Celtic Scholars of Germany, *Zeitschrift für Celtische Philologie* 46, 249-271.
- Ó RIORDÁIN S.P. 1947: Roman Material in Ireland, *Proceedings of the Royal Irish Academy* 51C, 35-82.
- PATTERSON N. 1991: *Cattle-Lords and Clansmen*, Notre Dame.
- RADFORD C.A.R. 1956: Imported Pottery found at Tintagel Cornwall, in: D.B. HARDEN (ed.), *Dark Age Britain*, London, 59-70.
- RAFTERY J. 1965: ExOriente....., *Journal of the Royal Society of Antiquaries of Ireland* 95, 193-204.
- RAHTZ P. 1974: Pottery in Somerset, AD 400-1066, in: V. EVISON (ed), *Medieval Pottery from Excavations*, London, 95-126.
- RYAN M. 1988: Fine Metal-working and Irish Monasteries: the Archaeological Evidence, in: J. BRADLEY (ed), *Settlement and Society in Medieval Ireland*, Kilkenny.
- THOMAS C. 1976: Imported Post-Roman Mediterranean Pottery in Ireland and Western Britain, Chronologies and Implications, *Proceedings of the Royal Irish Academy* 76C, 245-255.
- THOMAS C. 1988: The Context of Tintagel: a New Model for the Diffusion of Post-Roman Imports, *Cornish Archaeology* 27, 7-25.
- THOMAS C. 1990: *Gallici Nautae de Galliarum Provinciais* – A Sixth/Seventh Century Trade with Gaul Reconsidered, *Medieval Archaeology* 34, 1-26.
- WARNER R. B. 1995: Tuathal Techtmar: a Myth or Ancient Literary Evidence for a Roman Invasion?, *Emania* 13, 23-32.
- WHITEHOUSE D. 1992: The Mediterranean Perspective, in: R.T. FARRELL & C. NEUMAN DE VEGVAR (edd), *Sutton Hoo: Fifty Years After*, Oxford, Ohio, 117-124.
- WOOD I. 1991: The Franks and Sutton Hoo, in: WOOD I. & LUND N. 1991 (edd), *People and Places in Northern Europe 500-1600: Essays Presented to Peter Sawyer*, Woodbridge, 1-17.
- WOODING J.M. 1988: What Porridge Had the Old Irish?, *Australian Celtic Journal* 1, 12-17.
- WOODING J.M. 1992: Gaulish Artefacts in the Celtic West: Some Problems of Approach, in: Hall *et al.* 169-172.
- WOODING J.M. 1996: *Communication and Commerce along the Western Sealandes AD400-800*, British Archaeological Reports International Series 654, Oxford.
- WOODING J.M. 1997: Cargoes along the Western Seaboard, in: Dark, 67-82.
- ZIMMER H. 1909-10: Über direkte Handelsverbin-

dungen Westgalliens mit Irland im Altertum und frühen Mittelalter, *Sitzungsberichte der königlich preussischen Akademie der Wissenschaften* 1909: 363-400; 430-76; 543-613; 1910: 1031-1098; 1098-1119.

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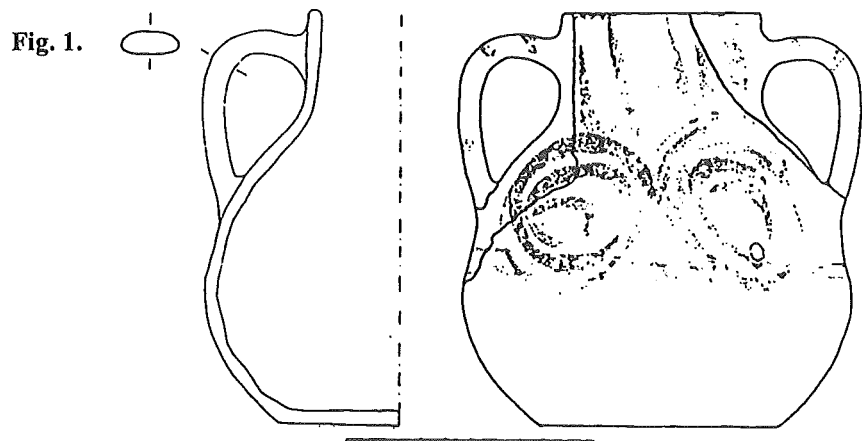
La Sardegna porto del Mediterraneo occidentale: le presenze ceramiche in età giudicale ed aragonese

La Sardegna, grazie alla sua posizione geografica, fin dall'epoca preistorica ha avuto una fondamentale importanza nei commerci marittimi del Mediterraneo occidentale¹. Ciò ha necessariamente comportato, anche nel periodo oggetto del presente studio, l'opportunità di frequente contatto con genti e merci delle più svariate provenienze. Una traccia materiale di queste frequentazioni, che ovviamente hanno portato a contaminazioni culturali reciproche, è la presenza in Sardegna di ceramiche provenienti da varie e differenti regioni geografiche e culturali, ma anche la testimonianza di prodotti sardi che imitavano le novità che di volta in volta giungevano d'oltremare².

Il periodo oggetto del presente studio comprende un arco cronologico ampio circa sei secoli, in quanto le prime tracce documentarie dei giudicati sardi risalgono all'inizio del X secolo, mentre la data del 1479

può essere considerata, per convenzione e praticità di lavoro, il momento di passaggio dalla dominazione catalano-aragonese, nei paesi soggetti alla Corona d'Aragona, a quella propriamente detta spagnola³.

Molti aspetti del mondo giudicale⁴ sono ancora poco conosciuti e fra questi bisogna annoverare ciò che comunemente è indicato con il termine di “cultura materiale”. In particolar modo le testimonianze ceramiche sono ben poche e controverse sono spesso le relative datazioni ed attribuzioni a precise aree di produzione⁵. Ad esempio, all'attenzione degli archeologi che studiano il medioevo sardo si è da circa vent'anni imposta la ceramica comune dipinta in rosso o bruno, rappresentata da forme chiuse (anforette o brocchette), con superficie esterna ricoperta da leggero ingobbio o solo schiarita in cottura e decorazione geometrica o a disordinate spirali che invadono



¹ La bibliografia su questo argomento è amplissima, si vedano in particolare per il periodo medievale e la vasta bibliografia precedente Simbula 1993 e Tangheroni 1996.

² Il presente studio si basa esclusivamente sull'edito che offra documentazione grafica o fotografica dei materiali citati, rimandando ad altra sede la verifica di tutte quelle notizie sintetiche di rinvenimenti che non permettono una valutazione comparativa dei pezzi. In considerazione delle norme redazionali di questi pre-atti, però, solo una piccola parte delle ceramiche citate potrà essere illustrata: si rimanda pertanto alle fotografie presenti nella bibliografia indicata per i singoli contesti.

³ Sulle vicende storiche e politiche della Sardegna giudicale e catalano-aragonese si vedano AA.VV. 1987 e Casula 1990.

⁴ D'altra parte, considerato il fatto che i tre giudicati di Torres (o Logudoro), Cagliari e Gallura cessano di esistere entro la metà del XIII secolo, mentre quello d'Arborea sopravviverà loro per quasi due secoli (fino al 1420), bisogna essere cauti nell'uso generico dell'aggettivo “giudicale” in riferimento a queste quattro realtà politiche, economiche e sociali in molti aspetti differenti, specificando sempre ambito geografico e cronologico al quale ci si riferisce di volta in volta.

⁵ Per una rassegna dei rinvenimenti si veda Marini & Ferru 1993, 18-21.

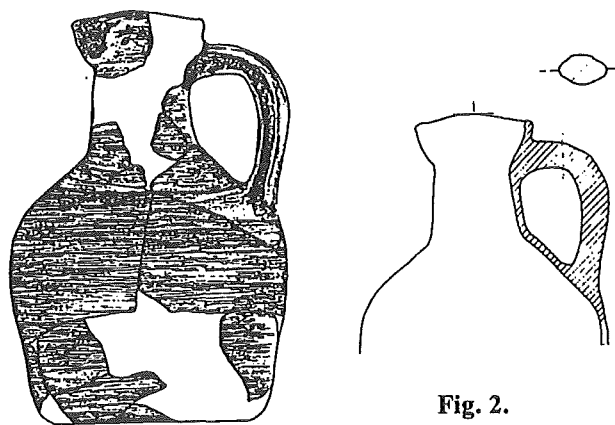


Fig. 2.

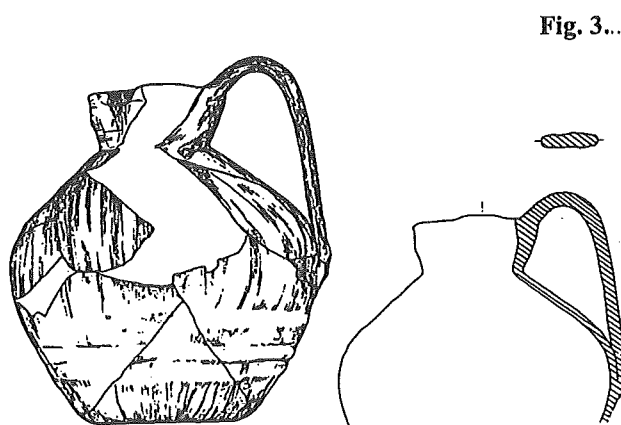


Fig. 3..

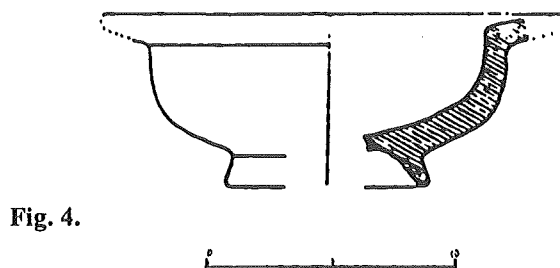


Fig. 4.

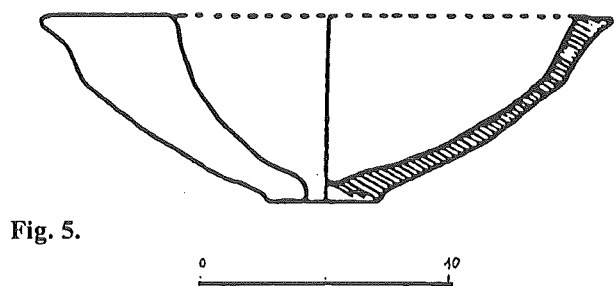


Fig. 5.

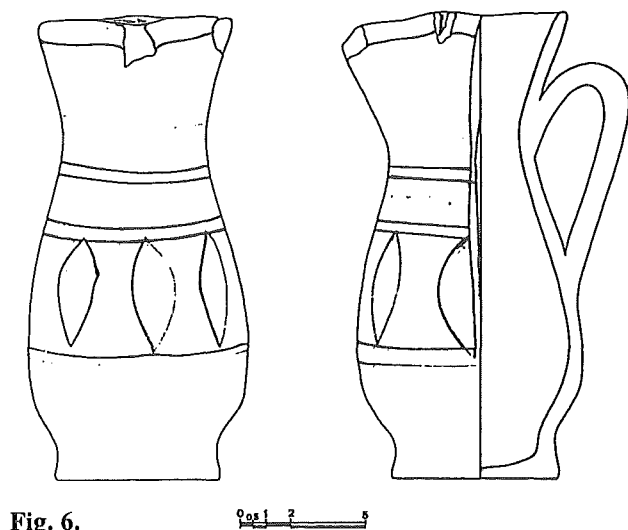


Fig. 6.

pancia, spalla, collo ed anse (Fig. 1)⁶. La cronologia ad essa relativa è ancora dubbia: in base a confronti tipologici la si colloca fra il secolo XI ed il XIII circa, ma a parte il caso cagliaritano di P.zza S. Cosimo⁷, laddove i frammenti sono in strati datati ai secoli XI-XII, ci troviamo davanti a rinvenimenti di superficie o non definibili cronologicamente con precisione da contesto⁸. Non tutti gli studiosi sono concordi nel considerarla una produzione isolana, preferendo alcuni sottolineare l'analogia fra questi materiali ed esemplari realizzati in Italia meridionale.

La ceramica comune non decorata di epoca alto-giudiciale (IX-XI) sembra invece rappresentata (nell'edito) solo da due brocchette monoansate rinvenute a Cornus⁹: la prima ha corpo biconico, orlo trilobato ed ansa a nastro, mentre la seconda è più tozza, dal profilo piriforme, bocca trilobata ed ansa a sezione ellittica. La stessa classe ceramica è molto più citata nelle pubblicazioni riguardanti contesti tardomedievali, ma purtroppo di rado viene illustrata in disegni e fotografie, limitandosi gli studiosi ad accennare alla presenza di tali materiali in relazione ad altri normalmente più significativi dal punto di vista cronologico¹⁰.

Ben più diffusa e di notevole interesse è la ceramica comune con decorazione incisa realizzata con un pettine o con una stecca sull'impasto ancora fresco. La datazione è incerta e le testimonianze provengono da numerosi contesti in tutta l'isola. Gli Autori che ne propongono una datazione si riferiscono ad alcuni frammenti recuperati in corso di scavo in loc. Corte Auda, nel territorio di Senorbì (Ca), da alcune fosse

⁶ Si veda da ultimo Dadea 1995, ma già Giuntella 1988 da cui è tratto il disegno della Fig. 1.

⁷ Pani Ermini 1984, 117 ed accenno in Spanu 1992, 70 e 65, fig. 46.

⁸ Forse è il caso del pezzo di Oristano in Depalmas 1991, 204, Tav. III, 8 e dei frammenti ricomposti ed integrati ora al Museo di Sardara e provenienti da S. Maria is Acquas, località

compresa nel territorio sardarese. Anche i frammenti segnalati in agro di Dolianova, Loc. Casinedda, provengono da raccolta di superficie: cfr. Salvi 1989, 35.

⁹ In Giuntella 1986, 145-146, fig. 11, Tavv. LXXI-LXXIV, LXXIX.2, LXXXIX.3. Le Figg. 2 e 3 qui riprodotte sono tratte dalla pubblicazione testè citata.

¹⁰ Una "mappatura" dei rinvenimenti relativi a questa classe

di scarico¹¹ e ad altri raccolti in superficie a Cagliari, in loc. Predio Ibbà¹². In ambedue i casi gli studiosi hanno suggerito l'attribuzione al periodo "proto-giudicale" (X-XI secolo ca)¹³.

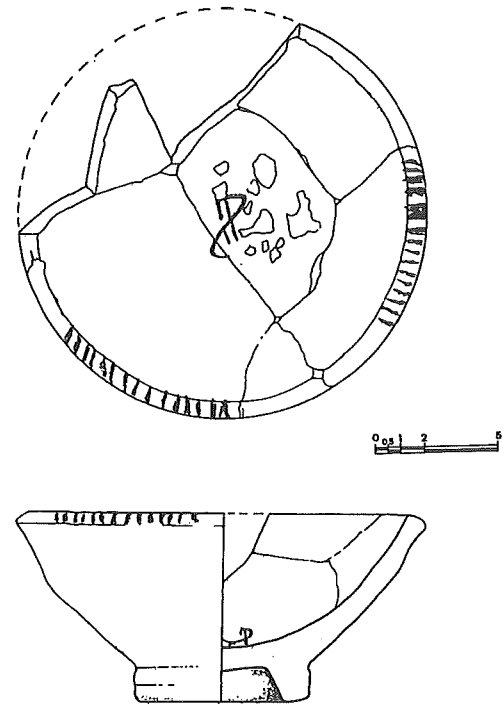
Le ceramiche invetriate sono molto diffuse e costituiscono un gruppo alquanto eterogeneo sia per caratteristiche morfologico-funzionali sia per tecniche ed aree di produzione.

La brocchetta invetriata con decorazione applicata "a pigne" (la cd. Forum Ware) conservata al Museo "Sanna" di Sassari è uno dei non numerosi esemplari di questo tipo importati in Sardegna¹⁴.

Numerosi frammenti di ceramiche invetriate provengono dal sito della capitale giudicale di S. Igia, a Cagliari, e si collocano fra l'XI ed il XIII secolo, mentre non meglio datati, ma certo posteriori al XII secolo, sono quelli rinvenuti durante gli scavi nel sagrato antistante la Cattedrale di Oristano¹⁵.

Dagli scavi condotti nel castello di Monreale provengono vari tipi morfologico-funzionali di materiali invetriati¹⁶. Fra queste vi sono bacini troncoconici con fondo piano, pareti leggermente estroflesse ed orlo molto ingrossato verso l'esterno, ingobbati e ricoperti di vetrina verde più o meno brillante all'interno: i diametri sono variabili fra i 22 ed i 43 cm. e una buona percentuale di esemplari è dotato di una coppia di fori passanti sul bordo. Materiali direttamente confrontabili per forme ed impasto (rosso, duro e vacuoloso, con *chamotte* ed inclusi bianchi) con quelli provenienti dalla chiesa di S. Chiara di Cagliari¹⁷. Boccaletti di piccole e medie dimensioni (h. compresa fra i 23 ed i 30 cm.) hanno bocca trilobata, ansa a sezione ellittica o a nastro con solcatura mediana, profili variabili delle pareti (verticali oppure più o meno convesse), ma sempre fondo apodo e piano¹⁸. Il rivestimento quasi sempre è presente solo

Fig. 7. -



sulla superficie esterna ed è in genere opacizzato o, in molti casi, rivela tracce di devetrificazione. La stessa forma può essere rivestita in un caso con vetrina verde pallido in un altro con uno smalto sottile e lattescente. Ciotole emisferiche, il diametro delle quali mediamente è di cm. 13 sono rivestite solo internamente da un pesante strato di vetrina densa e opacizzata di colore biancastro o giallastro con molte striature di colore più scuro e colature in prossimità dei bordi¹⁹.

Anche il silos rinvenuto durante gli scavi del Duomo di S. Nicola a Sassari, datato al XIV secolo, ha restituito interessanti esemplari di ciotole emisferiche,

ceramica è in fase di elaborazione da parte di Fabio Pinna nel corso della preparazione della propria tesi di laurea, di prossima discussione presso l'Università di Cagliari. Si rimanda senz'altro al lavoro di quest'ultimo anche e soprattutto per lo studio dei materiali di questo tipo rinvenuti nel castello di Monreale-Sardara (Ca) nel corso di varie campagne di scavo condotte dalla équipe della Prof.ssa Letizia Ermini Pani (sulla struttura cfr. il contributo del collega Pier Giorgio Spanu in questi stessi pre-atti).

¹¹ Salvi 1990, 90-91.

¹² Dadea 1995, 248, 257, figg. 5-6.

¹³ Uno studio preliminare su tale classe ceramica è stato affrontato da Elisabetta Garau nella propria tesi di laurea discussa presso l'Università di Cagliari con la Prof. ssa Letizia Pani Ermini nell'AA. 94-95.

¹⁴ Cfr. Serra 1979, 8-9, Tav. XVI.

¹⁵ Per S. Igia cfr. Giuntella 1988, 96, mentre per Oristano cfr. Depalmas 1995, 225-226.

¹⁶ Purtroppo non è possibile attualmente fornire i disegni delle ceramiche rinvenute nel castello di Monreale in quanto lo studio non è ancora stato portato a termine. I materiali sono in buona

parte esposti nelle vetrine del Museo Civico "Villa Abbas" di Sardara (Ca) ed è in corso di realizzazione, oltre all'edizione integrale degli scavi condotti negli ultimi anni nel castello da parte dell'équipe della Prof.ssa Letizia Ermini Pani, il catalogo della selezione di pezzi presentati al pubblico in questa struttura museale di recentissima apertura.

¹⁷ Salvi 1993, 150.

¹⁸ In Ferru & Porcella 1989, 170, Fig. 15, preciso confronto con esemplare rinvenuto in Loc. Casteddu Ezzu, in territorio di Cuglieri (Or).

¹⁹ Cfr. nota 17. Sono state avviate le analisi degli impasti e dei rivestimenti di questi esemplari onde individuare con buona affidabilità le produzioni locali e quelle di importazione. Una attribuzione a produzione locale di ceramiche invetriate con queste caratteristiche rinvenute in varie località sarde (cripta di S. Restituta a Cagliari, Casteddu Ezzu in agro di Cuglieri-Or e S. Francesco di Alghero) è stata in passato proposta in Ferru & Porcella 1989, 162 e 160-161, nota 11 per bibliografia relativa ai rinvenimenti.

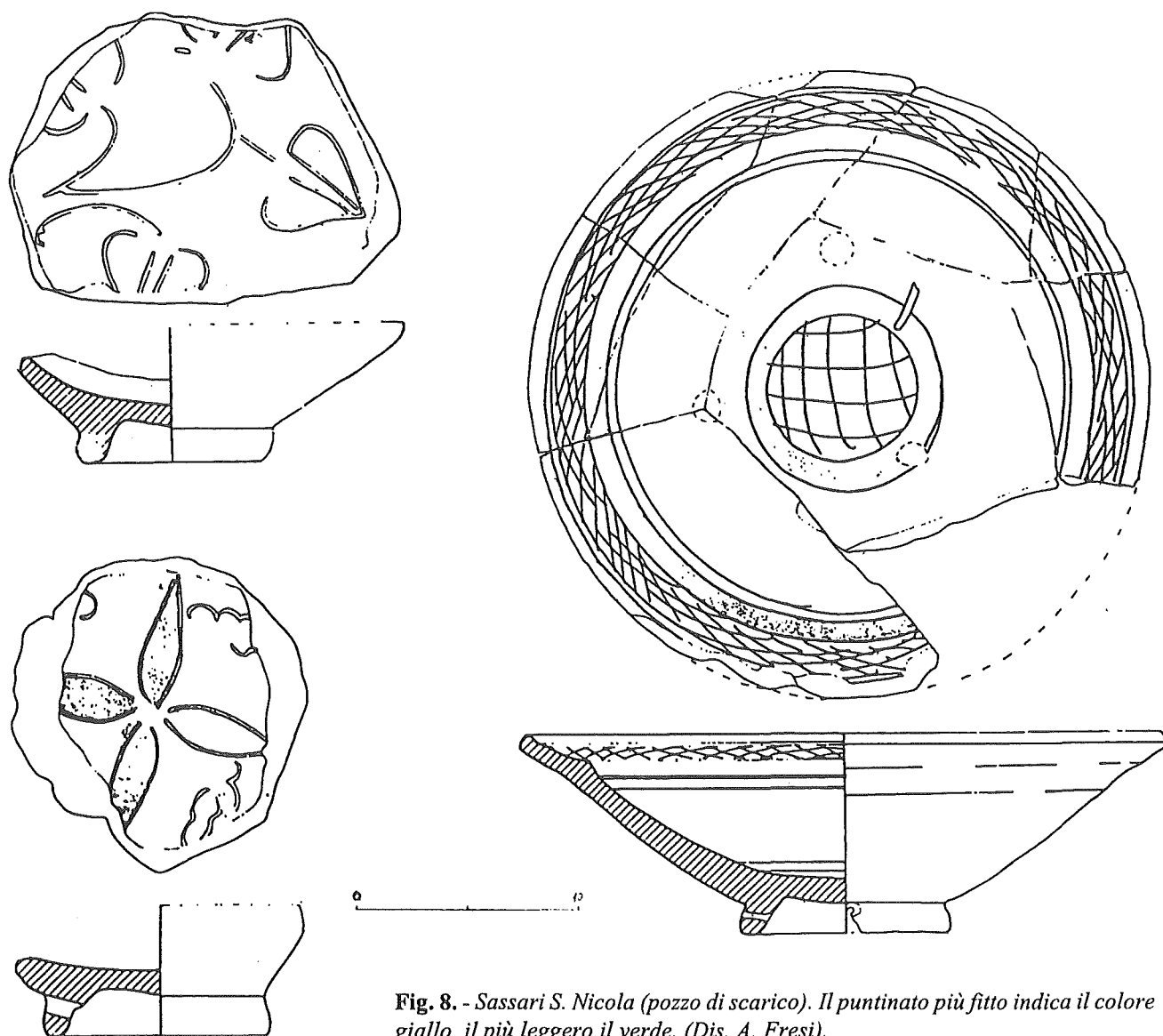


Fig. 8. - Sassari S. Nicola (pozzo di scarico). Il puntinato più fitto indica il colore giallo, il più leggero il verde. (Dis. A. Fresi).

ma in questo caso ingobbiate e rivestite da vetrina verde o gialla²⁰, che sembrano trovare riscontro in quelle stesse forme ingobbiate e rivestite da vetrina monocroma verde recuperate nell'area circostante la cattedrale di Oristano²¹. Varie segnalazioni relative a reperti ceramici invetriati riguardano numerose località della Sardegna²², ma in base all'edito non risulta ancora possibile un chiaro quadro dei rinvenimenti, così che non è agevole impostare un corretto confronto fra le produzioni. Le stesse difficoltà, se non maggiori, si riscontrano nello studio della ceramica da fuoco.

Le pentole in ceramica da fuoco associate ad anforacci da Corte Auda, in agro di Senorbi (Ca), restano per ora gli unici esempi editi di materiali di questo tipo databili tra X e XIII secolo²³. La pentola a fondo piano e parete verticale rinvenuta a S. Igia in associazione con la dipinta in rosso dovrebbe all'incirca datarsi allo stesso arco di tempo²⁴. Più tardi, in quanto attribuibili al XIV secolo, sono invece l'esemplare del silos del Duomo di Sassari con fondo piano, pareti verticali, orlo estroflesso e piccoli elementi di presa immediatamente al di sotto di questo e la piccola olla

²⁰ Rovina 1989, 167. L'A. propone di interpretarle come produzione locale.

²¹ Cfr. Depalmas 1995, 225-226. Chi scrive ha evidentemente accorpato per esigenze di sintesi le invetriate propriamente dette e le ingobbiate monocrome.

²² Per Galtelli (Nu) cfr. Pala 1989, 58-61; per Alghero Foschi

1986, 57-58; per l'abitato di Mara (Ca) Passeri, Ugas & Siddu 1993, 131; per Loc. Casinedda in territorio di Dolianova (Ca) Salvi 1989, 35-36; per varie località in agro di Senorbi (Ca) Salvi 1990, 76-77 e 90-91.

²³ Sono in Salvi 1990, 90.

²⁴ Cfr. Giuntella 1988, 96, 103, Tav. VI.

invetriata internamente con fondo piano, corpo globulare ed orlo fortemente estroflesso²⁵.

Di recente il panorama relativo a questa classe ceramica si è arricchito di nuovi elementi: due pentole biansate parzialmente ricostruite e molti frammenti relativi ad altri esemplari con differenti tipologie rinvenuti nel "butto" del castello di Monreale (Sardara-Ca), oltre a due olle da fuoco provenienti dall'abitato di Sardara (Ca), sono esposte al Museo Civico "Villa Abbas" nello stesso centro campida-

nese²⁶. La cronologia per questi materiali è compresa fra XIII e XIV secolo e l'impressione che si tratti di una produzione locale trova anche conforto nella corrispondenza degli impasti e delle tipologie morfologiche riscontrata fra i rinvenimenti dei due contesti citati (che seppur distinti sono geograficamente vicini fra loro). Interessante infatti la coincidenza delle forme delle olle sarde e di quelle sassaresi: si attendono nuovi contributi ed analisi degli impasti per verificare l'ipotesi di centri produttori comuni o

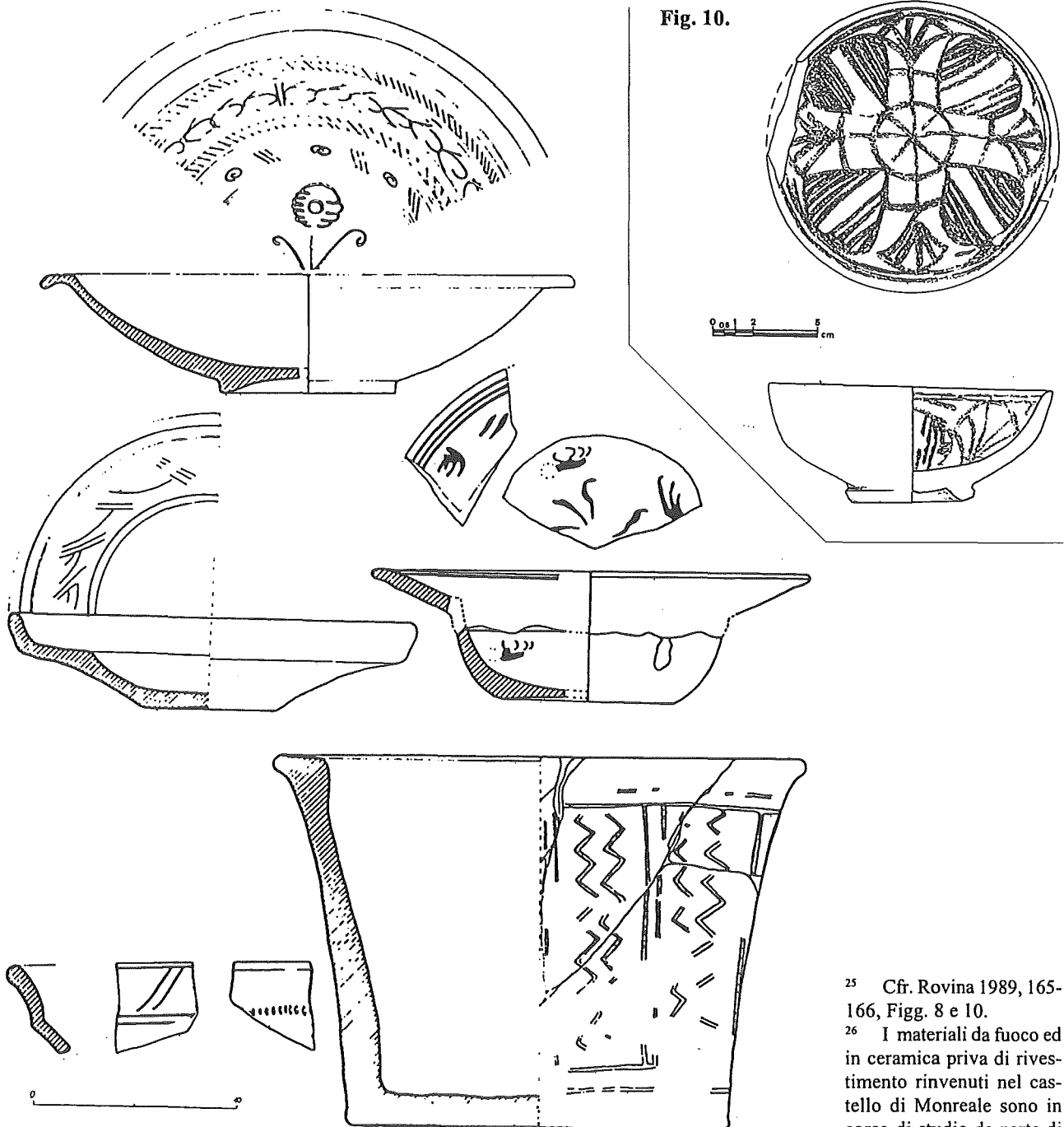


Fig. 9. - 1. Alghero (SS) Cala Dracumara; 2. Sassari S. Nicola (fossa); 3, 4. Sassari S. Nicola (vano ipogeico); 5. Sassari S. Nicola (pozzo di scarico). Il puntinato più fitto indica il colore verde, il più leggero il giallo. Nei nn. 3, 4 il puntinato indica sbavature di ingubbio. (Dis. A. Fresi nn. 1, 3, 4; D. Capula nn. 2, 5).

²⁵ Cfr. Rovina 1989, 165-166, Figg. 8 e 10.

²⁶ I materiali da fuoco ed in ceramica priva di rivestimento rinvenuti nel castello di Monreale sono in corso di studio da parte di Fabio Pinna, mentre quelli provenienti dall'abitato di Sardara sono stati analizzati direttamente da chi scrive.



Fig. 11.

in stretta correlazione fra loro²⁷. Morfologicamente simili ad esemplari rinvenuti nel castello di Monreale sembra anche il bacino troncoconico con orlo verticale, rivestito da vetrina verde bollosa, recuperato nel corso degli scavi presso la cattedrale di Oristano, ma manca un accenno all'impasto per poter approfondire il confronto²⁸.

Il contesto di S. Chiara a Cagliari presenta una maggiore varietà morfologica per ciò che riguarda pentole, olle e tegami invetriati internamente, mentre solo un tipo di tegame con fondo piano, parete verticale, orlo dritto e brevi prese ad orecchietta poco al di sotto di questo sembra non conservare tracce di rivestimento²⁹.

Se per le classi ceramiche già trattate si è a volte ipotizzata una produzione locale, è il caso di prendere ora in considerazione le produzioni di sicura importazione dall'esterno sull'isola, che sono numerose e meglio rappresentate nell'edito.

Esemplari di ceramica islamica, prodotta in Sicilia, in area maghrebina e nella penisola iberica nei secoli IX-XIII, sono stati individuati fra i bacini ceramici che decorano alcune chiese sarde, nel corso di interventi di tipo archeologico ed in collezioni private sarde³⁰.

In questo panorama spicca certamente il vasetto islamico graffito a punta sottile su manganese e ricoperto da vetrina turchese, che è conservato al Museo "Sanna" di Sassari, ma proveniente da Porto Torres³¹. Ma anche altri materiali, frutto di rinvenimenti occasionali e confluiti in collezioni private delle province di Cagliari ed Oristano, hanno confermato la presenza di prodotti islamici databili tra IX ed XI secolo: sono tutte forme chiuse ad impasto ben depurato, solo un esemplare reca sulla spalla una fascia con decorazione incisa a motivi pseudoepigrafici, mentre l'anforetta biansata rinvenuta a Cagliari in Loc. S. Igia è dotata di filtro alla base del lungo collo³².

Per quanto riguarda i bacini ceramici, l'attenzione degli studiosi si è soffermata sia sull'analisi delle motivazioni che possono essere state all'origine di tale uso decorativo sia sullo studio degli esemplari residui in opera³³.

Gli edifici che ancora conservano bacini islamici dell'XI secolo sono la basilica di S. Gavino a Porto Torres (Ss) e la chiesa di S. Nicolò di Trullas (Semestene-Ss): il primo presenta produzioni tunisine fra le quali un bacino con decorazione zoomorfa ed il secondo sette esemplari con decorazione in verde e bruno su fondo giallino e rivestimento a vetrina piombifera che trovano affinità con prodotti della Sicilia orientale³⁴.

Sembrano da riferire ai secoli XII-XIII, invece, vari esemplari recuperati prevalentemente nell'area urbana di Cagliari: alcuni sono pertinenti a collezioni private, altri sono stati rinvenuti nel corso degli scavi archeologici in Piazza S. Cosimo e nella chiesa di S. Chiara (Fig. 4)³⁵.

²⁷ A tal riguardo cfr. la interessante segnalazione in Salvi 1993, 149, relativa a materiali inediti ritrovati in villaggi sardi abbandonati nel corso del XIV secolo.

²⁸ Cfr. Depalmas 1995, 225 e 240, Tav. VII, 1.

²⁹ In Salvi 1993, 149-150, Figg. 93-94. Indicato dall'A. il confronto preciso con i tegami rinvenuti in Loc. Corte Auda presso Senorbi (Ca), descritti in Salvi 1990, 90-91.

³⁰ Una mostra tematica intitolata "Moriscos" ha di recente riportato l'attenzione sui rapporti fra la Sardegna e la cultura islamica. Vd. il catalogo omonimo (Moriscos), le ceramiche sono trattate in particolare alle pp. 31-41 e 55-78.

³¹ Cfr. Serra 1979, 8-9, Tav. XVI e Moriscos, 34, n. 24.

³² Moriscos, 33-34, nn. 20-23.

³³ Sull'origine di tale tecnica decorativa dell'architettura sacra in Sardegna il lavoro più recente è Marini & Ferru 1993, ma

fondamentali restano gli studi condotti da anni su questo tema in ambito non solo italiano dalla Dott.ssa Graziella Berti (per la vasta bibliografia in merito cfr. Berti & Cappelli 1994). Sui residui bacini ceramici nelle chiese sarde cfr. Berti, Hobart & Porcella 1990, con particolare attenzione alle protomaioliche ed alle produzioni ad esse associate.

³⁴ Moriscos, 31-33; nn. 16-19.

³⁵ Ci si riferisce a materiali esposti nella già citata mostra tematica, per la quale cfr. Moriscos, 34-37, nn. 25-32, 34-35. In Salvi 1993 le islamiche smaltate e decorate con cobalto e manganese oppure rivestite di vetrina verde sono illustrate alle pp. 133-136. Per il frammento con decorazione in bruno e blu da Piazza S. Cosimo a Cagliari vd. Spanu 1992, 71-72, Fig. 50, 25. La Fig. 4 è tratta da Salvi 1990b, scheda 2 ed il pezzo proviene dalla chiesa di S. Chiara di Cagliari.

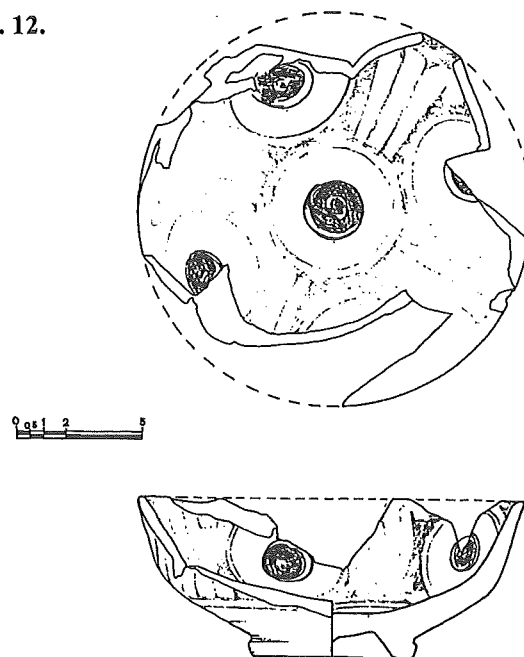
I bacini ceramici con decorazione realizzata in cobalto e manganese sono riscontrabili nella chiesa di S. Lorenzo a Cagliari, nella facciata di S. Barbara di Capoterra (Ca), nel campanile di S. Nicola di Sassari e negli ultimi due casi in associazione con protomaioliche³⁶.

Le caratteristiche delle ceramiche islamiche individuate sono abbastanza omogenee: sono quasi esclusivamente forme aperte (in particolare bacini con piede ad anello), gli impasti sono chiari o rosati, ben depurati e duri, mentre il rivestimento è costituito da vetrina verde o smalto bianco, con decorazioni in bruno, blu o verde³⁷.

Le cosiddette giare islamiche, grossi contenitori caratterizzati da una decorazione epigrafica impressa sulla spalla, sono attestate in contesti di XIII e XIV secolo in varie località della Sardegna: nell'edito per ora compaiono due frammenti con vetrina verde rinvenuti a Cagliari³⁸ ed il frammento acromo dalla chiesa di S. Chiara di Cagliari³⁹.

Fra le importazioni ceramiche dal Meridione della penisola italiana e dalla Sicilia la componente maggioritaria è costituita dalla cd. "protomaiolica": alcuni esemplari sono stati rinvenuti nel corso di scavi archeologici condotti nel capoluogo sardo (convento di S. Domenico, Piazza S. Cosimo e chiesa di S. Chiara)⁴⁰ ed alcuni bacini ceramici ancora *in situ* sono inquadrabili in questa produzione⁴¹. Invece la *Spiral Ware*, prodotta anch'essa in Italia meridionale, fra XII e XIV secolo, risulta essere, a giudicare dall'edito, poco presente in territorio sardo: se ne conoscono attualmente solo cinque esigui frammenti provenienti dall'area urbana di Cagliari⁴².

Fig. 12.



E' molto verosimile, anche in base alle attestazioni documentarie⁴³, l'ipotesi che i mercanti pisani e liguri, diffusamente presenti in Sardegna, insieme ai propri prodotti importassero sull'isola anche le ceramiche islamiche e meridionali già citate. Dall'area toscana e ligure venivano importate infatti in grande quantità la cd. graffita arcaica tirrenica e la maiolica arcaica, attestate in tutta l'isola in modo alquanto omogeneo⁴⁴.

I contesti di rinvenimento sono sia "butti" che strati di frequentazione e non mancano gli esemplari integri (Fig. 5)⁴⁵. Una brocchetta con orlo trilobato,

³⁶ L'attento esame delle associazioni di differenti classi ceramiche in uno stesso contesto decorativo è in Berti, Hobart & Porcella 1990, in particolare sulle smaltate tunisine nelle chiese sarde a p. 155.

³⁷ Si ritiene poco opportuno dare una dettagliata descrizione di questi esemplari, in quanto non è possibile fornire alcun supporto grafico di riferimento. Perciò si rimanda alle fotografie riportate nella bibliografia appena citata.

³⁸ Appartenenti a collezionisti privati. Cfr. Moriscos, 36-37, nn. 36-37.

³⁹ In Salvi 1993, 136, con bibliografia sul panorama mediterraneo occidentale. Interessante notare che un frammento di giara islamica non invetriata proveniente dal castello di Monreale (Sardara-Ca), da uno strato di crollo sconvolto a più riprese (anche in epoca contemporanea), abbia subito la stessa sorte di quello appena citato proveniente da S. Chiara, cioè reca le tracce di malta relative ad un riutilizzo come materiale edile. Anche questo reperto è esposto nel Museo Civico "Villa Abbas" di Sardara (Ca).

⁴⁰ Dal convento di S. Domenico provengono due boccali ed un piattino esposti nel corso della mostra "Moriscos", per la quale cfr. il relativo catalogo Moriscos, 40-41, nn. 40-42; per Piazza S. Cosimo cfr. Spanu 1992, 71, Fig. 50, 23-24, per S. Chiara cfr.

Salvi 1993, 136-137.

⁴¹ Lo studio specifico sulle "protomaioliche" utilizzate come bacini ceramici in chiese medioevali sarde è in Berti, Hobart & Porcella 1990, al quale si rimanda per le tipologie degli esemplari, le associazioni con altre classi ceramiche e l'analisi degli impasti.

⁴² I contesti sono ancora una volta lo scavo archeologico di Piazza S. Cosimo e della chiesa di S. Chiara, per i quali rispettivamente Spanu 1992, 70-71, Fig. 50, nn. 16-17 e Salvi 1993, 137, Fig. 75.

⁴³ Cfr. sui documenti d'archivio, oltre che sui rinvenimenti relativi alle ceramiche in questione, Ferru & Porcella 1989, 159-160.

⁴⁴ Al riguardo si vedano, per la maiolica arcaica, Salvi 1989, 2-3, al quale si rimanda anche per il ruolo fondamentale dei mercanti liguri e toscani e per la panoramica sui siti dei rinvenimenti relativi a questi materiali, e Salvi 1993, 137. Per la graffita medievale e postmedievale in Sardegna si veda lo studio specifico in Rovina 1986.

⁴⁵ Ad es. in Salvi 1987. La fig. 3 è tratta da Salvi 1990b, scheda 5 ed il pezzo proviene dal pozzo medievale di Bia 'e Palma (Selargius-Ca).

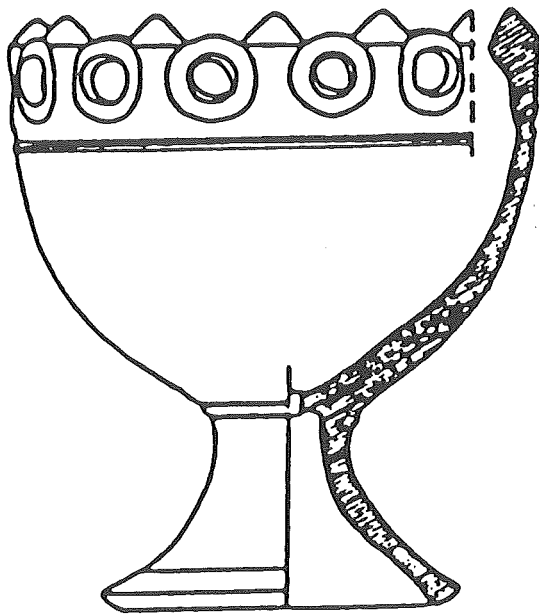


Fig. 13.

corpo piriforme, ansa a sezione circolare ed il fondo apodo non invetriato è stata rinvenuta nell'immondezzaio del castello di Monreale (Sardara-Ca)(Fig. 6)⁴⁶. In questo complesso fortificato, sia nel cassero che nel borgo e nell'unica torre scavata finora, la maiolica arcaica di XIV secolo è abbondantemente attestata (Fig. 7), mentre alla graffita arcaica tirrenica si possono attribuire solo sporadici frammenti⁴⁷.

In tutta la Sardegna risulta costante l'apporto di materiali ingobbiati e graffiti dall'area pisana e ligure dalla fine del XIII secolo fino al XVI secolo, quando probabilmente cominciano ad essere prodotte localmente ceramiche graffite monocrome nettamente distinguibili da quelle di importazione⁴⁸.

Ma senza dubbio i prodotti ceramici di importazione più diffusi nella Sardegna del tardo medioevo furono le maioliche di produzione iberica, che anche nei singoli contesti di rinvenimento sono percentualmente le più abbondanti (Figg. 8-9)⁴⁹. Sono le produzioni industriali di Paterna e Manises, centri dell'entroterra di Valenza, ad affermarsi maggiormente sul mercato isolano, grazie alla politica protezionistica della famiglia Boyl che aveva propri interessi ed incarichi politici in Sardegna⁵⁰. Ben presto le ceramiche realizzate negli altri centri iberici come Malaga o Manresa subiranno la forte concorrenza dei prodotti valenzani e nel secolo XV si può affermare che il mercato è assolutamente dominato da Manises (Figg. 10-13)⁵¹. Solo un secolo più tardi l'area barcellonese la soppianderà con il proprio lustro dalla forma ormai standardizzata nella ciotola apoda con fondo a ventosa, prese ad orecchietta lobata e prevalente decorazione a "triple trazo"⁵².

Così come già era avvenuto per la ceramica graffita, anche le maioliche iberiche condizionarono fortemente la produzione locale, nell'ambito della quale è possibile riscontrare esempi di imitazione dei modelli morfologici d'importazione: ciotole apode con prese ad orecchietta lobata, che sono in tutto simili nella forma a quelle barcellonesi, ma differiscono da esse per ciò che riguarda il rivestimento che in questo caso è vetrina giallastra⁵³.

Da questa rapida panoramica sui rinvenimenti ceramici relativi alla Sardegna del pieno e basso Medioevo si possono trarre alcune considerazioni conclusive. La ceramica comune, anche se decorata (da incisioni, impressioni o pennellate di colore), compare in numerosi contesti, ma purtroppo di rado è risultato possibile inquadrarla con precisione in produzioni geograficamente e cronologicamente definite. Analogo discorso riguarda la ceramica da fuoco, per la quale sembra esserci maggiore attenzione in rela-

⁴⁶ Attualmente il pezzo, come molti altri reperti provenienti dal castello, è esposto al Museo Civico "Villa Abbas" di Sardara (Ca). I disegni dei materiali qui riprodotti sono di Luciano Pilia.

⁴⁷ Cfr. nota 6.

⁴⁸ Cfr. Rovina 1986, 203 per quanto riguarda il nord della Sardegna. I rinvenimenti degli ultimi dieci anni nel restante territorio dell'isola confermano quanto affermato dalla studiosa nell'articolo citato. Le Figg. 8-9 riproducono le Tavv. I e II in Rovina 1986, 206-207, con relative didascalie indicanti le provenienze dei materiali.

⁴⁹ Nel "butto" del castello di Monreale-Sardara (Ca) rappresentano da sole il 20% del totale della ceramica rinvenuta.

⁵⁰ Al riguardo cfr; Ferru & Porcella 1989, in particolare alle pp. 161-162. Le Figg. 10-12 riproducono ceramiche rinvenute nel castello di Monreale-Sardara (Ca) ed i disegni sono di Luciano Pilia, mentre la Fig.13 è tratta da Salvi 1990b (scheda 11) e si riferisce ad un esemplare rinvenuto in località

imprecisata del golfo di Cagliari.

⁵¹ Risulta impossibile in questa sede fornire una indicazione puntuale su tutte le varietà di produzioni riscontrate fra le maioliche iberiche, si preferisce pertanto rimandare a Porcella 1988 per ciò che concerne il ben noto Fondo Pula, ai cataloghi di due importanti mostre (cfr. Porcella 1989 e Moriscos, 55-75) e ad uno studio specifico di chi scrive sulle maioliche valenzane nel castello di Monreale ed in Sardegna (Carrada 1996). Sui traffici commerciali è lo scavo del relitto di una nave spagnola del XV secolo che trasportava abbondanti prodotti ceramici cfr. Salvi 1989. In tutte le opere indicate è fornita una vasta bibliografia su questa classe ceramica e sulla sua diffusione in Sardegna.

⁵² E' piuttosto recente un ulteriore rinvenimento di maioliche barcellonesi in area urbana a Cagliari, per il quale Porcella 1996, 103-106.

⁵³ Cfr. l'esemplare proveniente da Nurachi in Porcella 1989,

zione a contesti di XIV secolo, laddove è associata alle ceramiche smaltate di importazione. Le invetriate ed ingobbiate vengono nell'edito quasi esclusivamente considerate produzioni locali, talvolta imitanti nella forma esemplari smaltati di importazione, ma non sembra che le analisi degli impasti siano andate oltre l'esame autoptico, mentre le classi meglio e più diffusamente studiate sono certo le smaltate di importazione, che individuano alcuni poli produttivi significativi: la Liguria, la Toscana, l'Italia Meridionale e la Sicilia, il Maghreb e la penisola iberica. In tal senso la Sardegna senza dubbio è partecipe della fitta rete di scambi commerciali che attraversa il Mediterraneo medievale.

Risulta evidente dunque, in primo luogo, la necessità di approfondire la ricerca sul mondo giudicale, indagando siti significativi e, attraverso l'analisi puntuale di impasti e pigmenti o coloranti, definire con buona affidabilità le aree produttive alle quali essi vadano attribuiti⁵⁴.

Infine, sembra opportuno a chi scrive rilevare che ultimamente si è proceduto ad un maggiore equilibrio, nello studio e nell'edizione di contesti di XIV e XV secolo, fra l'attenzione dedicata ai prodotti di importazione e decorati, di più facile inquadramento cronologico, e quelle classi di materiali che (come molte invetriate, la comune, la ceramica da fuoco, gli anforacei) risultano in genere relegate in secondo piano⁵⁵.

Bibliografia

- AA.VV. 1987: *Il Medioevo dai giudicati agli aragonesi*, Storia dei Sardi e della Sardegna, vol. II, Sassari, 1987.
- BERTI G. & L. CAPPELLI 1994: *Lucca. Ceramiche medievali e post-medievali (Museo Nazionale di Villa Guinigi) I. Dalle ceramiche islamiche alle "maioliche arcaiche". Secc. XI-XV*, Firenze.
- BERTI G., HOBART M. & PORCELLA M.F. 1990: "Protomaioliche" in Sardegna, *Albisola XXIII*, 153-167.
- CARRADA F. 1996: Maioliche valenzane dal castello di Monreale (Sardara - Ca), *Albisola XXIX*, in c.d.s.

- CASULA F.C. 1990: *La Sardegna aragonese*, Sassari, 2 voll.
- DADEA M. 1995: Ceramiche giudicali dipinte dall'areale cagliaritano, in: AA. VV., *La ceramica racconta la storia*, Atti del convegno, Oristano, 245-258.
- DEPALMAS A. 1995: Materiali dall'area della Chiesa di Santa Maria, Cattedrale di Oristano, in: AA.VV., *La ceramica racconta la storia*, Atti del Convegno, Oristano, 221-244.
- FERRU L. & M. F. PORCELLA M.F. 1989: La circolazione dei prodotti ceramici in Sardegna tra il XIV e il XVI secolo: importazioni e produzione locale, *Albisola XXII*, 159-177.
- FOSCHI A. 1986: Alghero. Chiostrò di S. Francesco, in: AA. VV., *L'archeologia romana e altomedievale nell'oristanese. Atti del Convegno di Cuglieri (22-23 giugno 1984)*, Mediterraneo tardoantico e medievale 3, Taranto, 57-58.
- GIUNTELLA A.M. 1986: *I materiali ceramici*, in: AA. VV., *L'archeologia romana e altomedievale nell'oristanese. Atti del Convegno di Cuglieri (22-23 giugno 1984)*, Mediterraneo tardoantico e medievale 3, Taranto, 135-146.
- GIUNTELLA A.M. 1988: Note preliminari sulla cd. ceramica dipinta, *Quaderni della Soprintendenza Archeologica per le Province di Cagliari e Oristano* 4.II/1987, 79-103.
- MARINI M. & FERRU L. 1993: *Storia della ceramica in Sardegna. Produzione locale e importazione dal Medioevo al Primo Novecento*, Cagliari, 1993.
- MORISOS: M.F. PORCELLA & M. SERRELI (a cura di), *Moriscos. Echi della presenza e della cultura islamica in Sardegna*, Cagliari, 1993.
- PALA P. 1989: Galtelli. Necropoli medievale in località S. Pietro, in: AA.VV., *Il suburbio delle città in Sardegna: persistenze e trasformazioni. Atti del III Convegno di studio sull'archeologia tardoromana e altomedievale in Sardegna (Cuglieri, 28-29 giugno 1986)*, Mediterraneo tardoantico e medievale. Scavi e Ricerche 7, Taranto, 58-61.
- PANI ERMINI L. 1984: Ricerche nel complesso di S. Saturno a Cagliari, *Rend. Pont. Acc.* LV-LVI, 1982-1984, 111-128.

383, n. 667.

⁵⁴ In tal senso procedono le ricerche avviate dalla dott.ssa Ilaria Buonincontri in occasione della propria tesi di diploma presso la Scuola Nazionale di Specializzazione in Archeologia di Roma, discussa nell'A.A. 94/95 con la prof.ssa L. Ermini Pani. I risultati di tale studio sono confluiti nell'intervento dell'A. al III Convegno di Studi sul tema "Le Ceramiche di Roma e del Lazio in età medievale e moderna" svoltosi a Roma

nel 1996 ed organizzato dalla cattedra di Archeologia e Topografia Medievale della Università "La Sapienza" di Roma.

⁵⁵ Vedi per tutti Salvi 1993. Per ciò che riguarda i materiali provenienti dal castello di Monreale si è, in tale ottica, provveduto ad avviare le analisi degli impasti e dei rivestimenti di un buon numero di pezzi appartenenti alle classi ceramiche in questione. Si spera di poter presto offrire anche i risultati di questo studio.

- PASSERI C., UGAS G. & SIDDU A. 1993: Ricerche nell'abitato di Mara. Notizia preliminare sull'area della necropoli punica di S. Pietro, in: AA.VV., *Villamar. Una comunità, la sua storia*, Dolianova (Ca), 121-157.
- PORCELLA M.F. 1988: La ceramica, in: AA. VV., *Pinacoteca Nazionale di Cagliari. Catalogo*, vol. I, Cagliari, 147-174.
- PORCELLA M.F. 1989: I prodotti ceramici, in: AA.VV., *La corona d'Aragona: un patrimonio comune per Italia e Spagna (secc. XIV-XV). Catalogo della mostra (Cagliari, 27 gennaio-1 maggio 1989)*, Cagliari, 354-383.
- PORCELLA M.F. 1996: La vasca "E": un contesto di ceramiche postmedievali, *Quaderni della Soprintendenza Archeologica per le Province di Cagliari e Oristano* 12/1995, 95-149.
- ROVINA D. 1986: Ceramiche medievali graffite medievali e postmedievali da S.Nicola di Sassari, *Albisola XIX*, 201-210.
- ROVINA D. 1989: Il Duomo di S. Nicola: recenti indagini archeologiche, in: AA.VV., *Sassari. Le origini*, Sassari.
- SALVI D. 1987: La maiolica arcaica nel pozzo medievale di Bia 'e Palma a Selargius (Cagliari), *Quaderni della Soprintendenza Archeologica per le Province di Cagliari e Oristano*, Cagliari, 4/II, 151-160.
- SALVI D. 1989: *Testimonianze archeologiche*, Dolianova.
- SALVI D. 1990a: Corte Auda, in: AA.VV., *Museo Sa Domu Nosta*, Cagliari, 90-91.
- SALVI D. 1990b: Catalogo delle ceramiche, in: AA.VV., *Traffici, Naufragi, Miracoli. Testimonianze di terra e di mare. Catalogo della mostra (Villanovafornu-Ca, 9 dicembre 1989-14 ottobre 1990)*, Cagliari, schede 1-47.
- SALVI 1993: La ceramica medievale e post-medievale, in: A. INGEGNO (a cura di), *Santa Chiara. Restauri e scoperte*, Cagliari, 133-155.
- SERRA P.B. 1979: Reperti tardo-antichi e altomedievali della Nurra, *Quaderni della Soprintendenza alle Antichità per le Province di Sassari e Nuoro* 3, Sassari, 1979.
- SIMBULA P.F. 1993: *Corsari e pirati nei mari di Sardegna*, Cagliari.
- SPANU P.G. 1992: Lo scavo archeologico di P.zza S. Cosimo, in: L. PANI ERMINI & P. G. SPANU, *Aspetti di archeologia urbana: ricerche nel suburbio orientale di Cagliari*, Oristano, 39-91.
- TANGHERONI M. 1996: *Trasporti navali e commercio marittimo nell'Italia del Quattrocento*, Roma-Bari.

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Premières réflexions sur l’approvisionnement en céramique à Tours et dans le Centre-Ouest de la France

La multiplication des opérations archéologiques donne au céramologue médiéviste une masse documentaire importante dont les études chrono-typologiques ne doivent pas être la finalité. Une fois les problèmes chronologiques surmontés, la céramique devient une véritable source pouvant répondre à des questions d’ordre historique. Préciser quels pouvaient être les réseaux d’échanges de la céramique implique de mieux comprendre comment les villes s’approvisionnaient et par conséquent quelles étaient les aires de diffusion des produits.

Si l’on veut appréhender l’évolution des aires céramiques et les mécanismes de distribution, l’étude ne peut se faire que dans le long terme et dans un espace géographique étendu. On appelle “aire céramique” un espace dont les produits locaux appartiennent à la même tradition de fabrication, dont les produits exogènes proviennent généralement des mêmes ateliers. Les choix du bas Moyen-Age et de l’époque moderne et du Centre-Ouest de la France ont été motivés :

- par l’étude systématique et quantifiée de la céramique exhumée à Tours pour ces périodes et réalisée dans le cadre de ma thèse (Husi 1994);
- par la mise en oeuvre toute récente d’un projet collectif de recherche régional sur ce thème (Husi 1996b)¹; la zone d’étude pour ce projet est le Centre-Ouest qui comprend un espace réunissant la vallée de la Loire et ses principaux affluents; l’objectif à terme est donc d’étudier la céramique de la Région Centre, de la Région Pays-de-la-Loire, du nord du Poitou et de la Nièvre à l’est.

Nous examinerons d’abord la céramique de Tours, non pas dans son aspect chrono-typologique mais plutôt dans l’image que celle-ci peut nous donner de l’ouverture de la ville sur l’extérieur. L’identification des produits locaux et importés à Tours et la part res-

pective qu’ils représentent servent de référence pour l’étude régionale dont aucun autre site n’a fait l’objet pour l’instant d’une recherche systématique et quantifiée.

Puis, nous essayerons, à partir d’un premier état des recherches dans le Centre-Ouest, de donner une image, même si elle est encore hypothétique et incomplète, des “aires céramiques” et de leur évolution durant la période concernée. On tentera enfin de mieux connaître l’évolution des mécanismes de distribution, les transformations qui ont pu s’opérer.

1 Identification des productions céramiques à Tours: première idée des réseaux d’approvisionnement de la ville

Comme l’avait déjà souligné F. Verhaeghe lors du Ier Congrès International d’Archéologie Médiévale en 1985, le développement des études quantitatives systématiques est de première importance pour mieux connaître cette source historique que constitue la céramique médiévale (Verhaeghe 1987, 203). L’intérêt de telles études est, non seulement de pouvoir identifier les productions et préciser leur durée d’existence, mais aussi de justifier les comparaisons que l’on en fait. Il paraît difficile de saisir les mécanismes d’approvisionnement ou de diffusion dans toute leur finesse, de donner un sens réel à la notion de céramiques locales ou importées, si l’on ne peut préciser la part que représente chaque production dans son contexte de découverte.

Le corpus d’étude de la céramique de Tours pour le bas Moyen-Age et l’époque moderne est actuellement de 60.000 tessons, en nombre de restes, répartis dans environ quatre-vingt groupes techniques et

¹ Ce projet a été élaboré par des chercheurs de la Région Centre (V. Aubourg-Josset et D. Josset, Blois; P. Bon, Mehun-sur-Yèvre; M.P. Chambon, Bourges et Châteauroux, N. Fouillet, Châteauroux; P. Husi, Tours; S. Jesset, Saran, haut Moyen-Age; C. Monnet, Bourges). Il a aussi pour vocation d’y associer

d’autres chercheurs des régions avoisinantes comme la Bourgogne ou les Pays-de-Loire afin de mieux cerner les questions liées aux échanges de céramiques dans le Centre-Ouest de la France.

quatre-vingt formes². Le choix du corpus porte sur les contextes stratigraphiques domestiques a priori les plus fiables que sont les niveaux d'occupation et les fosses dépotoirs. Les trente-huit ensembles stratigraphiques étudiés pour l'instant appartiennent à six sites répartis dans la ville. On peut y ajouter deux sites de production.

Généralement, les études chrono-typologiques s'articulent sur les renseignements stratigraphiques, puis sur les éléments de la chronologie absolue du site étudié et enfin sur des comparaisons typologiques avec le matériel d'autres sites. Cette démarche semble pouvoir être affinée grâce aux résultats des données quantitatives, en comparant à partir de tests statistiques les fréquences d'un même groupe technique appartenant à des contextes différents. La méthode élaborée, en collaboration avec P. Chareille, statisticien à l'Université de Tours, a permis d'obtenir un classement des ensembles stratigraphiques et par conséquent de préciser la chronologie relative de ceux qui n'avaient aucune relation physique les uns avec les autres (Chareille & Husi 1996). Cette première approche quantitative et statistique, qui doit se poursuivre, a pour objectif d'observer au sein de la ville l'évolution des productions d'une manière linéaire et non site par site. On connaît alors précisément la période d'apparition, de prédominance et de disparition de chaque production quantitativement bien représentée.

Cette étape indispensable franchie, il est possible d'utiliser les effectifs pour estimer la part que représentent les productions locales et importées en fonction de l'analyse chrono-typologique établie pour le bas Moyen-Age et l'époque moderne. Une bonne appréciation de la part que représente chaque production est un bon indicateur des réseaux d'approvisionnement de la ville.

1.1 PRODUITS LOCAUX OU IMPORTÉS ?

On peut considérer comme locale la céramique produite dans la ville ou dans son territoire d'approvisionnement qui semble limité à un rayon de cinq à six lieues autour de la ville (Chevalier 1983, 65). Inversement, une céramique est considérée comme importée uniquement si nous sommes en présence d'un type attesté comme étant produit à l'extérieur de ce territoire.

La détermination des groupes techniques réalisée à partir de la céramique provenant des contextes domestiques n'apporte aucune réponse sur la provenance des récipients. Seule la céramique mise au jour dans les structures de production permet d'entrevoir, même d'une manière incomplète, l'éventail des types produits; c'est le cas de certaines productions qui sont rattachables sans ambiguïté à des ateliers connus dans la région. De même, les types qui sont fortement attestés dans d'autres villes du Centre-Ouest et dont on ne relève que quelques traces à Tours peuvent être considérés comme importés; seules sont localisées dans ce cas les zones de production et non les ateliers.

Le manque de références locales dans ce domaine nous oblige à émettre des hypothèses de travail qu'il faudra confirmer par la suite. On ne recense actuellement que deux structures de production, partiellement fouillées; aucun autre site de production n'a été mis au jour en Touraine. L'étude de la céramique qui leur était associée a permis de déterminer avec plus de certitude quelques productions locales.

Afin de différencier les produits locaux des produits importés et d'essayer de déterminer l'origine des autres, le choix a été fait pour Tours de distinguer deux périodes, l'une à laquelle sont attribuables les deux ateliers locaux et l'autre sans aucune information concernant les productions locales. Les ateliers ont été datés par comparaisons entre la céramique mise au jour dans les tessonniers et celle datée appartenant aux niveaux domestiques stratifiés. C'est à la fin du XVe s. que la représentation des produits locaux dans les niveaux domestiques devient significative. La période de pleine activité de ces ateliers semble pourtant correspondre à la deuxième moitié du XVIe s. et au début du XVIIe s.; c'est dans la deuxième moitié du XVIIe s. que ces produits disparaissent des niveaux domestiques révélant la fin de l'activité des ateliers.

On a donc pris le parti de traiter d'abord la période allant de la fin du XVe s. à la fin du XVIIe s., pour laquelle on connaît certains produits locaux. Ensuite on s'intéressera à la période comprise entre la fin du XIIIe s. et la deuxième moitié du XVe s. pour laquelle aucun atelier n'a été découvert (Fig. 1). On observe bien évidemment des recouvrements d'une période à l'autre, la transition se faisant dans la deuxième moitié du XVe s. La présence du groupe local P.9b dans la période la plus ancienne peut être interprétée comme une preuve de l'existence d'autres ateliers. Elle peut aussi refléter en partie la manière arbitraire dont le découpage a été réalisé ce qui dans le cas présent n'a pas de réelles incidences.

En effet, l'intérêt de cette périodisation est de répartir les produits locaux, ceux qui sont importés et ceux dont l'origine n'est pas connue pour la période

² Les données qui servent de fondement à cette étude sont tirées de ma thèse et de l'étude récente que j'ai réalisé dans le cadre d'une fouille de sauvetage dirigée par A.M. Jouquand à Tours (Husi 1994; Husi 1996a).

Répartition des produits locaux et importés découverts à Tours au bas Moyen-Age et à l'époque moderne.										
* produits n'appartenant pas à la période concernée.										
produits	Céramique bas Moyen-Age (fin 13e- 2eme moitié 15e s.)					Céramique moderne (Fin XVe-fin 17e s.)				
	bas Moyen-Age	prod locaux	prod importés	prod supposés locaux	prod locaux ou importés?	moderne	prod locaux	prod importés	prod supposés locaux	prod locaux ou importés ?
P.1a	*					*				
P.1b	*					*				
P.1c	*					340				340
P.1d		2316			2316	*				
P.1e	*					*				
P.1f	*					*				
P.1g		33			33	*				
P.1h	*					*				
P.1i	*					*				
P.1j		2073			2073	*				
P.1k		1270			1270	*				
P.1L	*					*				
P.1m	*					*				
P.1n		87			87	*				
P.2a	*					*				
P.2b	*					423				423
P.2c		116			116	*				
P.2e		3			3	*				
P.2f		55			55	496				496
P.2g		39			39	*				
P.2h		19		19		*				
P.3a		375			375	*				
P.3b		6			6	*				
P.3c		78			78	1397				1397
P.3d	*					46				46
P.3e		1801			1801	288				288
P.3f		32			32	*				
P.3g		139			139	196				196
P.4a		3			3	387				387
P.4b		328			328	*				
P.5a		52		52		*				
P.5b		62		62		*				
P.5c	*					245				245
P.6a		175			175	*				
P.6b	*					118	118			
P.6c		72			72	*				
P.6d		174			174	*				
P.6e	*					3869				3869
P.7a		16			16	*				
P.7b		1105			1105	*				
P.7c	*					1401	1401			
P.7d		4			4	*				
P.7e		374			374	*				
P.7f	*					13				13
P.7g		4			4	*				
P.8b	*					2030				2030
P.8c	*					247	247			
P.8d		26			26	73				73
P.8e	*					*				
P.8f	*					*				
P.8g	*					*				
P.8h	*					*				
P.8i	*					112				112
P.8j	*					84				84
P.8k	*					*				
P.8L	*					*				
P.9a	*					2				2
P.9b		1163	1163			10918	10918			
P.9d		4			4	*				
P.10		52		52		1679		1679		
P.11a		52	52			201	201			
P.11b		24	24			644	644			
P.11c	*					28				28
P.11d		39	39			2436	2436			
P.11e	*					*				
P.11f	*					*				
P.12a	*					59				59
P.12b	*					10				10
P.12c	*					1				1
P.12d		11		11		*				
P.13a	*					24				24
P.13b	*					*				
P.14a	*					1				1
P.14b		3			3	2				2
P.15		2			2	*				
P.16a	*					1				1
P.16b	*					*				
P.16c	*					*				
P.17a	*					1				1
P.17b	*					*				
P.18a	*					87				87
P.18b	*					144				144
P.19a		1		1		71		71		
P.19b		3		3		14		14		
P.19c		201		201		1434		1434		
P.19d		26		26		*				
P.21a	*					2		2		
P.21b	*					142		142		
P.21c	*					924		924		
P.21d		24		24		106		106		
Inclassable	*					*				
Gallo-rom.	*					*				
TOTAL		12442	1278	2524	7535	1105	30696	15965	4372	10288
% par période			10%	20%	61%	9%		52%	14%	34%
										0%

Fig. 1.

la plus récente, nommée pour plus de facilité période moderne. L'objectif est de dresser un profil type, des produits locaux puis importés, susceptible de nous aider à reclasser les groupes sans origine. En tenant compte des résultats obtenus pour la période moderne on essaiera de mieux cerner comment se répartissent les productions de la période la plus ancienne, que l'on nommera bas Moyen-Age. et pour laquelle aucun atelier local n'a encore été découvert.

1.1.1 Origine des productions: la céramique moderne comme référence (fin XVe - fin XVIIe s.)

Les produits locaux pour la période moderne sont au nombre de sept (Fig. 1 et 2). L'effectif du groupe P.9b (10918 tessons; 35%) est le plus élevé du corpus étudié. On ne peut pour autant en déduire que tous les groupes fortement représentés sont des productions locales. On ne recense par exemple que 118 tessons (moins de 1%) pour le groupe P.6b. et à l'inverse les effectifs de certains produits importés, comme le grès du Domfrontais (P.19c) ou la céramique lavalloise, dénommée aussi "rose-bleu", sont élevés (P.10). Bien que les parts de ces produits soient moins importantes que celle de P.9b, elles peuvent atteindre 4% à 5% de l'ensemble du matériel étudié (Fig. 3, A et B). Les productions lavalloises, attestées par J. Naveau dans la partie sud de la commune de Laval (Saint-Jean-la-Poterie), prendront le nom de "la Hardelière" qui correspond au site de découverte (Bucur, Dufournier, Goulpeau *et al.* 1984, 171).

En revanche, les types de récipients et parfois leur fonction, suivant qu'il s'agisse de produits locaux ou importés, peuvent donner quelques indications. En effet, les céramiques importées servent souvent de contenants et non de récipients d'usage domestique. La plupart d'entre-eux sont des grès du Domfrontais (P.19c), du Beauvaisis (P.21d), du Berry (P.21c) peut-être pour certains de la Puisaye, ou des pâtes bien particulières comme la "rose-bleu" lavalloise de la Hardelière (P.10) (Fig. 1 et 3) (Poulet 1989; Bucur, Dufournier, Fajal *et al.* 1989; Dufournier & Flambarb 1987; Fajal 1995).

On ne distingue aucune production "commune" importée. Une production "commune" à Tours se caractérise par la texture de sa pâte moyennement grossière et non micacée, d'une couleur claire, beige à orange, munie ou non d'une glaçure généralement verte ou brune-orangé. Pour la période moderne, le profil de la céramique locale semble être un récipient

d'usage domestique, réalisé dans une production "commune", dont la représentation est parfois très forte (P.9b, P.11d) (Fig. 2).

Ce portrait d'une céramique locale peut donc être appliqué aux productions dont l'origine est inconnue ("produits supposés locaux", Fig. 1 et 4). Seules quatre productions ne correspondent pas au profil type d'une céramique locale:

- le groupe P.12a qui regroupe la faïence;
- les groupes P.12b et P.12c qui sont munis d'une glaçure brune, au manganèse;
- le groupe P.17a munis d'une glaçure verte mais dans une pâte fortement micacée.

On peut en déduire, pour les autres, à titre d'hypothèse, qu'il s'agit sûrement de productions locales (Fig. 4).

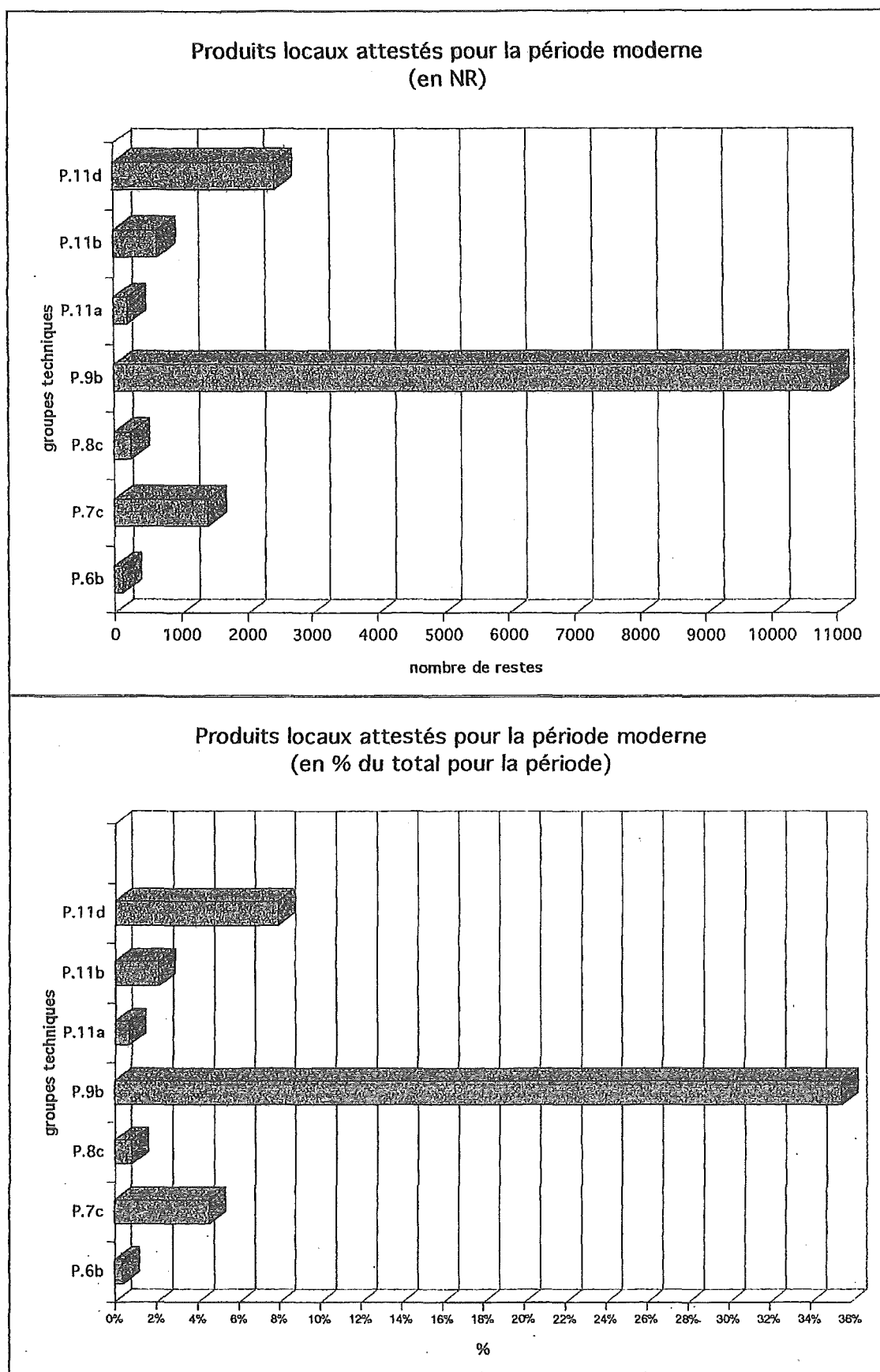
1.1.2 L'origine des productions du bas Moyen-Age (fin XIIIe - fin XVe s.): essai de détermination suivant l'exemple de la distribution moderne

Peut-on appliquer le même raisonnement à la céramique du bas Moyen-Age? Les quelques groupes classés sous le titre de "produits locaux" ne sont rien d'autre que l'apparition de ceux de la période moderne qu'un découpage un peu arbitraire a placé là; ils n'ont donc que peu d'intérêt dans notre propos (Fig. 1). A la différence de la période moderne, il n'existe donc aucun atelier de production connu pour le bas Moyen-Age, la distinction ne pouvant se faire qu'entre les produits importés et les produits supposés locaux. Certains produits importés sont les mêmes que ceux de la période moderne. C'est le cas des grès de Normandie (les groupes P.19) et principalement ceux du Domfrontais (P.19c) ou du Beauvaisis qui sont importés dès le bas Moyen-Age (P.21d) ou des productions lavalloises de la Hardelière (P.10) (Fig. 5, A et B).

En revanche, le groupe P.5b correspond à une céramique dite "rouge de Dourdan" du nom du lieu de découverte d'un atelier. Bien qu'aucune structure de production ne soit identifiée pour le groupe P.5a nommé "pseudo-rouge", sa forte présence dans l'orléanais permet au moins de préciser sa région d'origine (Orssaud 1985, 107; Bourgeau 1987). Des groupes proviennent du sud-ouest: le premier (P.12d) avec certitude car il s'agit d'une production Saintongeaise; le second (P.2h), dont l'origine est plus hypothétique, est bien attesté dans le Poitou (Cavaillès 1991, 130-131)³. Enfin un dernier groupe (P.1j) fortement représenté (2073 tessons; 17%), dont les récipients sont caractérisés par la finesse de leurs parois, vient de la Sarthe où un atelier a été mis au jour à Saint-Jean-de-la-Motte (Guilleux 1978) (Fig. 5, A et B).

³ L'origine des productions du sud-ouest a été précisée grâce aux travaux réalisés au sein du projet collectif sur la céramique médiévale en Poitou-Charentes dirigé par J. Chapelot.

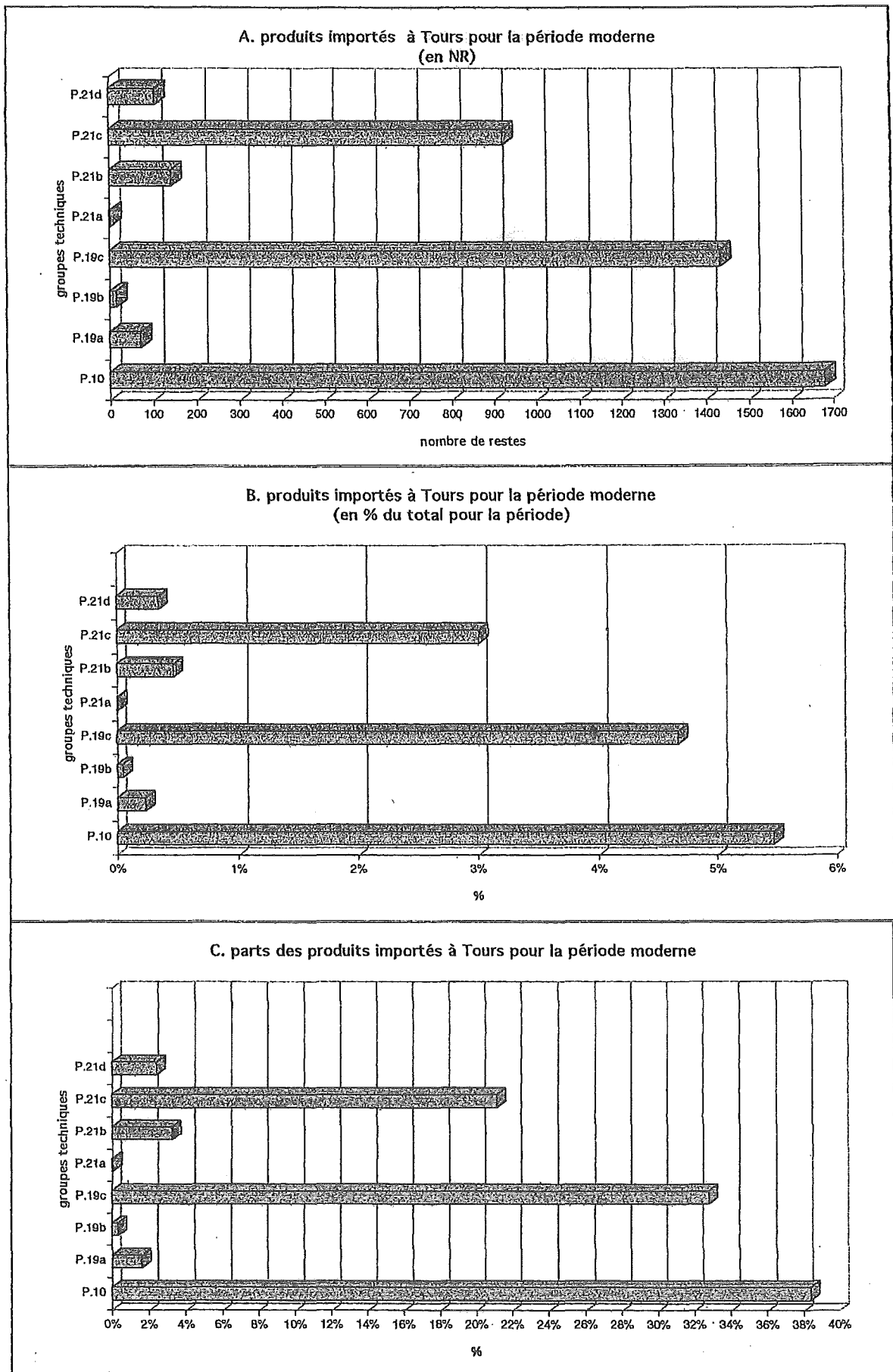
Fig. 2.



Deux groupes (P.5a et P.2h) sont considérés comme des produits exogènes même si aucun atelier n'a encore été découvert. C'est la fréquence de leur présence dans les régions désignées qui justifie la zone de production.

Comment peut-on essayer de préciser si les autres groupes sont locaux ou importés? Les premiers résultats d'une recherche régionale ont permis d'identifier, encore grossièrement, quels sont les produits véritablement locaux, qui gravitent uniquement autour

Fig. 3.



des sites de consommation les plus importants du Centre-Ouest. L'enquête révèle aussi que certaines productions sont présentes dans des proportions

apparemment proches dans plusieurs sites éloignés. C'est le cas pour l'instant de récipients en pâte claire et fine, munis d'une glaçure mouchetée (P.7b), qui

sont très souvent des pichets de formes générales identiques (Fig. 1). S'agit-il de la même production, d'imitations ou d'une tradition commune? Dans le doute, il est pour l'instant plus raisonnable de ne pas classer ce groupe.

Après avoir éliminé les produits importés et ceux dont il est impossible de préciser l'origine, il reste maintenant à étudier les produits supposés locaux à Tours au bas Moyen-Age (Fig. 6). Les premiers sondages dans divers sites du Centre-Ouest de la France ne révèlent qu'une présence sporadique et encore hypothétique de certains d'entre-eux. Les récipients classés dans cette catégorie correspondent à la définition d'une production "commune" et sont toujours d'usage domestique. C'est par exemple le cas des groupes P.1d et P.3e dont les formes les plus fréquentes sont des pots à cuire et quelques pichets d'usage courant et dont les parts respectives sont de 19 % et 15 % de la totalité du matériel étudié (Fig. 6). Les formes produites dans le groupe local P.9b de la période moderne sont assez proches. Le groupe P.1d est fortement représenté au bas Moyen-Age comme l'était le groupe P.9b pour la période moderne.

1.2 APPROVISIONNEMENT DE TOURS EN CÉRAMIQUE

Bien que la provenance exacte de certains récipients soit encore inconnue, la localisation, même hypothétique, des zones de production permet d'avoir une première idée de la manière dont Tours s'approvisionnait en céramique entre la fin du XIIIe s. et la fin du XVIIe s. (Fig. 7 et 8). L'analyse détaillée de la céramique locale de Tours – attestée ou fortement supposée – pour cette période a montré que l'éventail des types présents est bien plus important à partir de la fin du XVe ou du début du XVIe s. (Husi 1994, 220-233). En outre, la généralisation de l'utilisation de certaines techniques, comme l'application plus fréquente d'une glaçure de meilleure qualité, accentue cette image. Est-ce que cette évolution, visible dans la tradition céramique locale, qui peut correspondre à un changement des réseaux d'approvisionnement locaux, s'observe aussi pour les productions importées? Une variation de ces réseaux signifie-t-elle une ouverture économique différente de la ville?

1.2.1 Réseaux commerciaux: immobilisme ou changement

Cette problématique demande une définition précise du sens donné à la notion d'approvisionnement ou d'importation. La présence d'un récipient d'un atelier ou d'une zone de production exogène ne suffit

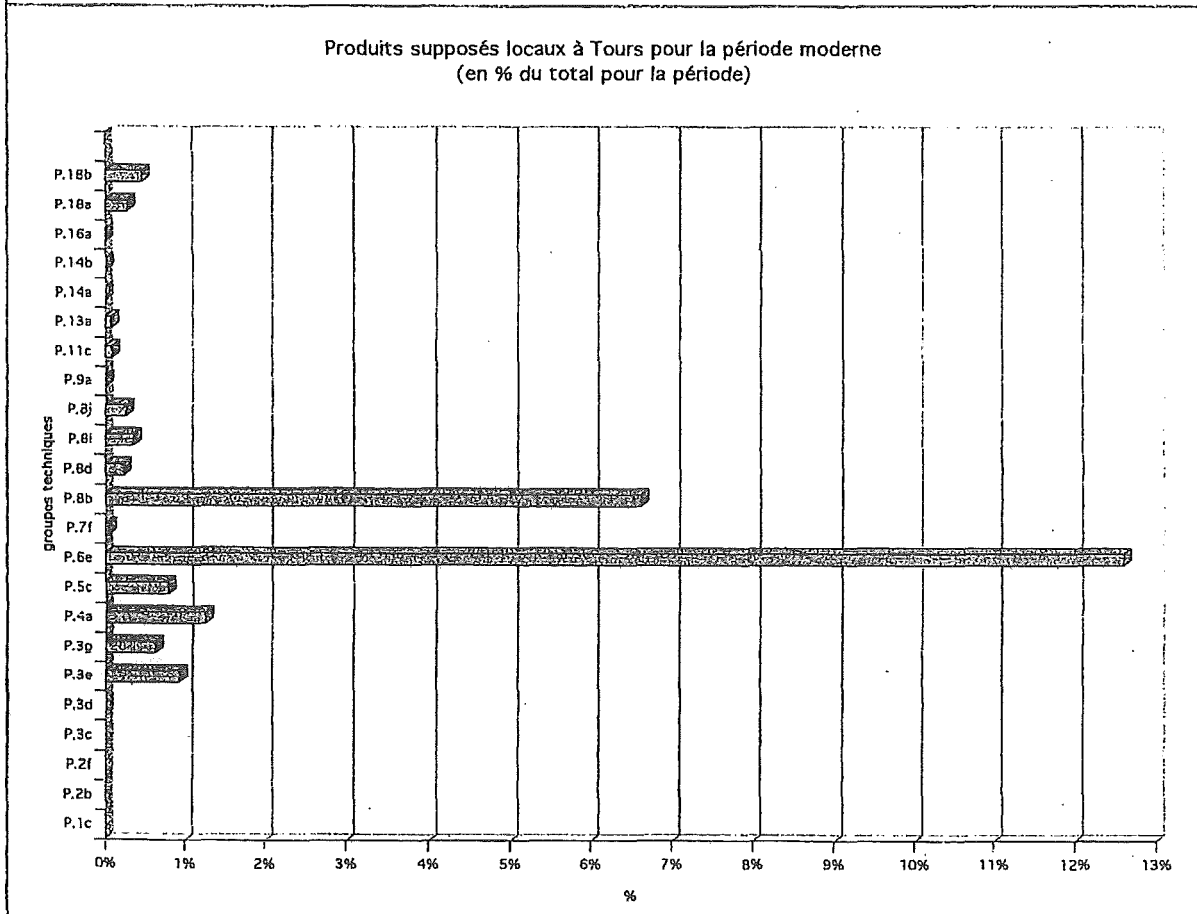
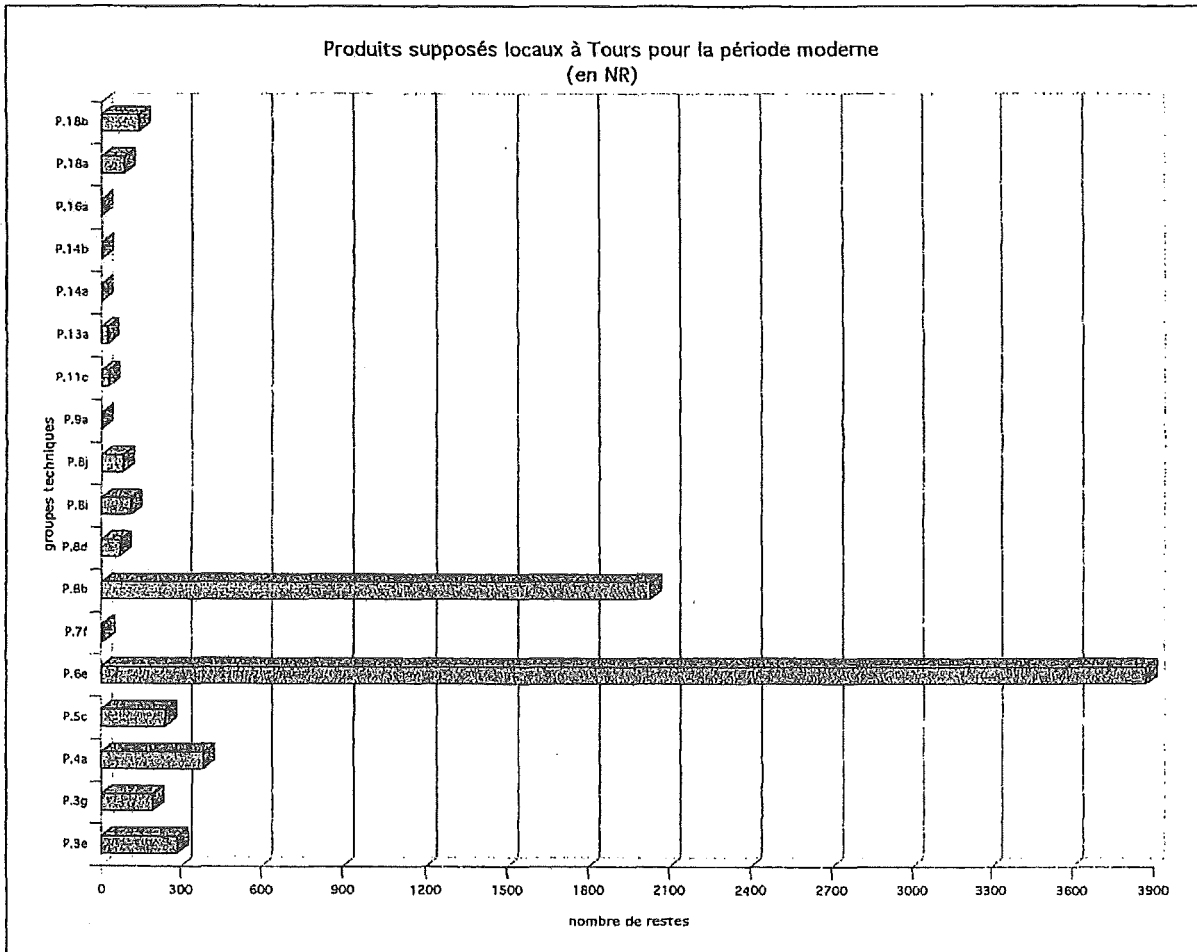
pas à démontrer l'existence d'un flux régulier de marchandises. Il ne semble pas que l'on puisse parler d'approvisionnement d'un centre de consommation et par conséquent d'importation lorsque les transactions sont faibles et ponctuelles. En outre, la céramique étant souvent le témoin d'autres transactions, il est très difficile de déterminer les réseaux commerciaux qui lient un site de production à un site de consommation.

A Tours, les produits importés au bas Moyen-Age sont essentiellement les pichets de la Sarthe (Saint-Jean-de-la-Motte) et les pots en grès du Domfrontais (Fig. 7). Les premiers sont datés du début du XIVe s au début du XVe s. et les seconds apparaissent dès le début du XVe s (P.1j; P.19c) (Husi 1994, 171, 182). C'est à partir du milieu du XVe s. que Tours commence très timidement à s'approvisionner en céramiques du Beauvaisis (P.21d). La présence d'autres types n'est très souvent attestée que de manière marginale; c'est le cas de la céramique à pâte rouge, dite de Dourdan (P.5b), de la céramique à pâte blanche et fine couverte d'une glaçure verte sur toute la surface extérieure (P.2h) provenant certainement du Poitou, du pichet de Saintonge muni d'un décor d'oiseau (P.12d) (Fig. 1; 5 et 7).

A l'époque, moderne on observe un accroissement des importations de grès du Domfrontais (P.19c) (Fig. 3; 5 et 8). La céramique lavalloise de la Harde-lière (P.10) apparaît dès la fin du XVe s. mais prédomine au XVIe s. et durant la première moitié du XVIIe s. L'approvisionnement en céramique du Beauvaisis est plus régulière (P.21d). A la fin du XVIIe s., on note une forte présence de grès du Berry et dans une moindre mesure de la Puisaye (P.21c) (Fig. 3) (Husi 1994, 180, 182-183).

Globalement, les produits importés à Tours au bas Moyen-Age et à l'époque moderne représentent respectivement environ 20% et 15% du matériel exhumé (Fig. 1). Cette part non négligeable traduit bien l'ouverture économique de la ville sur l'extérieur. L'analyse quantitative de la céramique a permis de déterminer avec précision la part représentée par chaque production importée. Sans ce travail préalable il serait difficile de voir si un produit est le fruit d'un commerce régulier ou celui d'un simple échange ponctuel. Du début du XIVe s. au début du XVe s. le commerce se fait essentiellement avec la Sarthe (P.1j); ces productions représentent 82% des importations du bas Moyen-Age (Fig. 5; C). Bien qu'existant sporadiquement dès le XIVe s., les relations commerciales avec la Normandie et plus précisément avec le Domfrontais, semblent s'intensifier au XVe s. (P.19c, 8%) (Fig. 5; C). En revanche, celles avec le sud-ouest sont marginales et disparaissent totalement à l'époque moderne (P.2h, 1%; P.12d, %) (Fig. 3; C et 5; C).

Fig. 4.



Au XVI^e et jusqu'à la fin du XVII^e s., les liens avec le nord-ouest sont forts avec 74% des produits importés de la période (P.10; P.19a; P.19b; P.19c) (Fig. 3; C). On observe en même temps un léger accroissement des échanges avec le nord-est, les récipients du Beauvaisis représentant non plus 1% mais 2% des importations (P.21d) (Fig. 3; C et 5; C). Il faut attendre la fin du XVII^e s. pour que de nouvelles relations commerciales se développent dans le sud-est; ces produits pénètrent sur le marché local avec 21% des importations de la période moderne (P. 21c) (Fig. 3; C).

Au bas Moyen-Age, cette distribution révèle non seulement l'existence d'un commerce de denrées alimentaires avec le nord-ouest (P.19c) mais aussi une relation privilégiée avec l'ouest pour les récipients d'usage domestique. Les données pour la période moderne traduisent une intensification d'un commerce alimentaire avec le nord-ouest. Les rares témoins d'un approvisionnement extérieur en récipients domestiques jusqu'au milieu du XVII^e s. attestent de relations avec le Beauvaisis; à partir de la fin du XVII^e s. ils deviennent important avec le sud-est. Une lecture fine des résultats quantitatifs peut, non seulement révéler les courants majeurs, mais aussi permettre d'estimer l'évolution des flux de produits mineurs comme par exemple les grès du Beauvaisis.

1.2.2 Tours: une ville qui regarde principalement vers l'ouest

Durant tout le bas Moyen-Age et jusqu'au milieu du XVII^e s., les rapports commerciaux que peuvent nous révéler la céramique traduisent que l'ouverture économique de la ville ce fait essentiellement avec le nord-ouest. Le type de transaction et par conséquent la fonction des récipients n'y sont pas étrangers.

Il s'agit le plus souvent de contenants ayant servi au transport de denrées alimentaires comme le beurre pour les productions normandes et peut-être lavalloises (Dufournier & Flambard 1987, 146). Bien que l'éventail des formes produites soit varié, les récipients en grès importés du Domfrontais sont toujours des pots avec une anse; l'existence d'un pot sans anse en "proto-grès" du début du XIV^e s. révèle des contacts anciens avec la normandie (Bucur, Dufournier & Fajal 1989, 219-220, fig 12 et 13; Fajal 1995, 48-49). La présence exclusive de pots de la région lavalloise de la Hardelière, alors que les formes produites dans cet atelier étaient nombreuses, semble étayer l'hypothèse de contenants pour le beurre. En outre, aucun récipient dit "à oeil de perdrix" qui caractérise la production du bas Moyen-Age de ces mêmes ate-

liers n'a été découvert à Tours (Bucur, Dufournier, Goulpeau *et al.* 1984; Husi 1994). Les récipients produits à la Hardelière au bas Moyen-Age sont plutôt d'usage domestique ce qui peut expliquer l'absence de rapports commerciaux aussi lointains. Une analyse à l'échelle du Centre-Ouest doit permettre de mieux connaître ce phénomène.

La présence parfois très prononcée de récipients a priori d'usage domestique comme les pichets de la Sarthe ou les coupes du Beauvaisis est plus difficile à expliquer. L'hypothèse d'une utilisation comme contenant des pichets produits dans la Sarthe paraît difficilement envisageable étant donné leur fragilité. La grande qualité de ces produits, qui a dû faire leur réputation, peut expliquer leur diffusion non seulement à Tours mais, comme nous allons le voir, dans toute la région. Les mêmes arguments peuvent expliquer la présence de récipients en grès du Beauvaisis qui se limite presque exclusivement aux coupes. En effet, l'importation d'un produit d'usage domestique aussi lointain, hors des réseaux d'approvisionnement habituels, ne peut s'expliquer que par la qualité d'une production très variée qui a su s'imposer et dominer un marché aussi important que celui de Paris (Ravoire 1990, 87-199). Ce n'est pas le cas à Tours avec l'unique présence des coupes et de quelques gourdes dont on peut pourtant attester l'existence durant presque deux siècles.

Il faut attendre la fin du XVII^e s. et les grès du Berry et de la Puisaye, pour que Tours ne soit plus uniquement tournée vers l'ouest de la France. Ces récipients de toutes formes, semblent concurrencer la céramique commune locale; on peut parler de concurrence car à la différence des pots Normands ou Lavallois, les céramiques ne servent pas de contenants mais sont bien des récipients d'usage domestique. Même les formes les plus courantes, qui antérieurement étaient toujours des productions locales sont maintenant souvent en grès. Bien que les grès ne soit pas adaptés à la cuisson des aliments, certains pots révèlent même des traces de cet usage.

L'étude de la céramique du bas Moyen-Age et de l'époque moderne de Tours nous révèle les liens forts qui existent entre cette ville et l'ouest de la France. Cependant, la céramique est une source qui doit être utilisée avec précaution car elle n'est souvent que le témoin d'un autre commerce. Dans ce cas, les réseaux commerciaux entre les centres de production et de consommation deviennent difficiles à percevoir car ils sont tributaires du produit transporté et par conséquent indirects. On peut maintenant élargir le champ d'investigations en essayant d'entrevoir si l'image de Tours est représentative du Centre-Ouest de la France ou si l'on peut déterminer des courants

Fig. 5.

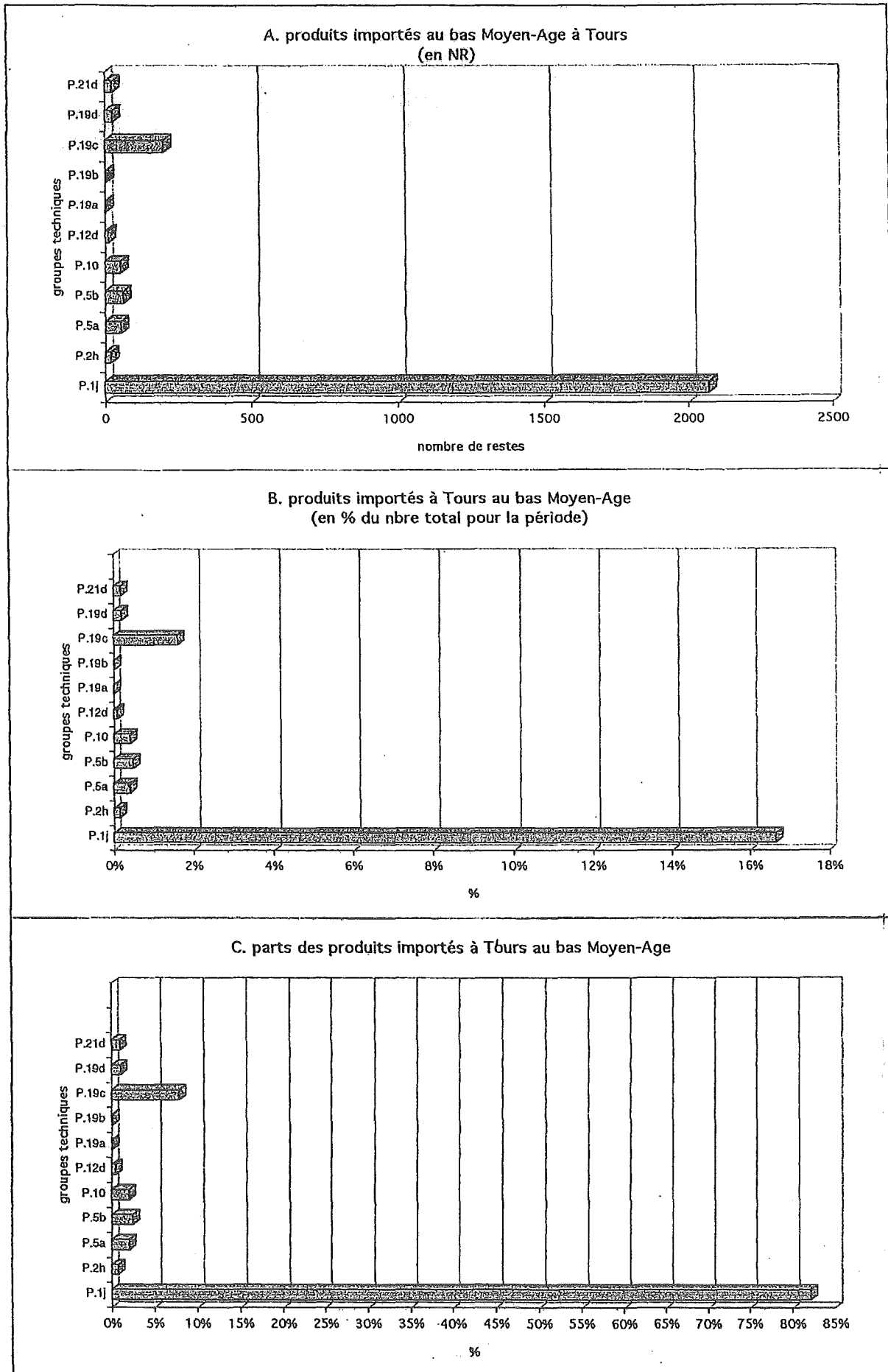
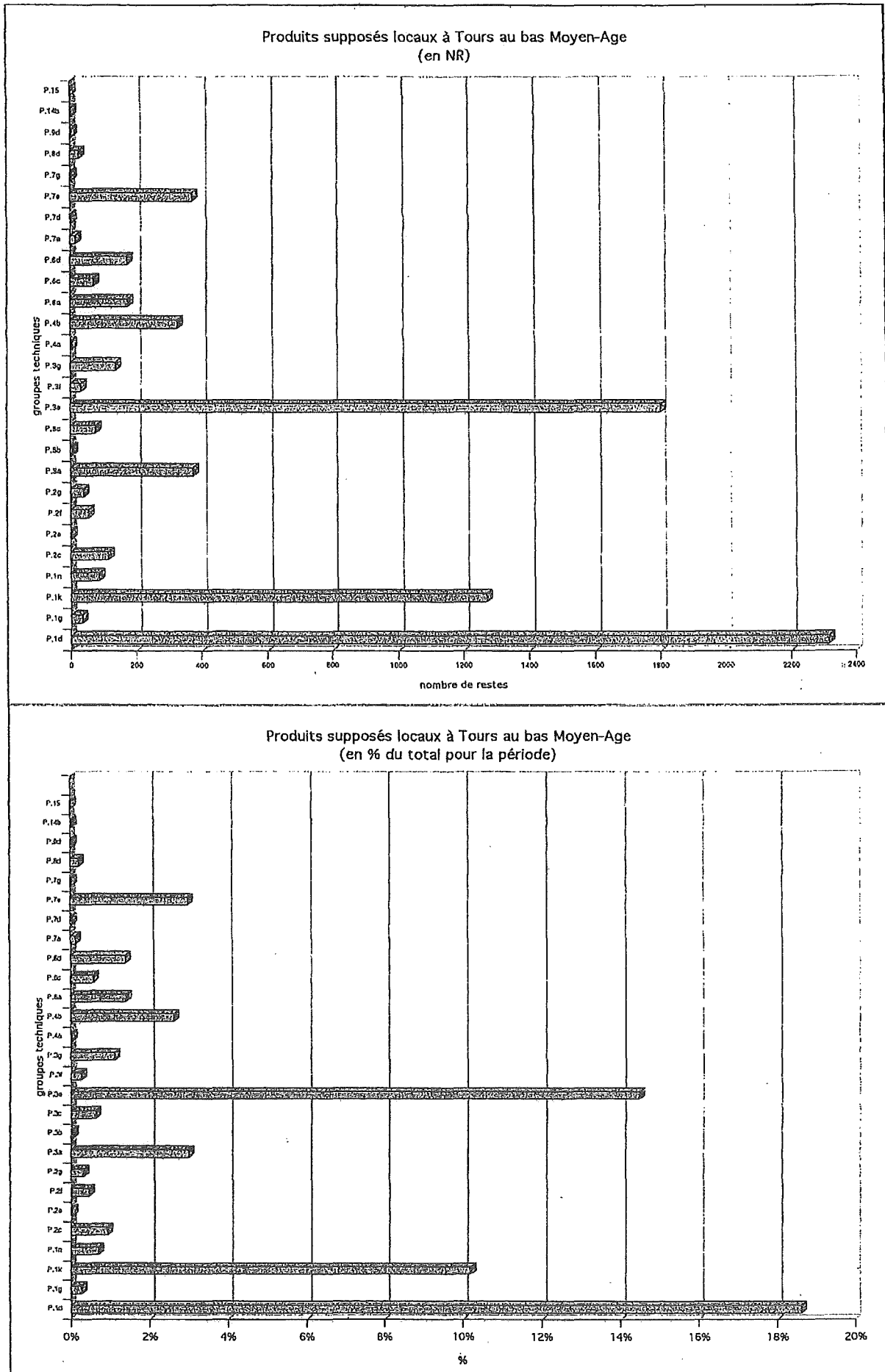


Fig. 6.



d'échanges, des "aires céramiques" et des zones de contacts différentes au sein d'une entité géographique plus étendue.

2 Essai de détermination des réseaux d'échanges et des "aires céramiques" dans le Centre-Ouest de la France

Le développement qui suit n'est qu'un préliminaire à une étude de la céramique au niveau régional, en cours depuis le début de l'année 1996. Le Centre-Ouest, tel que nous l'avons déjà défini, n'est pas encore étudié dans son intégralité et la première image, très incomplète, que l'on peut présenter correspond principalement aux résultats de l'analyse de quelques sites de la Région Centre. Ces principaux sites étudiés au sein du projet collectif de recherche, souvent d'une manière encore incomplète, sont Tours, Blois, Châteauroux, Mehun-sur-Yèvre, Orléans et dans une moindre mesure Bourges; les données des autres sites sont le fruit des publications régionales et de réunions collectives de travail (Fig. 9 à 12). Les sites qui servent de références pour l'étude sont en gras sur les cartes.

Les cartes présentées restent très hypothétiques car:

- le nombre des sites étudiés n'est pas suffisant;
- exception faite de Tours, l'analyse de la céramique n'étant pas exhaustive, le corpus d'étude est le plus souvent incomplet;
- il est encore difficile de cerner l'importance de chaque production et par conséquent de comparer les sites;
- enfin, l'espace géographique étudié à ce jour est encore trop restreint car limité uniquement à quelques sites de la Région Centre.

2.1 LES ATELIERS: LOCALISATION ET DURÉE D'EXISTENCE

2.1.1 Les zones de production en relation avec le Centre-Ouest

La liste des ateliers qui participent à la vie économique de cette région correspond pratiquement à celle déjà présentée pour Tours (Fig. 9 à 12). Sans distinction chronologique, on recense une première zone de production du nord-ouest avec les ateliers du Domfrontais, ceux de la région Lavalloise et ceux de la Sarthe. Puis une seconde du nord-est comprenant plusieurs petites structures dont la diffusion est limitée; ils sont regroupés sous les noms de "Jouy-le-Potier" et des "ateliers de la Forêt d'Orléans". Dans cette partie nord-est, on recense encore les ateliers de

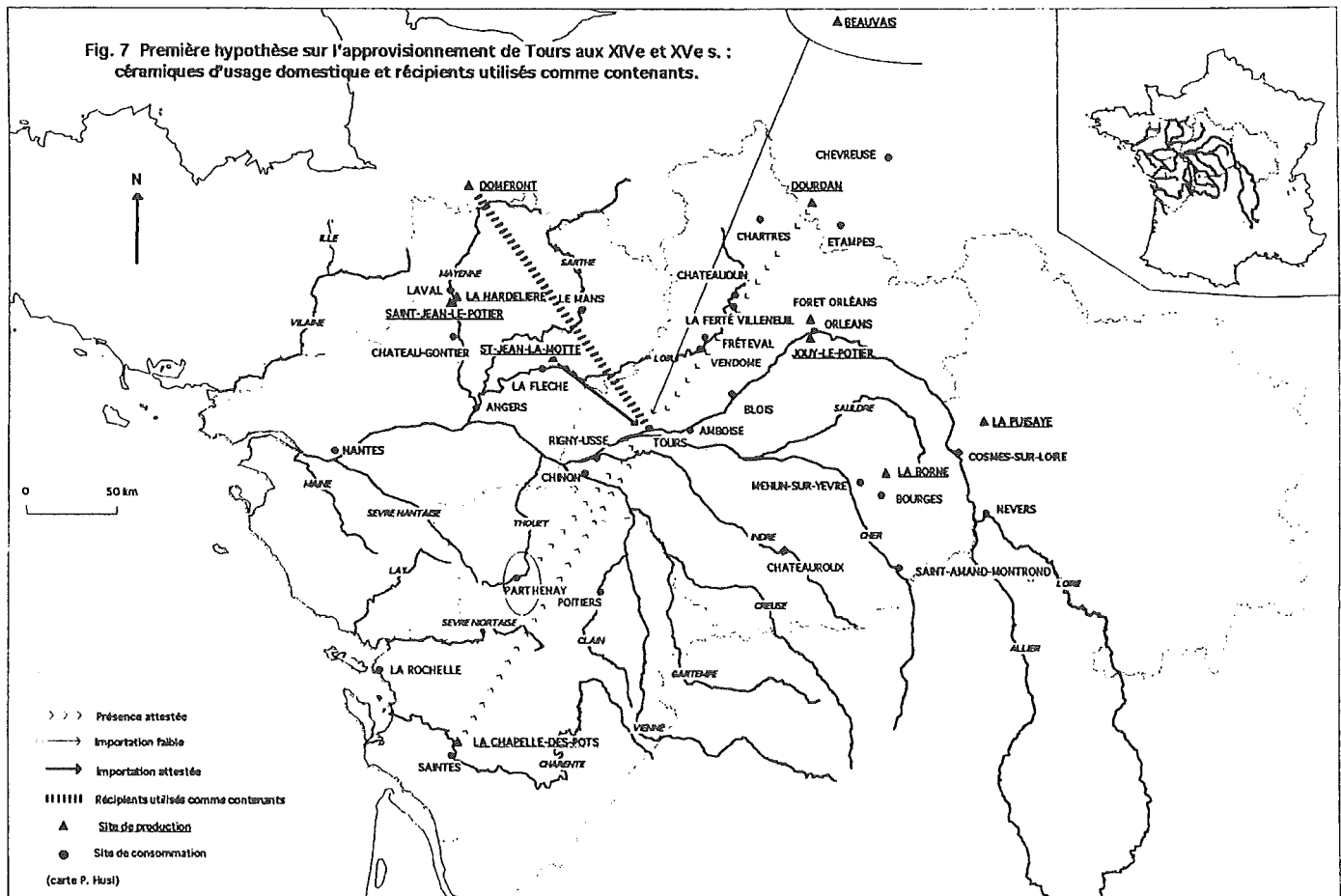
la région de Dourdan et plus lointains, ceux du Beauvaisis. Enfin, au sud-est, les ateliers de la Borne et ceux de la Puisaye forment un dernier pôle de production. Exception faite de Tours, les productions aussi renommées que celles de Saintonge, diffusées dès le XIII^e s. dans toute l'Europe et à partir des XVII^e et XVIII^e s. dans les sites de colonisation française, n'apparaissent pas dans cet espace (Chapelot 1991, 62-63).

Que dire de l'espace central situé en bord de Loire et compris au moins entre Blois et Tours, si ce n'est l'absence d'ateliers produisant des céramiques vouées à l'exportation. Il est bien évident qu'aucune recherche pointue sur ce thème n'a été entreprise jusqu' alors et que les cartes révèlent aussi ces lacunes. Cependant, l'étude de la céramique de Tours a montré que les produits locaux ou supposés locaux sont rarement attestés ailleurs dans la région, même les céramiques décorées des XVI^e et XVII^e s. On doit plutôt envisager une série de petits ateliers dont l'activité est limitée à l'approvisionnement local, dont la tradition artisanale dans ce domaine est faible.

2.1.2 Durée d'existence des ateliers

Les ateliers produisant la céramique rouge de Dourdan cessent leurs activités au XV^e s (Orssaud 1985, 80; Bourgeau 1987, 81). Les produits de Saint-Jean-de-la-Motte disparaissent dans la première moitié du XV^e s. des contextes domestiques de Tours (Husi 1994, 171).

Bien que les ateliers lavallois semblent fonctionner sans discontinuité au bas Moyen-Age et à l'époque moderne, on observe un changement des techniques de fabrication et un renouvellement des formes au milieu du XV^e s. avec le passage d'une production dite "à oeil de perdrix" à une production dite "rose-bleu", cette dernière apparaissant dans les niveaux domestiques des fouilles de Tours dès la fin du XV^e s. (Bucur, Dufournier, Goulpeau *et al.* 1984, 181; Husi 1994). Comme les productions lavalloises de la Hardelière, les ateliers du Domfrontais sont en activité durant tous le bas Moyen-Age et l'époque moderne mais le changement dans les techniques de fabrication est plus précoce. La fouille du site de Saint-Georges-de-Rouelley a permis de mettre en évidence une production de protogrès datable de la première moitié du XIV^e s. dont l'éventail typologique varié comprend aussi des mortiers à "oeil de perdrix" de même tradition que ceux de la région lavalloise (Bucur, Dufournier, Fajal *et al.* 1989). Le passage d'une production de protogrès à celle du grès semble s'opérer à la fin du XIV^e s. dans ces ateliers du Domfrontais; les récipients fabriqués ont alors



pour utilité principale le stockage ou la conservation des denrées alimentaires (Dufournier & Flambard 1987, 145-146).

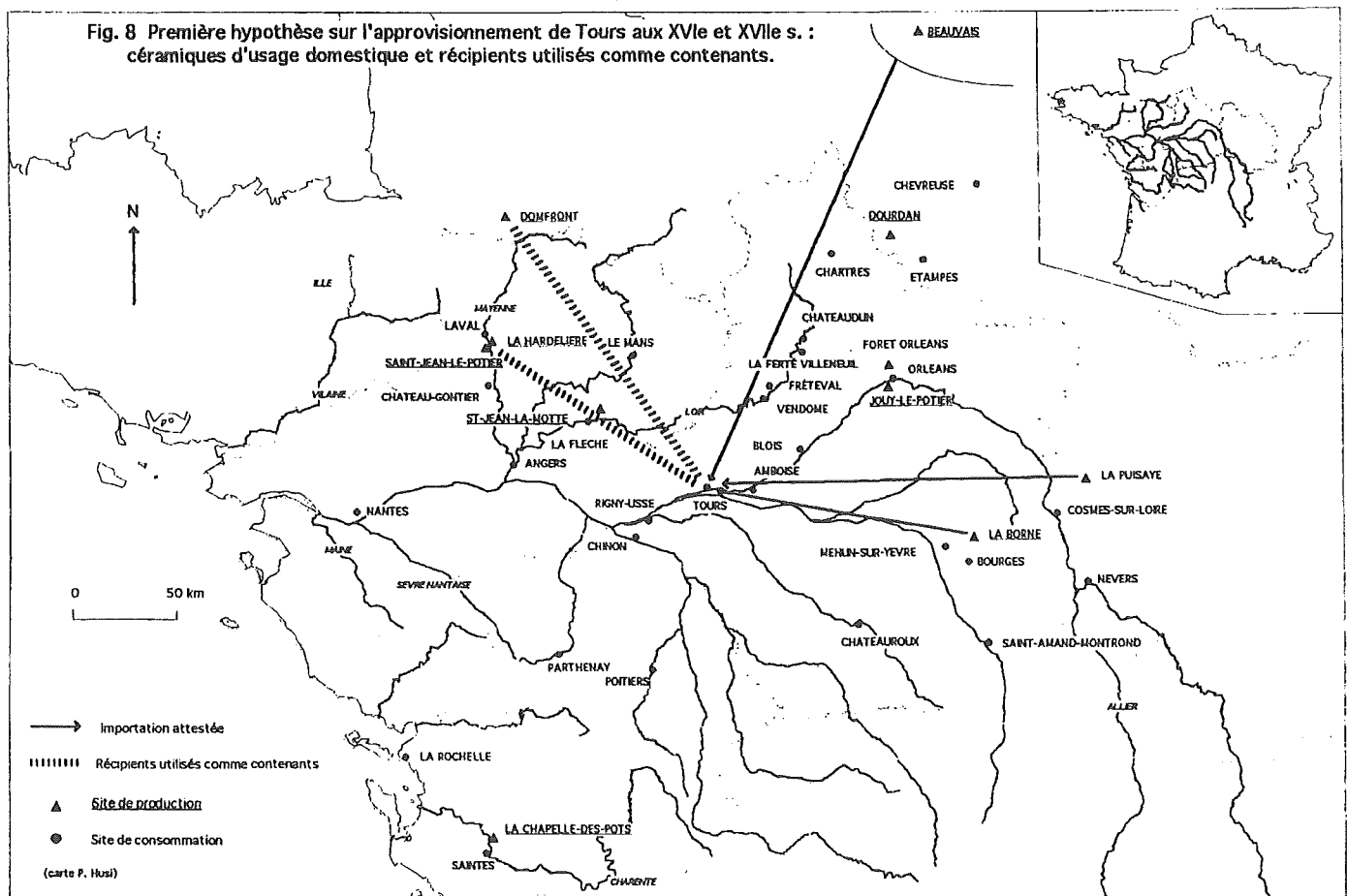
Il est difficile de cerner l'évolution des productions de grès du Berry qui est encore mal connue. En revanche, la tradition d'un artisanat céramique dans le Haut-Berry, localisé autour d'Henrichemont et de la Borne est ancienne car on retrouve la mention de la Poterie dans les textes dès le XIIIe s. Ces ateliers devaient très certainement approvisionner la ville de Bourges. Un autre groupement d'ateliers qui apparaît dès le XIIe s. se situe à Saulzay-le-Potier et alimente probablement les centres urbains du Bas-Berry notamment le Saint-Amandois (Bailly 1979, 35-36). La fabrication de grès est aussi attestée dans l'Yonne à partir du XVIe s.; les ateliers se répartissent sur plusieurs communes dénommées la "Puisaye des argiles" (Poulet 1989, 281). Bien qu'ils soient en concurrence, les ateliers de la Puisaye et du Berry se situent dans une aire géographique proche et forment ainsi cette zone de production du sud-est dont la particularité est la fabrication de récipients en grès en tous cas dès le XVIe s. et ceci jusqu'au XIXe s. (Bouthier, Poulet & Rosen 1996, 100-102).

La localisation et la durée d'existence des principaux ateliers en relation avec le Centre-Ouest étant maintenant connues, l'intérêt est d'essayer de mieux

percevoir les aires de diffusion des produits et leurs évolutions. Est-ce que la modification des zones de production, qui semble se dessiner au XVe s., a une influence sur la manière dont s'organise la diffusion des produits ? En d'autres termes, est-ce que l'on peut avoir deux images distinctes des "aires céramiques" dans le Centre-Ouest avec un changement qui s'opérerait au cours du XVe s. ?

2.2 EVOLUTION DES AIRES CÉRAMIQUES DU CENTRE-OUEST

Ces aires céramiques sont pour l'instant presque toujours fondées sur la présence ou l'absence de produits importés et de produits locaux de même tradition, associés à des niveaux archéologiques stratifiés. L'étude systématique du matériel reste encore à faire pour la plupart des sites et l'inventaire exhaustif du matériel n'est pas toujours terminé. Bien que la part de chaque production dans les sites étudiés soit rarement connue, on peut déjà estimer grossièrement celle des groupes les plus fréquemment rencontrés, ne serait-ce qu'à partir des formes complètes. Le découpage des aires n'est par conséquent pas figé et ce préliminaire à une étude plus complète n'a pour objectif que de servir de base de réflexion.



2.2.1 Au bas Moyen-Age (fin XIIIe s. - fin XVe s.) (Fig. 9)

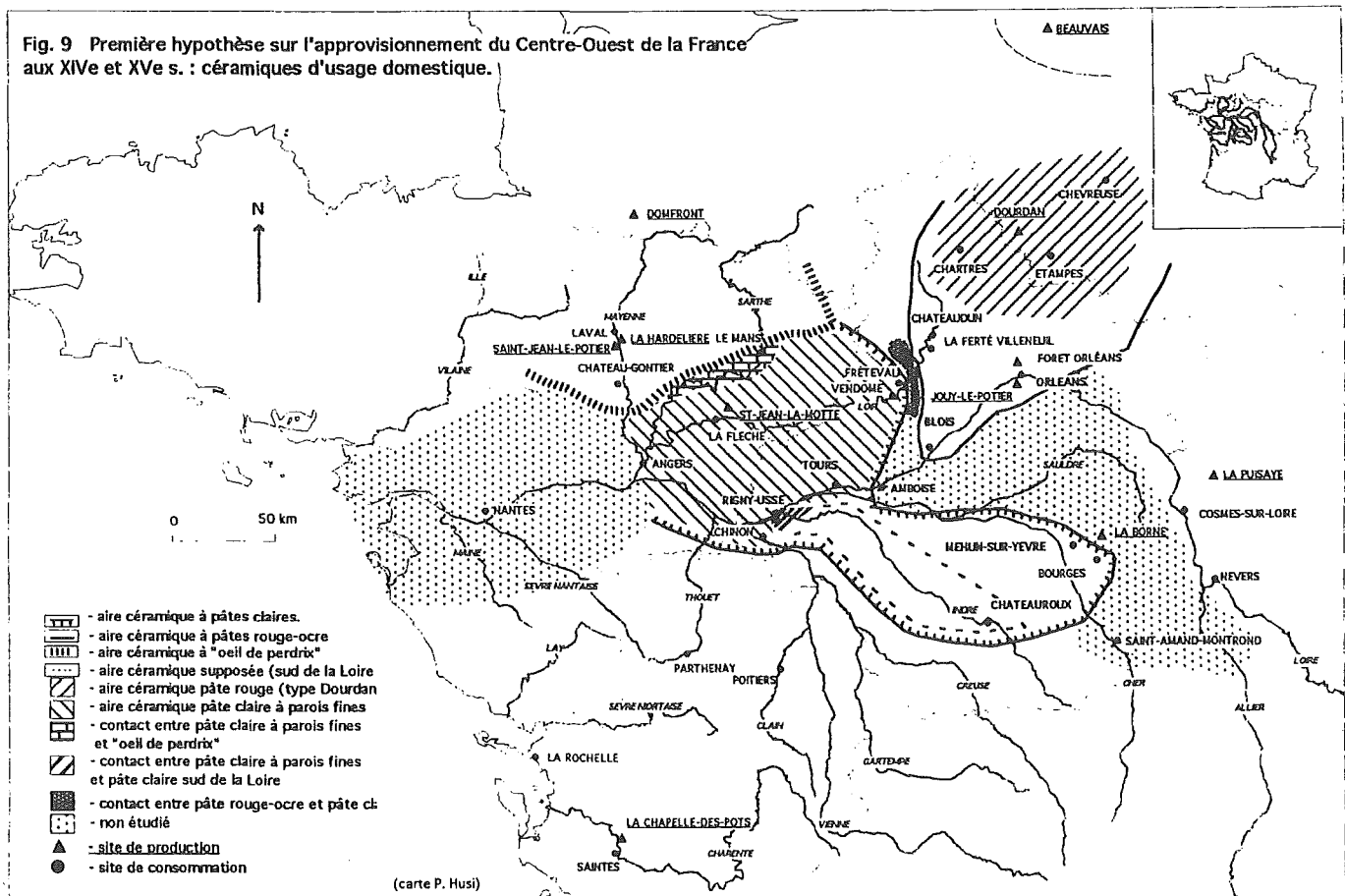
On distingue actuellement pour cette période deux zones appartenant à des traditions de fabrications céramiques distinctes:

- celle des céramiques à pâtes rouges et dérivées comme les "pseudo rouge" ou les pâtes ocre que l'on trouve dans la partie est de l'espace étudié;
- celle des céramiques à pâtes claires qui appartiennent à la partie ouest et probablement sud du même espace.

Dans la première zone, à l'est, les productions de tradition rouge-ocre sont omniprésentes à Chartres, à Orléans et à Blois. Elles sont composées des céramiques rouges de la région de Dourdan, des céramiques "pseudo-rouge" et ocre produites dans l'Orléanaise et d'après V. Aubourg-Josset sûrement imitées près de Blois. Une analyse plus fine de la répartition entre pâtes ocre et pâtes rouges pourra être envisagée lorsque l'analyse quantitative du matériel sera réalisée. Elle permettra peut-être d'entrevoir des aires céramiques différentes. On peut pourtant situer l'aire principale de diffusion des céramiques rouges, très au nord-est de notre région d'étude, entre Chartres, Chevreuse et Etampe (Claude 1994, 43, fig. 23).

Les contacts connus, entre les céramiques de tradition rouge-ocre et celles de tradition claire, semblent se faire dans le Vendômois. En effet, les céramiques à pâtes rouge-ocre se retrouvent encore à la Ferté Villeneuil près de Châteaudun et exceptionnellement au château de Lavardin près de Vendôme; selon V. Aubourg-Josset elles sont inconnues à Fréteval, site où prédomine la céramique à pâtes claires (Orssaud 1985, 79; Selles 1987, 15-31; Claude 1994, 38-45; Rayneau 1995, 67; Aubourg-Josset & Josset 1996, 199, 202, 220, 222-223). En Touraine, la céramique de tradition rouge-ocre n'apparaît que marginalement à Tours et à Rigny-Ussé; il s'agit de céramique rouge de la région de Dourdan ou de "pseudo-rouge" de l'Orléanaise ou du Blésois (Husi 1994, 225-226). A première vue, selon C. Monnet à Bourges et P. Bon à Meun-sur-Yèvre, aucune trace de pâtes rouge-ocre n'a été observée dans le Berry. Il semble d'une manière plus générale que ces productions n'atteignent pas le sud de la Loire.

Dans la seconde zone, à l'ouest, qui est caractérisée par la couleur claire des pâtes, on peut délimiter une aire céramique qui correspond aux récipients avec des parois assez fines et souvent munis de stries de tournage très marquées. Un des symboles pourrait en être les produits de Saint-Jean-de-la-Motte (Guilleux 1978). On les trouve très fréquemment dans la partie



ouest de la région d'étude, avec comme limite le Vendômois, la Touraine et sud le Chinonais (Schweitz 1979, 119-147, 187-191; Husi, Lorans & Theureau 1990, 154-155; 1992, 135-138; 1994, 195 et 224).

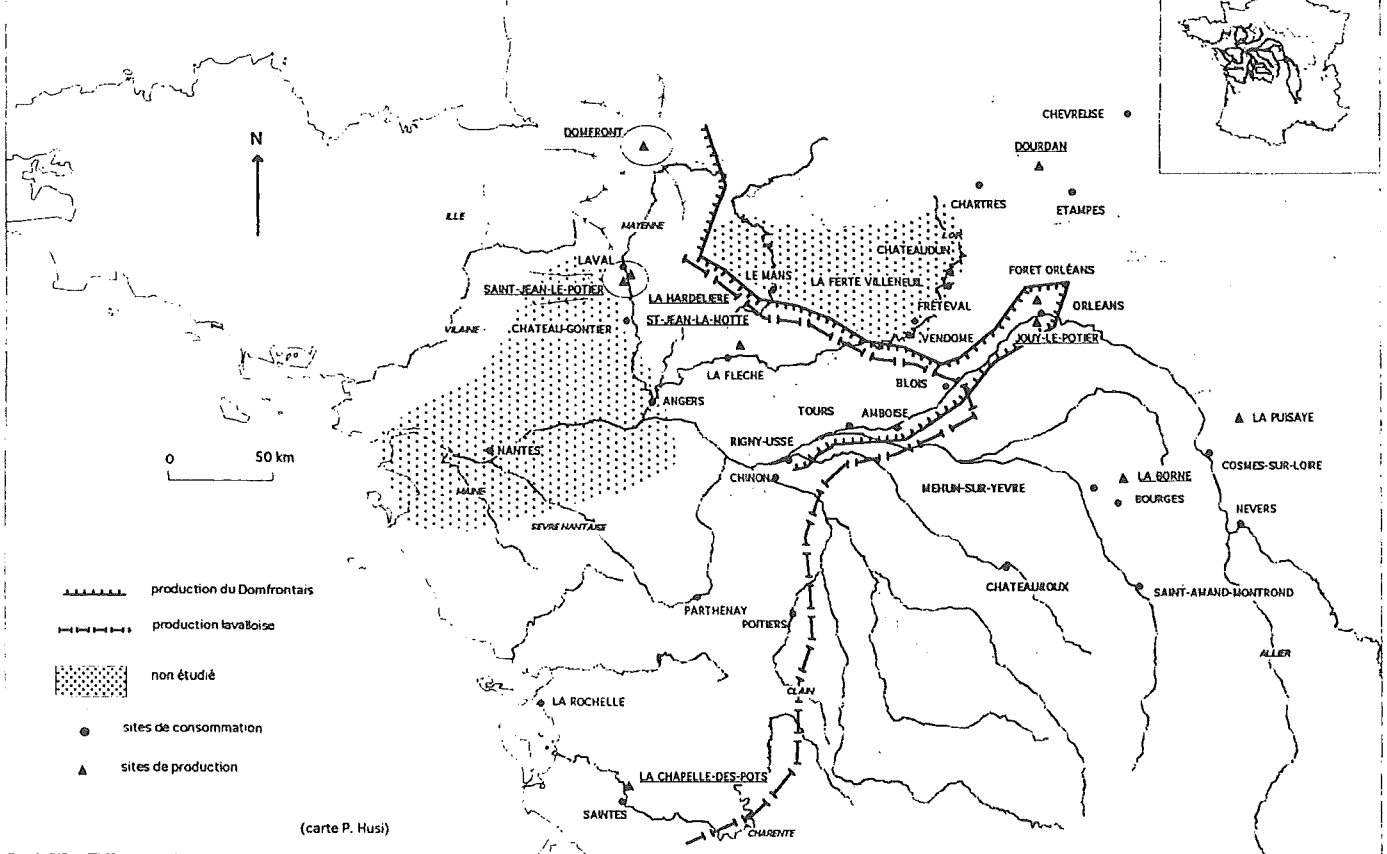
Que dire de la céramique à "oeil de perdrix", autre production bien caractéristique de l'Ouest de la France, si ce n'est qu'elle est produite dans la région lavalloise et en Basse Normandie et qu'elle se diffuse très peu vers le sud-est. En effet, aucune trace de récipients de cette tradition n'a été mis au jour à ma connaissance dans le Vendômois, en Touraine ou dans le Chinonais, alors que leur présence est attestée non seulement dans le Maine et ses abords ou dans la Sarthe comme au Mans, mais aussi en Saintonge (Bucur, Dufournier & Goulpeau *et al.* 1984, 193-195). La présence de ces productions à l'extrême nord-ouest de la région d'étude semble révéler une nouvelle aire céramique de tradition différente. Bien qu'en grande partie extérieure au Centre-Ouest, la céramique à "oeil de perdrix" semble limiter au nord-ouest le développement des productions à parois fines. En effet, selon J. Naveau, ces dernières sont faiblement représentées à Laval alors qu'elles semblent mieux attestées au Mans.

Une autre aire céramique, encore très hypothétique et mal délimitée, qui appartient à la tradition des pâtes

claires, existe au sud de la Loire. Les récipients la caractérisant le mieux pour l'instant, sont des pots en pâte blanche et fine, avec ou sans anse, munis d'une lèvre déjetée vers l'extérieur et d'une gorge supérieure. Bien que l'on ne puisse encore attester la provenance commune de ces récipients, ils ont été mis au jour à Rigny-Ussé et à Châteauroux pour le début du bas Moyen-Age, (deuxième moitié XIII^e-début XIV^e s.) (Husi 1992, 135-137; Chambon 1996, 39-40). La présence de l'Indre comme axe de communication peut expliquer cette hypothèse, qu'une étude systématique du matériel devra préciser. Ces productions semblent disparaître au moment où apparaissent plus au nord-ouest les récipients à parois fines. Aucun récipient de type Saint-Jean-de-la-Motte n'a été observé dans un espace compris entre Châteauroux et Bourges. Ceci semble traduire l'existence d'une aire céramique dont la tradition est toujours incluse dans les pâtes claires, mais dont les formes produites sont différentes (Bon 1996, 55-88). Une étude plus précise de la céramique du Berry pour le bas Moyen-Age devrait permettre de délimiter des aires céramiques au sud de la Loire, espace dont on peut uniquement dire pour l'instant qu'il appartient à la tradition des pâtes claires.

La quasi-absence de produits saintongeais dans le Centre-Ouest et la présence de quelques exemplaires

Fig. 10 Première hypothèse sur l'approvisionnement en récipients lavallois et domfrontais utilisés comme contenants dans le Centre-Ouest de la France à l'époque moderne.



de récipients du Poitou confirment bien les maigres contacts qui peuvent exister avec le sud-ouest déjà observés à Tours. Il en est de même pour le sud-est avec lequel aucun échange n'est encore perceptible. En revanche, il semble que les grès du Beauvaisis fassent leur apparition dans la partie est de l'espace étudié dès le milieu du XVe s. C'est le cas à Tours, à Blois selon V. Aubourg-Josset et plus logiquement à Chartres (Selles 1987, 29-35). Une analyse de l'approvisionnement des sites étudiés en grès du Beauvaisis qui passe par la quantification systématique de la céramique devrait préciser la rapidité et l'ampleur de la diffusion de ce produit.

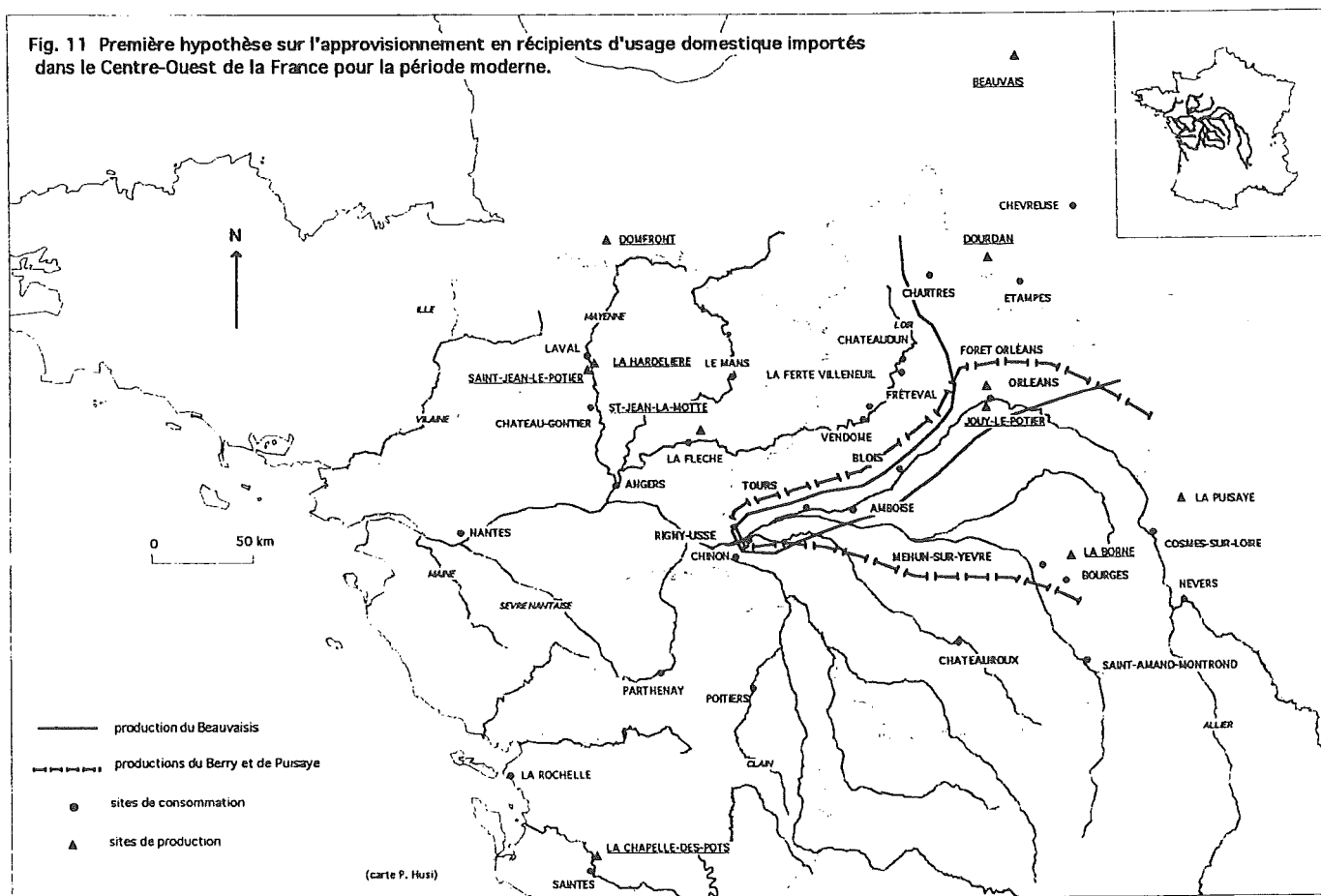
On perçoit actuellement dans le Centre-Ouest pour le bas Moyen-Age deux grandes zones de traditions de fabrication différentes, l'une comprenant des pâtes rouge-ocre, l'autre des pâtes claires. Bien que le Vendômois semble être un point de contact, entre les deux zones, la délimitation de ces espaces est encore mal identifiée, notamment au sud de la Loire. Ces deux zones principales se subdivisent pour donner naissance à des aires céramiques de traditions typologiques différentes qui se chevauchent les unes les autres. Le manque de données quantifiées ne permet pas de proposer un découpage plus précis. Les aires céramiques les mieux identifiées actuellement sont d'une part celle des pâtes rouges dites de Dourdan et

d'autre part celle des pâtes claires à parois fines dont un atelier est connu à Saint-Jean-de-La-Motte. Exception faite d'une aire encore hypothétique liée à la vallée de l'Indre, le Centre-Ouest, mieux connu dans sa partie nord, se divise en deux espaces, l'un attiré vers le nord-ouest et l'autre vers le nord-est. Une étude plus approfondie devrait permettre de mieux connaître la distribution de la céramique au sud de la Loire. On remarque déjà que la Loire participe à la diffusion des produits mais sert aussi de limite entre le nord et le sud. Est-ce que la distribution céramique observée pour cette période est stable ou est-ce qu'elle change à l'époque moderne?

2.2.2 A la période moderne (fin XVe - fin XVII e s.) (Fig. 10 à 12)

A la période moderne, l'utilisation systématique de techniques existant déjà au bas Moyen-Age, comme la surimposition de glaçure ou le grès est sûrement une des causes d'un transfert des ateliers de production et d'un changement des réseaux commerciaux.

Alors que la présence des pâtes ocre reste forte dans l'Orléanais et le Blésois dans la deuxième moitié du XVe s., les pâtes rouges de Dourdan ont tota-



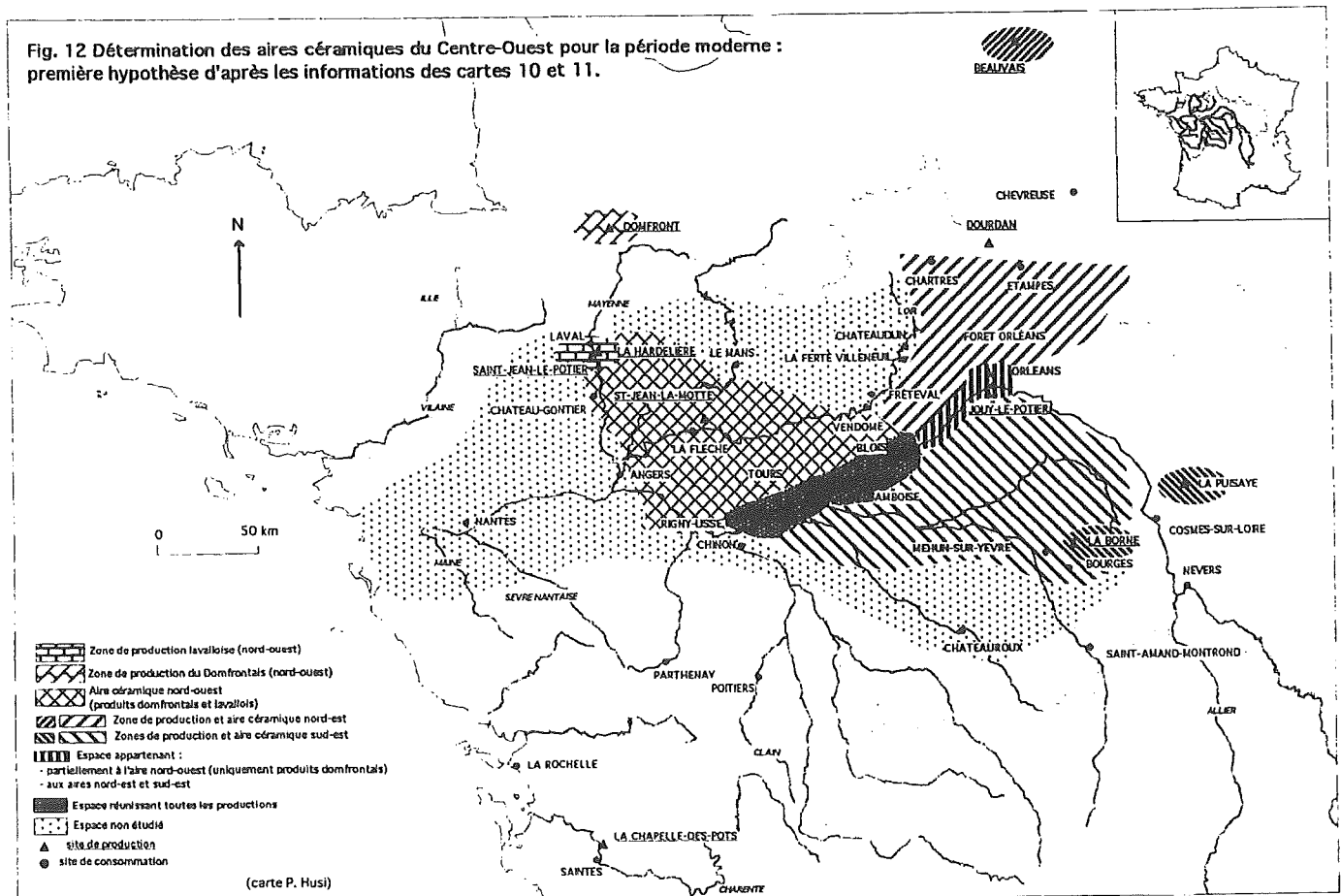
lement disparu (Orssaud 1985, 72-81; Aubourg & Josset 1992, 20-28). L'existence de deux zones de traditions différentes, l'une comprenant les pâtes ocre-rouge et l'autre les pâtes claires, qui caractérisait le bas Moyen-Age, est beaucoup moins marquée à partir du XVI^e s. Les différences dans les caractéristiques techniques semblent s'estomper. Bien que des productions locales comme par exemple les pâtes ocres de l'Orléanais existent toujours à l'époque moderne, l'utilisation de pâtes blanches pour les récipients glaçurés est fréquente (Orssaud 1985, 75, 82, 109-110; Selles 1987, 32-33). Inversement, la prédominance des pâtes blanches plus à l'ouest tend à disparaître, avec une forte présence de céramiques oranges, et même rouges. Est-ce l'utilisation plus fréquente de la glaçure qui est la cause de cette plus grande homogénéité, et par conséquent d'une disparition des traditions de fabrication plus anciennes? Est-ce qu'un transfert des techniques aboutit à la création de nouveaux ateliers dont l'aire de diffusion est locale? Assiste-t-on à une concurrence de la céramique domestique au niveau local?

A partir de la fin du XV^e s., les récipients domestiques locaux sont souvent glaçurés et les céramiques importées, non glaçurées, proviennent de grands centres de production, parfois lointains. Bien que le grès soit une innovation technique du bas Moyen-Age, il

n'a concurrencé les autres produits qu'à la période moderne lorsque les techniques de fabrication sont totalement acquises et que les capacités de production permettent d'arriver à une standardisation des formes.

Les grès normands et plus spécifiquement du Domfrontais comme les productions lavalloises n'ont que rarement concurrencé les produits locaux de la région car il semble qu'ils aient uniquement servi de contenants pour le transport des denrées alimentaires. Bien que les zones de production soient situées à proximité l'une de l'autre, les récipients exportés se retrouvent dans des zones quelque peu différentes (Fig. 10).

Il semble que passé la Loire les produits normands soient plus rares. Ils sont omniprésents en Touraine dès le bas Moyen-Age (Husi 1994, 226). On les trouve dans des sites ruraux comme Rigny-Ussé; ils sont attestés à Orléans et d'après V. Aubourg-Josset à Blois (Orssaud 1985, 109; Husi 1994, 226-227). Selon A.M. Fourteau et M. Cavallès, quelques rares exemplaires existent dans le Poitou, peut-être à Parthenay et à La Rochelle; d'après P. Bon et C. Monnet, ils sont inexistantes dans le Berry comme à Mehun-sur-Yèvre ou à Bourges. La céramique dite "rose-bleu" de la Hardelière près de Laval est surtout connue dans la partie ouest de la région d'étude. Alors qu'elle est fréquente en Vendée, dans le Poitou



et jusqu'en Charente, la Touraine ou le Blésois forment une des limites à l'est (Fourteau-Bardaji & Cavaillès 1993). Une analyse systématique et quantifiée de ces productions s'impose encore ici.

Comment expliquer l'apparition de ces productions lavalloises à l'est à l'époque moderne alors que les céramiques à "œil de perdrix" du bas Moyen-Age étaient déjà bien connues plus à l'ouest? L'apparition de récipients servant de contenants peut s'interpréter comme la preuve de nouveaux échanges de denrées alimentaires entre les deux régions à la période moderne. Elle peut aussi montrer que ces ateliers ont su transformer leurs produits afin de s'adapter à la demande et arriver à s'imposer face au monopole des grès normands.

Il semble, dans l'espace étudié, que la Touraine corresponde à la zone la plus orientale de pénétration des produits normands et lavallois (Fig. 10). La zone, où l'on trouve ces produits, n'est que le reflet de l'approvisionnement de certains sites en denrées alimentaires. En effet, ces récipients servant "d'emballage", on ne peut pas établir une relation directe entre le site de production et le site de consommation. Il est fort probable que les circuits de distribution de ces récipients soient totalement tributaires des produits qu'ils contiennent.

Que dire des récipients d'usage domestique? La réputation des grès du Beauvaisis est telle que certaines formes comme les gourdes, les coupes ou les gobelets vont réussir à s'imposer sur les marchés locaux du Centre-Ouest. C'est surtout vrai pour la partie est de la région, notamment l'ancienne aire de diffusion des pâtes rouge-ocre, même si leur présence en Touraine est tout de même bien attestée (Orssaud 1985, 83-84, 106-108; Selles 1987, 32-34; Aubourg-Josset 1992, 26-28; Husi 1994, 199-200, 203, 227) (Fig. 11). A la différence de la région parisienne où les productions du Beauvaisis glaçurées et en grès ont très fortement inondé le marché local, la plus grande partie du Centre-Ouest n'est que marginalement concernée et sauf exception, exclusivement par les récipients en grès. La Loire apparaît comme la limite sud-ouest de diffusion de ces produits en même temps qu'un axe de communication ayant aidé à sa pénétration. Alors que ces derniers sont bien représentés dans tous les sites longeant la Loire, d'Orléans à Tours, ils sont quasi inexistant dans le Berry et n'ont à ma connaissance jamais été découverts dans le Poitou. Une recherche plus précise sur ce produit devra donc être développée dans les années à venir, notamment plus à l'ouest le long de la Loire.

Les aires de diffusion des grès du Berry et de la Puisaye sont encore difficilement discernables dans le Centre-Ouest. Ces pôles de production, en pleine expansion au XVII^e s., concurrencent parfois les types locaux les plus courants des grandes villes du sud-ouest de la région étudiée comme Orléans, Blois, Bourges et Tours (Orssaud 1985, 109; Husi 1994, 182; Aubourg-Josset & Monnet: étude en cours) (Fig. 11). Bien que tardifs et encore mal connus, ces produits apparaissent sur les marchés locaux à partir du XVI^e s. et atteignent une place non négligeable au XVII^e s. Les pichets sont essentiellement de la Puisaye alors que les pots semblent provenir du Berry (Orssaud 1985, 109-110; Boutier, Poulet & Rosen 1996, 100-103). Il est encore difficile de cerner l'ampleur du phénomène car l'étude des contextes archéologiques les plus récents reste souvent à faire. Est-ce que ces productions se retrouvent plus vers l'ouest et le nord-ouest comme par exemple en Anjou? Où peut-on placer la zone de contact entre les grès du Beauvaisis et du Berry ou de la Puisaye dans le Centre-Ouest? Est-ce une fois encore la vallée de la Loire qui sert de limite?

La modification des réseaux d'approvisionnement, qui avait déjà été observée à Tours à la fin du bas Moyen-Age, semble se confirmer dans le Centre-Ouest. En l'état de la recherche, et en limitant pour l'instant le Centre-Ouest à quelques sites de la Région Centre, on peut distinguer trois "aires céramiques" qui se chevauchent et qui englobent des espaces de tailles différentes (Fig. 12). Ces aires ne se dessinent pas en fonction d'une tradition de fabrication locale comme au bas Moyen-Age, mais dépendent de grands ateliers parfois extérieurs à la région. La première aire, très importante, tournée vers l'ouest est limitée par la diffusion des productions lavalloises et normandes; la seconde beaucoup plus modeste garde des rapports constants avec les ateliers du Beauvaisis tout en étant partiellement touchée par les productions normandes; enfin, la troisième, un peu plus tardive, est tournée vers le sud-est et les ateliers du Berry et de la Puisaye.

Il faut pourtant nuancer cette image car la signification de ces aires n'est pas toujours la même. La première n'est que le témoin d'un approvisionnement en denrées alimentaires dont on ne connaît pas vraiment les réseaux de distribution; ces derniers sont sûrement indirects et fortement tributaires de la nature des produits transportés. Les deux autres reflètent plus vraisemblablement un approvisionnement en céramique domestique, les réseaux de distribution étant alors certainement directs.

En ne s'intéressant qu'aux produits d'usage domestique et en supposant que la commercialisation des récipients est directe, on peut émettre l'hypothèse

que la vallée de la Loire sert aussi bien de limite entre l'aire du nord-est et celle du sud-est que d'axe de distribution. Lorsqu'on y ajoute les produits du nord-ouest servant de contenants, on constate une fois de plus que la totalité ou la quasi-totalité des productions sont présentes dans cet espace qui longe la Loire (Fig. 12). Cette hypothèse reste pourtant à confirmer par une étude systématique du matériel dans un plus grand nombre de sites et dans un espace plus vaste que la Région Centre.

2.3 AIRES CÉRAMIQUES ET MÉCANISMES DE DISTRIBUTION

C'est le changement des mécanismes d'approvisionnement qui explique en partie cette redistribution. Le commerce céramique au bas Moyen-Age est essentiellement celui de produits domestiques, l'identité de chaque aire céramique étant fondée sur une tradition de fabrication. Le commerce de la céramique ne se fait qu'à moyenne distance car les ateliers, utilisant les mêmes techniques de fabrication, sont encore atomisés dans une micro-région. Les zones économiques situées dans la mouvance d'un ou d'une série d'ateliers sont moins importantes que celles observées à l'époque moderne. C'est le cas pour les céramiques à parois fines dont un atelier est connu à Saint-Jean-de-la-Motte ou de celles à pâtes rouges attribuées à l'atelier de Dourdan; ces ateliers sont sûrement les pôles principaux de production sans en être les seuls.

En revanche, à partir de la fin du XV^e s. et durant toute la période moderne, il semble qu'apparaisse un commerce à plus longue distance. Ce commerce à plus grande échelle peut s'expliquer par le développement des échanges de denrées alimentaires, le récipient ne servant alors que de contenant. C'est le cas pour les productions céramiques du nord-ouest pour lesquels on peut imaginer que les réseaux de distributions ne sont pas directs entre l'atelier et le site de consommation. Cependant une augmentation des importations du Domfrontais et de la région lavalloise, qui correspond aussi à une meilleure adéquation entre le récipient et son usage de contenant, n'est pas l'unique explication au développement des échanges à plus longue distance. En effet, l'influence des grands centres de production est omniprésente, même pour l'approvisionnement en récipients d'usage domestique comme ceux du Beauvaisis et ceux du Berry ou de la Puisaye. Il semble que la situation géographique de la région en soit une des causes principales. En effet, le Centre-Ouest est encadré par trois des plus grandes zones de production de grès de France: la Normandie, le Beauvaisis et le Berry-la Puisaye.

Cette innovation technique révolutionne le marché de la céramique: la qualité des produits implique une forte demande de certains types de récipients qui font la réputation de chaque région productrice. C'est le cas des sinots du Domfrontais, de récipients domestiques comme les coupes, les gobelets ou les gourdes du Beauvaisis, de vases à liquide comme les pichets de la Puisaye, enfin des pots du Berry. La forte demande est sûrement à l'origine d'un accroissement des capacités de production qui s'observe dans la spécialisation et la standardisation des formes. Est-ce que l'accroissement de production et la distribution à grande échelle sont uniquement liées à ce produit bien particulier qu'est le grès? Il semble que non car la même analyse peut-être faite pour les productions lavalloises, dont les pots servant de contenant, se retrouvent dans tout le grand ouest de la France.

On observe donc une transformation des mécanismes de distribution qui nous révèle non seulement l'accroissement du commerce de récipients d'usage domestique mais surtout l'augmentation des importations de denrées alimentaires comme le beurre. Ce changement des mécanismes de distribution de la céramique semble s'opérer dans la deuxième moitié du XV^e s. et à pour cause le passage d'un système économique de subsistance à un autre qui entre dans une logique pré-industrielle.

Cette première approche a mis en évidence l'existence d'une évolution des "aires céramiques" pour la période étudiée. Il semble qu'un changement des lieux d'approvisionnement en céramique existe au début de l'époque moderne. Elle correspond au développement de certains grands centres de production qui se spécialisent et standardisent certaines formes qui feront leur succès. Il ne faut pourtant jamais oublier que la céramique n'est souvent que le reflet d'un autre commerce. C'est le cas ici des productions du nord-ouest dont les réseaux de distribution dépendent essentiellement du produit transporté.

Comme nous venons de l'entrevoir, la Loire et ses principaux affluents ne sont pas les seuls moteurs de diffusion de la céramique dans la région. En effet, la Loire facilite le commerce, mais apparaît aussi comme une limite à son développement. L'opposition entre l'est et l'ouest au bas Moyen-Age traduit bien l'existence d'autres facteurs de diffusion.

Une meilleure compréhension de ces phénomènes passe maintenant par le développement de la recherche dans ce domaine. Les sites étudiés sont pour l'instant trop peu nombreux et il est difficile de préciser les courants d'échanges, de saisir comment se faisait l'approvisionnement, de mieux délimiter les "aires céramiques", tant qu'une analyse quantitative et systématique n'est pas faite pour les sites les mieux strati-

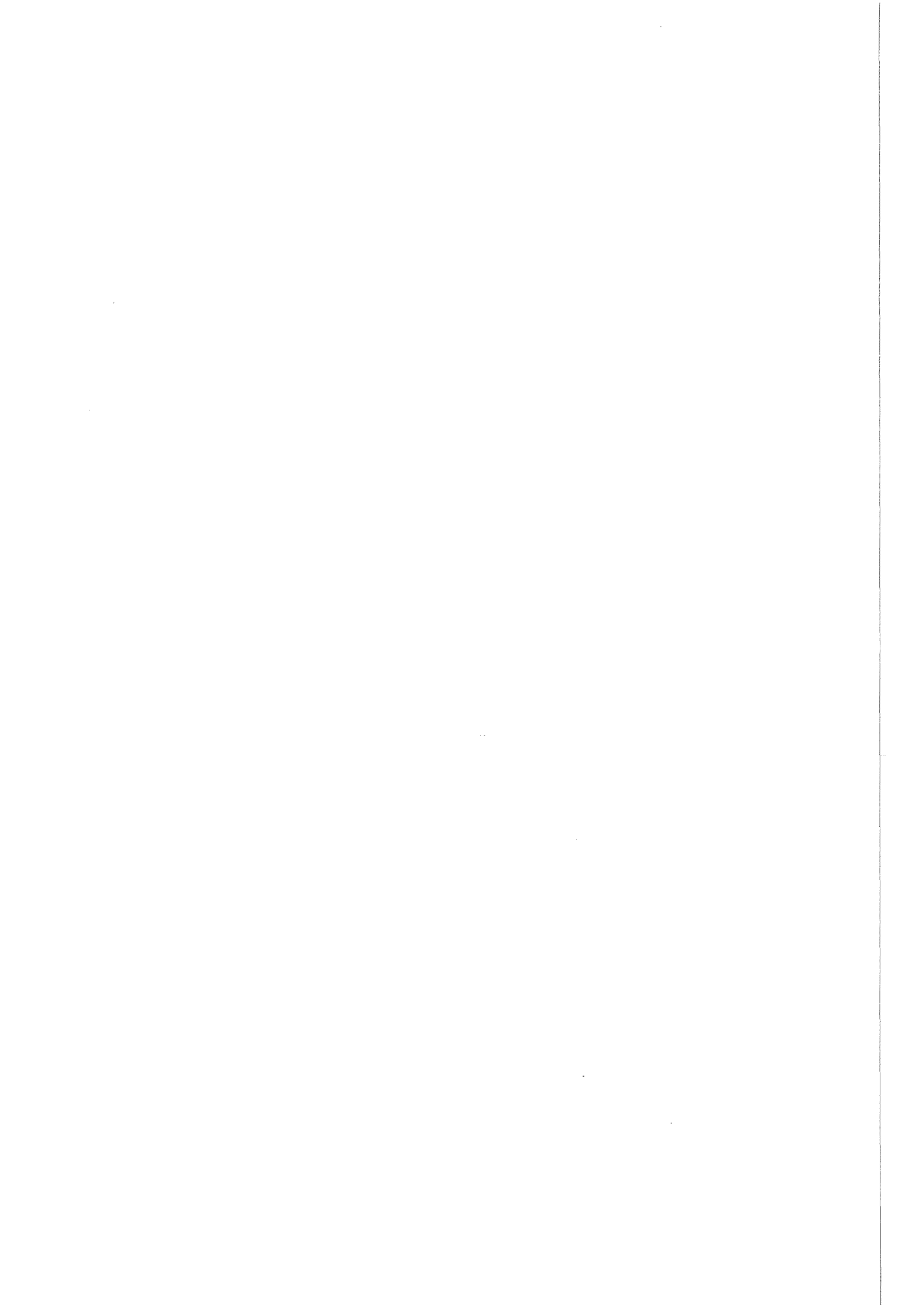
tifiés. Actuellement on travaille encore trop souvent en terme de présence ou d'absence d'un produit ce qui limite fortement les interprétations. La mise en oeuvre du projet collectif régional est un des moyens de développer cette recherche. L'objectif, à terme, est de faire une analyse systématique de la céramique des principaux sites du Centre-Ouest tel que nous l'avons définie, en travaillant en collaboration avec les chercheurs des régions avoisinantes.

Bibliographie

- AUBOURG V. & JOSSET D. 1992: *Cour du Château de Blois (Loir-et-Cher)*, Maîtrise des sciences et techniques de Tours, 1 vol. dactyl. Tours.
- AUBOURG-JOSSET V. & JOSSET D. 1996: La céramique de Blois, in: Husi 1996b, 179-225.
- BAILLY P. 1979: Céramiques médiévales et renaissance, *Archéologia* n° 134, 31-35.
- BON P. 1996: La céramique de Mehun-sur-Yèvre (Cher), in: Husi 1996b, 55-88.
- BOURDU D. (dir.) 1991: *Dialogue. Il était une fois la rue de la Vau Saint-Jacques... et l'Égypte en Poitou-Charentes*, Musée et service patrimoine de la ville de Parthenay.
- BOURGEAU L. 1987: La production de céramique médiévale dans la région de Dourdan (Essonne), in: Chapelot, Galinié, Pilet-Lemière 1987, 77-86.
- BOUTHIER A., POULET M. & ROSEN J. 1996: Les grès de Puisaye du 16^e au 19^e s., in: *Trente ans d'archéologie dans la Nièvre, catalogue d'exposition*, Comité départemental de la recherche archéologique nivernaise, conservation départementale des musées de la Nièvre, 100-103.
- BUCUR I., DUFURNIER D., FAJAL B., LEVALET D. & LOUIS-PHILIPPE M. 1989: Un four de potier médiéval à Saint-Georges-de-Rouelley (Manche), les premiers grès bas-normands, *Archéologie Médiévale* XIX, 215-242.
- BUCUR I., DUFURNIER D., GOULPEAU L., LANGOUET L. & NAVEAU J. 1984: La céramique à "oeil de perdrix" et la production de la Hardelière à Laval, *Archéologie Médiévale* XIV, 169-220.
- CAVAILLÈS M. 1991: Les résultats des fouilles archéologiques de la maison des cultures de Pays, in: Bourdu (dir.) 1991, 114-140.
- CHAMBON M.P. 1996: La céramique du site du "Petit Colombier" (Sain-Maur, Indre), in: Husi 1996b, 37-43.
- CHAPELOT J. 1991: *Les artisans ruraux de la terre cuite en Saintonge du XIII^e au XVIII^e s. La céramique saintongaise des origines au XVI^e s.*, catalogue d'exposition de la Société d'Archéologie et d'Histoire de la Charente-Maritime,

- Sainte, 61-66.
- CHAPELOT J., GALINIÉ H. & PILET-LEMIÈRE J. (éds.) 1987: *La céramique (Vème-XIXème siècle): fabrication, commercialisation, utilisation. Actes du 1er Congrès international d'archéologie médiévale (Paris 1985)*, Caen.
- CHAREILLE P. & HUSI P. 1996: Une méthode d'analyse quantitative et statistique de la céramique de Tours, *Histoire et Mesure* 11, n°1/2, 19-51.
- CHEVALIER B. 1983: *Tours ville royale 1356-1520, origine et évolution d'une capitale à la fin du Moyen-Age*, Tours.
- CLAUDE C. 1994: *Aire de diffusion de la céramique à pâte rouge produite à Dourdan au XIVe s.*, mémoire de DEA de l'Ecole des Hautes Etudes en Sciences Sociales, sous la direction de J.M. Pesez, 1 vol. dactyl.
- DUFOURNIER D. & FLAMBARD A.M. 1987: Réflexions à propos de l'apparition du grès en Europe occidentale: 139-147, in: Chapelot, Galinié & Pilet-Lemière 1987.
- FAJAL B. 1995: L'artisanat du grès à l'Epoque Moderne dans la région de Domfront: l'exemple de Champsecret, *Histoire et Archéologie*, Alençon, Champsecret, La Ferrière-aux-Etangs, *Société historique et archéologique de l'Orne* CXIV, 3-4, 41-72.
- FOURTEAU-BARDAJI A. M. & CAVAILLÈS M. 1993: Une production de l'ouest de la France: la céramique "rose-bleu", in: CHAPELOT (dir.), *La céramique médiévale en Poitou-Charentes, rapport d'activité du projet collectif de recherche*, SRA Poitou-Charentes, 121-134.
- GUILLEUX J. 1978: *Fouille de sauvetage sur le site "La Chaussée-Paillère" en Saint-Jean-de-la-Motte (Sarthe)*, rapport de fouille imprimé, 41-60.
- HUSI P., LORANS E. & THEUREAU C. 1990: Les pratiques funéraires à Saint-Mexme de Chinon du Ve au XVIIIe siècle, *Revue archéologique du Centre de la France* 29, fasc. 2, 131-168.
- HUSI P. 1991: Préliminaires à une étude chronotypologique de la céramique de Tours du XIIe au XVIIe siècle, *Revue archéologique de Centre de la France* 30, 207-214.
- HUSI P. 1992: La céramique funéraire, in: E. ZADORA-RIO & H. GALINIÉ (dir.), *Le cimetière paroissial de la vieille église de Rigny*, *Revue archéologique du Centre de la France* 31, 134-140.
- HUSI P., La céramique domestique, *ibidem*, 140-143.
- HUSI P. 1994: *La céramique de Tours du XIVe au XVIIe siècle (Essai de détermination des produits locaux et des produits importés à partir du mobilier des fouilles de Tours)*, thèse de doctorat, Université de Tours, 3 vols dactyl., I (texte) 259 p., II (figures) 133 fig., III (annexes).
- HUSI P. 1996a: La céramique médiévale et moderne du site "les abords de la Cathédrale" de Tours, in: A.M. JOUQUAND (dir.) 1996: *La fouille des Abords de la Cathédrale de Tours*, Document final de synthèse, Ministère de la culture (Orléans: SRA Région Centre), 125-127; 156-184; annexes 7, 8 et 9.
- HUSI P. (dir.) 1996b: *La céramique médiévale et moderne de la Région Centre, rapport annuel du projet collectif régional*, Tours UMR "Archéologie et territoires", SRA Orléans.
- ORSSAUD D. 1985: La céramique médiévale orléanaise, *Revue archéologique du Loiret* 11 (Archéologie de la ville - Orléans 2).
- POULET M. 1989: La poterie traditionnelle: les grès de Puisaye, in: *L'Yonne et son passé, 30 ans d'archéologie*, catalogue d'exposition, Comité Départemental de la Recherche Archéologique de l'Yonne, Comité Régional de la Recherche Archéologique de Bourgogne, 281-284.
- RAVOIRE F. 1990: Terres cuites glaçurées du Beauvaisis des XVI et XVIIe siècles trouvées Cour Napoléon du Louvre et secteur sud du Carrousel à Paris, *Groupe de recherches et d'études de la céramique du Beauvaisis* 12, 87-197.
- RAYNEAU L. 1995: L'église Saint-Martin de la Ferté-Villeneuil et ses fontaines, *Bulletin de la société Dunoise* XXII, n° 285, 48-73.
- SCHWEITZ D. 1979: *Contribution archéologique à l'étude de la céramique du Bas Moyen-Age en Vendômois*, Mémoire E.H.E.S.S., Paris.
- SELLES H. 1987: *Céramiques médiévales de Chartres. Présentation sommaire*, A.D.A.U.C, Chartres.
- VERHAEGHE F. 1987: La céramique en Flandre (XIIIème-XVème siècle): Quelques aspects de l'évolution et de la concurrence, in: Chapelot, Galinié & Pilet-Lemière 1987, 203-225.

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15th century Flemish tiles in the north of England

Plain-glazed floor tiles of late 14th to early 16th century date are found at a large number of sites in Britain, and elsewhere around the North Sea, and have long been thought to be imports from the Low Countries. The idea of imported floor tiles from ports in the Netherlands to the north of England is well supported by references in customs accounts. However, there are considerable difficulties in identifying these tiles on the ground, and therefore of extending discussion of this trade by including information derived from archaeological study.

The main reason for this problem of identification is that the manufacture of plain-glazed tiles does not require the use of a stamp. Wooden stamps, with designs carved on them, are used in the production of most two-colour floor tiles. The same stamp is used to make large numbers of these decorated tiles and, in consequence, the products of a workshop can be identified with some confidence. As plain-glazed tiles cannot be characterised as closely as decorated examples, they are not as useful archaeologically.

Over the past ten years, however, a substantial research programme into the manufacture, distribution, design and use of medieval floor tiles in the north of England has been carried out by English Heritage at the University of York. The study spans the period from c1200 to c1500, and includes all provenanced material north of the river Humber and south of the Scottish border, plus relevant comparative material outside the area. The large sample size, provided by the scale of this study, means that an evaluation of the characteristics of plain-glazed tiles has also been possible. It is now hoped that the results will allow comparative work with material in the Low Countries.

This paper assesses the evidence for plain-glazed Flemish tiles in England, considers how they may be recognised archaeologically and looks at some of the implications arising from their production and distribution.

Tile series in the north of England

Study of all the tiles in the north of England has identified eight major series. Decorated tiles belonging to the 13th and early 14th centuries were produced locally. The decorated tiles used in the mid-14th century were probably made further south, in the area around Nottingham (north midlands), and were brought into the region, probably via the river Trent. The limited available evidence suggests that these tiles were being laid in pavements in the north until about 1370-80. Decorated floor tiles, once again produced locally, were in use in the 15th century, but possibly not before the later 15th century. Large numbers of plain-glazed tiles are generally dated from the late 14th to early 16th centuries. It is these plain-glazed tiles which are thought to have been made in the Low Countries and imported to Britain.

Customs accounts

The importation of floor tiles is evidenced in customs accounts¹. These documents were compiled at major ports for tax purposes on overseas trade. Where tile was part of a cargo it is usually listed in the accounts as Flanders tile. The terminology can be a pro-

¹ References to tile imports have been noted by a number of writers including L.F. SALZMAN, *English Industries of the Middle Ages*, 2nd edition, Oxford, Clarendon Press, 1923, 180-182; J.B. WARD PERKINS, Late medieval Flemish inlaid tiles in England, *Antiquaries Journal* 17, 1937, 443; L. F. SALZMAN, *Building in England down to 1540; a documentary history*, Oxford, Clarendon Press, 1952, 140-148; G.E.C. KNAPP, Flemish medieval paving tiles in Hampshire, *Papers and Proceedings of the Hampshire Field Club and Archaeological Society* 30, 1956, 29-33; Arthur LANE, *Guide to the collection of tiles*, Victoria and Albert Museum, London, 1960, 53; L. KEEN, Medieval floor tiles from Campsea Ash Priory, *Proceedings of the Suffolk Institute of Archaeology* 32, 1971, 148; L. KEEN, The medieval floor-tiles, in: J.P. ALLAN (ed), *Medieval and post-medieval finds from Exeter, 1971-1980*, Exeter Archaeological Reports 3, 1984, 236-240; E.C. NORTON, Medieval floor tiles in Scotland, in: *Medieval Art and Architecture in the Diocese of St Andrew*, British Archaeological Association Conference Transactions, 1994, 149-153.

blematic as Flanders tile may refer to either brick or tile². However in many instances floor tiles are clearly specified as 'floare' or 'pavyngtyles' and bricks are referred to as 'walle tiles'. References to Flanders tile are also occasionally found in fabric rolls and wills but, without corroborating evidence, these may indicate a type of tile known as Flanders tile (perhaps any plain-glazed tile) rather than tiles actually made in the Low Countries and imported to England.

The most complete medieval English customs accounts so far published are those for Hull³. The twenty eight surviving accounts are not consecutive but cover a period equivalent to a full nine years' trade in the second half of the 15th century. Customs duty was payable on all imports and exports unless there was an exemption (such as Hansard). Otherwise, apart from goods traded illegally, the accounts are thought to be an accurate record of overseas trade⁴. The extant documents record a total of 22.7 thousand, or thousand-weight (M), of floor tiles, imported in 14 shipments, with most loads arriving in 1-2 M lots⁵. 22.7 M of floor tiles imported over a total of nine years gives an average figure of 2.5 M per year. 47 M of bricks were brought in in five shipments over the same period. Bricks were therefore imported infrequently but in larger quantities.

The Hull accounts record the ship master, the ship's name and home port, the commodities being shipped, their quantity, ownership and value. In all cases the accounts specify whether they were bricks or floor tiles or, as in one case, '*lapidum pavimentalium*'⁶. In all cases the home port of the ship was in the Netherlands and the owners and shippers were alien. In only four cases, including the stone paving, did the owner(s) differ from the shipper. All the bricks and tiles were carried as part of a shipment of several different items and the value given was for the whole cargo.

The jurisdiction of the port of Hull extended along the Yorkshire and north Lincolnshire coasts, and included the outports of Scarborough and Grimsby. These accounts therefore provide some idea of the scale of tile imports into a sizeable section of the study area in

the second half of the 15th century. The accounts suggest that floor tile imports were steady but small scale. Plain-glazed tiles of c110 mm across and 25 mm in depth from the Gilbertine priory in York weigh approximately 1.25 lbs each. If one hundred-weight (C) of tiles is speculatively taken as a measurement by weight of 112 lbs, 2.5 M would pave an area of about 27 m². The average annual imports to Hull would not therefore have been enough to pave much more than one reasonably sized room.

Identifying the characteristics of the imported tiles

The telling characteristic of plain-glazed tiles imported from the Netherlands is thought to be the nail-holes, which are visible in the corners and/or centre on the upper surface of some c15th century plain-glazed tiles, but which are not known in England on 13th and earlier 14th century tiles. A process which would make these nail-holes is known from the manufacture of 17th century tin-glazed tiles in the Netherlands⁷. After being shaped in a mould the clay was transferred to a board with nails sticking up at the corners, which held the tile in place while the sides were trimmed with a knife. The practicality of a rather simpler approach, in which a board with nails knocked through it was used to hold the clay in place while the tiles were cut out, has been successfully demonstrated during experimental work carried out at Norton Priory, Runcorn, Cheshire⁸.

Other characteristics thought to result from Netherlandish manufacturing techniques include a high shine and the flaking, rather than wearing, of the glaze. These may result from a double firing technique in which the tiles are fired once as quarries and again after the glaze has been applied⁹. Korf's description of the double firing process suggests that the slip was applied to the quarry before the first firing¹⁰. In such a process the glaze may not fuse to the body fabric as well as on a tile produced from a single firing, and as a result can be prone to flake off when the tiles come into use. A

² SALZMAN, *op. cit.*, note 1, 1923; P.J. DRURY, The production of brick and tile in medieval England, in: D.W. CROSSLEY (ed.), *Medieval Industry*, CBA Research Report 40, 1981, 126-142.

³ Wendy R. CHILDS, *The Customs Accounts of Hull 1452-1490*, Yorkshire Archaeological Society record series 144, Leeds, 1986.

⁴ CHILDS, *op. cit.* note 3, xix-xx.

⁵ Both bricks and tiles were imported in quantities of 'M' (a thousand or thousand weight; i.e. ten hundredweights) and 'C' (a hundred, hundredweight or hundred by tale). It seems more likely, given the variable size of floor tiles, that they were shipped by weight rather than number. A hundredweight could vary between 100 and 112 lbs. A hundred by tale, could be

'short' = 100 lbs, or 'long' = 120 lbs or more, depending on the commodity.

⁶ CHILDS, *op. cit.* note 3, 186. The 17C of stone paving, valued individually at 35s, was shipped from Gouda to Hull in 1473. The small volume of this import and its high value suggest that this was marble or other decorative stone.

⁷ LANE, *op. cit.* note 1, 49; D. KORF, *Dutch tiles*, translated by Marieke Clark, London, Merlin Press, 1963, 12-13.

⁸ J.P. GREENE & B. JOHNSON, An experimental tile kiln at Norton Priory, Cheshire, *Medieval Ceramics* 2, 1978, 35.

⁹ E.S. EAMES, *Catalogue of medieval lead-glazed earthenware tiles in the Department of Medieval and Later Antiquities, British Museum I*, British Museum, London, 1980, 19.

streaked yellow and brown appearance, caused by brushing a thin slip onto a quarry which does not cover the whole surface, has also been recorded as a feature of tiles thought to be made in the Netherlands¹¹.

The problem with establishing the characteristics of the imported tiles with any certainty is, of course, a consequence of the difficulty of linking extant tiles directly with the documentary evidence for imports. Little or nothing about the physical characteristics of the tiles is referred to in the documents. There is, at present, only one case in Britain in which extant tiles can be identified with some certainty as those mentioned in documents and where there is also evidence to support the idea that the tiles were imported. These are the tiles in the Muniment rooms at Winchester College¹². The characteristics of these tiles are that they measure c127 mm across and 25 mm deep, have an oxidised fabric, no keys and nail-holes in the corners of the upper surfaces. Their glaze is fired to a dark brown, dark green or black over the body fabric, and yellow, or yellow and orange, over a thin layer of white clay. Purchases of tiles are recorded in the surviving College accounts. As Christopher Norton has argued, the likelihood is that the tiles in the Muniment rooms are those mentioned in the accounts for 1396/7 as Flanders paving tiles. Crucially, the same entry in the accounts lists monies paid for 1,000 tiles of a larger size, for unloading from a ship and for carriage; thus providing some corroborating evidence for the suggestion that these tiles were imported.

Flanders tiles are listed in the accounts of other sites but the Winchester case is the only one in which there is any clear indication that the tiles were actually imported. At York, for example, two sizes of tile are listed in the fabric roll of York Minster for 1415: 600 large Flanders tiles were bought for the crypts (*les cruddes*) from William Newland for 33s 4d and 600 smaller tiles for 8s 4d. 8d was paid for carriage¹³. Browne's description of the crypt floor states that tiles of two sizes of tile were present in the Minster crypt in the mid-19th century; a chequered floor of 7" (175

mm) tiles, glazed alternately yellow and blue, and 11" (275 mm) tiles arranged in a similar way. If these were the sizes of the tiles bought from William Newland in 1415 and the prices paid per square metre of floor are compared with Winchester, it is clear that while the price of the York tiles were much higher than those at Winchester, the price of the carriage to York Minster was much lower. Since the prices of building materials are not thought to have increased greatly between the dates of the Winchester and York tiles¹⁴ it seems likely that the low transport costs show that the York tiles were bought locally. However, the discrepancy in the cost of the actual tiles also means that they could still have originally been imported, and that they were sold on with the cost of long distance transport included in the price. Of course this discrepancy might be explained in other ways; for example as a result of the much larger scale of the Winchester purchase. The place of origin of the York tiles remains a matter for conjecture.

Tiles of both the sizes recorded by Browne remain in the crypt today, although their locations are not as he described. The plain-glazed 275 mm tiles are now entirely worn, with no sign of slip or glaze, and a pitted surface which makes identification of nail-holes impossible¹⁵. The 175 mm examples are difficult to see in the poor light but five nail-holes are visible on some examples. Some of the unworn slip coated tiles were glazed a streaked yellow and brown, with the body fabric showing through the poorly applied slip. Two further types of tile are also here, donated to the Minster in 1963¹⁶. These are of 13th century to early 14th century series, from Meaux Abbey and Watton priory.

Plain-glazed tiles in the north of England

Plain-glazed tiles, made without decorated counterparts, have been found on a total of 34 sites in the region. Dating evidence is scarce but ranges between the late 14th and early 16th centuries. Where the characteristics of the tiles can be ascertained, they fall into two

¹⁰ KORF, *op cit* note 7.

¹¹ EAMES, *op cit* note 9, 274.

¹² E.C. NORTON, The medieval pavingtiles of Winchester College, *Proceedings of the Hampshire Field Club and Archaeological Society* 31, 1976, 23-42.

¹³ J. RAINE, *The Fabric Rolls of York Minster*, Publication of the Surtees Society for 1858, 35, 1859, 36. In *d.c largis tegulis Flaundrensibus emptis pro les cruddes de Willelmo Neuland, 33s 4d. In dc minoribus tegulis emptis de eodem, 8s 4d. In caria-gio earumdem tegularum usque Monasterium, 8d*. This entry is also discussed by John BROWNE in *The History of the Metropolitan Church of St Peter, York*, 1847, 198 and 210. Like Raine, Browne interpreted '*les cruddes*' as the crypts, although he mistakenly asserts that 500 of each size of tile were bought.

¹⁴ H. SWANSON, *Building craftsmen in late medieval York*, Borthwick Papers 63, 1983, 26-28, University of York. Comparing prices of purchases made at different times is, of course, difficult because any variation may be explicable in purely monetary terms. However, remarkable consistency has been noted in building material costs and wages paid to building craftsmen in York between 1360 and 1450.

¹⁵ Nail-holes made during the manufacture of tiles tend to have glaze in them, and can therefore be distinguished from damage to the fabric, unless the tiles are very worn or abraded. However they are rarely visible on tiles which have been coated with slip since the slip tends to fill the holes.

¹⁶ E. MILNER-WHITE (ed), *Friends of York Minster Thirty-fifth Annual Report*, 1963, 10-11.

broad groups, one of which largely accords with the Winchester College tiles, while the other is much more variable:

Type A (at 18 sites): tiles with five nail-holes on the upper surface (one in each corner and one in the centre), a homogeneous oxidised fabric, sandied base and bevelled, but not trimmed, sides. These tiles have a high shine on the yellow, dark green or dark brown glaze. They are uniformly made and of reasonable quality but do not wear well, with slip and glaze flaking from the body fabric. In some cases the slip is too thin and has been poorly applied, brushed roughly onto the tiles so that the quarries are not properly coated; they glaze a streaked yellow and brown. It may be the case that, where the slipped tiles are streaked, their dark coloured counterparts tend to be dark brown rather than dark green. Dimensions vary; in many cases tiles of more than one size were found at the same site. There does not seem to be any correlation between tile size and date.

Type B (at seven sites): tiles without nail-holes, and with a variety of other features often including a reduced fabric, a streaked slip and unevenly applied glaze. Some are shiny, others not. Their quality is variable, with unusual features on some examples. Dimensions vary.

The uniformity and standardised production techniques found among type A tiles suggests that, despite some variation in the quality of the slip application, they were all part of the same general manufacturing tradition. This contrasts with the variety among the tiles of type B. The distribution patterns of the two tile types also varies. Type A tiles have a coastal distribution, along the eastern seaboard. The majority of sites with type B tiles are further inland.

The distribution of the type A tiles, and the general similarity of their characteristics to the Winchester College tiles, supports the idea that they were imported. However, a ready distinction between imports and home produced tiles becomes more difficult when comparison is made between the type A plain-glazed tiles and the tiles of the 15th century decorated series in the north of England¹⁷. Like the type A plain-glazed examples, some of the 15th century decorated tiles have nail-holes¹⁸, and the majority have a high shine,

and poorly applied, brushed-on slip. The glazed colours, including a dark green, are also similar. Other features, such as the homogeneous oxidised fabric, and bevelled sides, are found on the majority of 15th century tiles. The main difference between the type A tiles and those of the decorated series is that there are four nail-holes, as at Winchester, rather than the five of the plain-glazed examples in the study area. In addition, the slip and glaze do not appear to flake from the body fabric in the same way as is sometimes the case with the type A plain tiles. It has already been noted that the 15th century decorated tiles are thought to have been manufactured in the north of England. Although the kilns used to make them have not been identified, the distribution of the tiles is an inland one and the heraldry in several of the designs refers to well-known personalities of the region, such as Marmaduke Huby, abbot of Fountains, and Henry Algernon Percy, 5th Earl of Northumberland.

Nail-holes are a feature of other later 15th or early 16th century tiles thought to have been made in England. A set of rectangular tiles from Bordesley Abbey, Hereford and Worcester, with an English inscription have nail-holes in each corner¹⁹. One of these tiles was included in a programme of scientific fabric analysis using neutron activation techniques. The fabric of the inscribed tile was similar to kiln furniture found elsewhere in the monastic precinct, suggesting local production²⁰. Relief decorated tiles from the precinct of the leper hospital at Burton Lazaars in Leicestershire, on display in the British Museum, have nail-holes in the two diagonally opposed corners. These tiles are decorated with English heraldic designs and, again, date to the late 15th or early 16th centuries²¹.

Conclusions

The study of tiles in the north of England suggests that not all plain-glazed tiles of the 15th or early 16th century date were imported. Most tiles of type B are likely to have been made specifically for each site and on a local basis. This is suggested by the way in which their characteristics vary from site to site, and also because of the very poor quality of some of the mater-

¹⁷ To avoid any confusion plain-glazed tiles of the same sizes as the two-colour, decorated, examples were left out of this comparison since plain-glazed tiles would have been made as part of the decorated series.

¹⁸ Nail-holes were identified on about 25% of the decorated tiles. These tiles were recorded individually while, for practical reasons, the plain-glazed examples were recorded in batches. It is not possible, therefore, to compare the proportion of tiles with recognisable nail-holes. However a proportion of over 50% is unlikely (see note 15 above).

¹⁹ J. STOPFORD & S.M. WRIGHT, A group of late medieval inscribed tiles from Bordesley Abbey, forthcoming.

²⁰ J. STOPFORD, *The changing structure of a small medieval industry: an approach to the study of floor tiles*, Unpublished PhD thesis, University of Reading, 1990, 153-161 and Appendix 5; J. STOPFORD, M.N. LEESE & M.J. HUGHES, A scientific study of medieval tiles from Bordesley Abbey, Redditch (Hereford and Worcester), *Oxford Journal of Archaeology* 10/3, 1991, 349-360.

²¹ EAMES, *op. cit.* note 9, 117-123.

ial. It is improbable that the tiles of this type at Rievaulx Abbey, for example, could ever have been sold successfully on a large scale. Their manufacture was inexpert and the products only just serviceable. This is not always so: at Fountains Abbey the type B plain tiles are perfectly competently made. No kiln sites have been found in the study area but home production of plain-glazed tiles is known elsewhere²². 39% of the sites in the north of England with extant plain-glazed tiled floors had tiles of type B.

It seems likely that many type A tiles were imported and their distribution suggests that there was a limit to the distance they were worth carrying from the coast²³. However their similarity to the decorated assemblage from the north of England also suggests that not all tiles with some of the characteristics traditionally attributed to Flemish manufacture were in fact from overseas. In a discussion about the influx of maiolica and relief-decorated stove tiles from continental Europe to Britain in the 16th century it was suggested that a number of stages of such a process might be identified, beginning with the importation of foreign goods, followed by the settlement in Britain of foreign craftsmen, with the eventual evolution of an indigenous industry²⁴. Such a sequence may be relevant to medieval brick production²⁵ and could explain the appearance of some Flemish characteristics on tiles made in England in the later 15th/early 16th century. Home production did not take over from importation; customs accounts suggest that imports continued in some regions into the first half of the 16th century²⁶. Local production seems to have been additional to the import trade, rather than supplanting it.

Comparing the numbers of imported tiles listed in the customs accounts with the quantities of extant type A tiles is difficult. The jurisdiction of Hull included both Grimsby and Scarborough. The Hull accounts therefore represent the quantities of tiles imported into

a sizeable hinterland. Their volume, in the second half of the 15th century, indicates something regular but relatively small scale, possibly brought in in response to specific building projects²⁷. The extant tiles of type A, on the other hand, might suggest something more substantial. Plain-glazed tiles would not, generally, be expected to survive particularly well. Their market included parish churches, country houses and urban institutions, as well as rural monasteries; sites which have remained in use or been rebuilt many times over. When found, plain-glazed tiles are far less likely to have been kept than their decorated counterparts, being of little interest to museums or collectors. Perhaps, if the level of imports documented for Hull in the later 15th century had continued unabated since the later 14th century, this would account for the relatively substantial extant collection of type A tiles. It is possible that larger quantities were imported to the north-east in the late 14th and earlier 15th century; i.e., during the period in which there appears to have been no competition from local tile makers. Outside the study region tiles with type A characteristics are found over a wide area, with large numbers known in south-east England²⁸, and examples noted in Scotland, the Orkneys and elsewhere around the North Sea²⁹. If even half of these were imports from the Low Countries, the scale of production there must have been considerable. The inability of an indigenous industry to compete successfully in supplying plain-glazed tiles within the north of England, or its lack of interest in doing so, is difficult to explain.

Unlike plain-glazed tiles, imports of decorated examples to Britain are rare at any time in the medieval period and have only been found in very small numbers³⁰. One reason for the success of plain-glazed, rather than decorated, imports may have been the ease with which they could be used to make a floor. All extant examples of plain-glazed pavements were laid

²² Two kilns in Essex making plain floor tiles early and late in the 15th century not using a nailed board in their manufacture were noted by P.J. DRURY, *Brick and Tile*, in: D.W. CROSSLEY (ed), *Medieval Industry*, Council for British Archaeology research report 40, 1981 130.

²³ But note that tiles of type A have been found on inland sites in England south of the study area; see EAMES, *op. cit.* note 9, 274.

²⁴ WARD PERKINS, *op. cit.* note 1, 442-444.

²⁵ DRURY, *op. cit.* note 22, 126-142.

²⁶ KEEN, *op. cit.* note 1, 1984, 240.

²⁷ A similarly scale trade in tiles has been noted at Southampton; Knapp *op. cit.* note 1.

²⁸ Chr. NORTON, *The production and distribution of medieval floor tiles in France and England*, in: X BARREL I ALTET (ed), *Artistes, artisans et production artistique au moyen age III*, Paris, Picard, 1990, 126, fig. 8.

²⁹ *Op. cit.* notes 1 and 1&. Similar tiles may have also been found further afield, in excavations of a 15th century mint

attached to the archbishop's palace in Trondheim, Norway, possibly at a time when the connections between the palace and the outside world had shifted from Germany and towards the Low Countries. I am grateful to Tom Saunders and C McLees, Norwegian Institute for Cultural Heritage Research, for information regarding this site.

³⁰ WARD PERKINS, *op. cit.* note 1, 442-444; KNAPP, *op. cit.* note 1; L. KEEN, *Floor tiles*, in: P.L. DREWETT, *Excavations at Hadleigh Castle, Essex, 1971-1972*, *Journal of the British Archaeological Association* 38, 1975, 90-154; P.J. DRURY, *The floor tiles*, in: F. WILLIAMS (ed), *Excavations at Pleshey Castle, Essex*, British Archaeological Reports, British series 42, Oxford, 1977, 92-124; M. HORTON, *A group of sixteenth-century Flemish tiles in England*, in: A. DETSICAS (ed), *Collectanea Historica: essays in memory of Stuart Rigold*, Maidstone, 1981, 235-246; E.C. NORTON, *Medieval Tin-Glazed Painted Tiles in North West Europe*, *Medieval Archaeology* 28, 1984, 133-172.

in a chequered pattern in which light and dark coloured tiles were alternated³¹. This simple arrangement meant that those constructing the floor did not need to have any understanding of the designs or multi-tile arrangements which were common in decorated tile pavements. This in turn meant that those laying the plain tiles need not have knowledge of their manufacture. The tiles could therefore be successfully produced at a long distance and transported and sold via a number of middlemen. No specialist knowledge or communication was required for their use. They were far more commercially viable for large scale production and export than decorated tiles.

In England, as elsewhere, most medieval floor tile series consist of both plain-glazed and two-colour decorated tiles, which were made and used together, and the north of England was no exception. All the 13th and 14th century tile series included both plain and decorated tiles, the plain tiles forming a background, or framework, for the decorated examples, dividing them up in a variety of ways. The use of plain-glazed tiles laid on their own in chequered pavements, rather than the more complicated decorated tiled floors of earlier times, suggests a dramatic change in fashion in the later 14th century. If the Low Countries were responsible for initiating this change, and this is perhaps supported by the way the Flanders name is attached to floor tiles in the documents, they succeeded in establishing a substantial and long-lived export trade.

Further work

The absence of designs (and therefore the use of stamps) does mean that plain tiles can rarely be characterised as closely as decorated ones, and it is not possible to identify links in the production of tiles at different sites with the level of confidence that is feasible with many decorated tiles³². However some aspects of manufacture do provide a basis for comparison and the products of individual workshops can sometimes be identified. There is no doubt that the study of plain floor tiles is feasible and will produce results.

It is clear that some aspects of 17th century Dutch tile preparation were definitely not used to make the

type A plain-glazed tiles found in the north of England. There is, for example, no evidence for the trimming of the tile sides, or for the use of moulds (where sand might be expected on the tile sides). The process resulting in nail-holes may have been simpler than that recorded for the production of 17th century tiles. The use of a nailed board to hold a piece of clay, while the tile was cut out with an angled blade or wire, would have been far less time consuming and more in keeping with a product which, while serviceable, was not of a particularly high quality. Nails were, however, not fixed to the design stamps used on the English-made tiles, since tiles made with the same stamp are found both with and without nail-holes. The significance of differences in the number of nail-holes is, as yet, unclear. Variations in the quality of tiles also deserves further consideration. Although streaking on some yellow tiles in an assemblage is usual, there is a distinction between assemblages which contain a few streaked tiles, and those where the slip has been carelessly brushed on all examples. Finally, the question of double firing remains open and experimental work in this area would be helpful. This technique is thought to produce a higher shine but the slip and glaze wears less well. Tiles fired twice would be much more expensive to produce, dramatically increasing the time spent handling the tiles as well as the amount of fuel required. It is difficult to see why such a method should have been adopted in the production of the mundane plain tiles of the 15th century.

In the north of England, it seems that the difference between imported plain-glazed tiles and those made by immigrant tilers may be visible in the mix of characteristics among the tiles of a production group. Further debate on importation and home production, and refinement of the characteristics of the various tiles, now depends upon detailed study of material in the Netherlands; ideally involving the study of products of one or more production sites.

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³¹ The best and only substantial extant example of this arrangement is the pavement in the Consistory Court of York Minster, one of three vestries on the south side of the Minster. A similar arrangement was recorded by Browne for the tiles in the crypt of the Minster (*op. cit.* note 13, 210-211) and by Kenneth Beaulah in the north-east of the cloister at Meaux (pers comm). A chequered floor was also found at Pontefract Priory, in a room to the east of the polygonal chapter house: C. VINCENT BELLAMY, Pontefract Priory Excavations 1957-1961, *Publications of the Thoresby Society* 49, Leeds, 1965, 76; and a similar

layout was thought likely at the Franciscan Friary, Hartlepool: R. DANIELS, The excavations of the church of the Franciscans, Hartlepool, Cleveland, *Archaeological Journal* 143, 1986, 282. Tiles in this arrangement also remain in the west cloister at Thornton Abbey, Lincolnshire.

³² Although the c110mm size tiles from St Peters Church, Barton upon Humber, and those from the Franciscan Friary, Hartlepool, are indistinguishable in every respect, including identical small, round nailholes c1mm in diameter which are 15-20 mm from the tile edges. These sites are about 100 miles apart.

Study of the trade links of south-eastern Europe during the second half of the first millennium A.D. on the basis of the Saltovo-Mayatskoye archaeological culture

Introduction

In the late 19th and early 20th century, Russian archaeologists discovered the eponymous monuments of a rich and original medieval culture, *i.e.* the Mayatskoye site on the Don and the Saltovo cemetery on the Severskiy Donets (fig. 1; Pletnyova 1981, 62)

Further excavations have shown that in the late 8th-early 10th centuries A.D. the Saltovo-Mayatskoye culture was spread over a large territory from the foothills of the North Caucasus to the upper reaches of the Don and the Severskiy Donets as well as from the Eastern Crimea to the Volga steppes (fig. 1). The richness and integrated features of the culture were indicative of its belonging to a powerful state. Since at the time of its flourishing the Khazars held sway over the steppes, it was identified as the state culture of the Khazar Chaganate (Artamonov 1940).

Hitherto, more than 400 sites of the Saltovo-Mayatskoye culture have been recorded and subdivided into local varieties. I will discuss the artefacts recovered from the sites of the Don forest-steppe zone. At present there is no doubt that the bearers of the Don forest-steppe variety of the said culture belonged to the Khazar Chaganate and their stone strongholds served as outposts of the Khazar north-western frontier (Pletnyova 1981, 64-65).

Owing to the role played by the Khazar Chaganate in the history of the nations included into its sphere of influence, that state has long since drawn the attention of scholars. The relations between the Byzantine Empire and the Chaganate are recorded in Syrian and Byzantine narrative sources, while the Arabian ones provide information on alternating wars and peaceful trade contacts between the Arabs and the Khazars.

Though of primary importance to the study of trade links of the Khazar Chaganate, written sources are, however, often sparse and contradictory. To corroborate and amplify their data one has to turn to the archaeological record, which can yield valuable information on commerce and trade routes.

Formulation of the problem

Archaeological excavations in the Don basin are yielding an ever increasing amount of information on the material culture of the Khazar Chaganate population. No special attention has, however, been paid to the glass articles encountered at the sites of the Saltovo-Mayatskoye culture, though such a mass category of artefacts is likely to represent a most informative historical source. The origin of the beads is indicative of the direction of trade links as well as of the intensity of commercial and cultural relations. Beads are a highly sensitive indicator of new trends in fashion and commerce in south-east Europe.

Glass beads from the Don basin have been investigated only from a morphological point of view in order to verify the chronology of the Saltovo-Mayatskoye culture. The issues of the origin of beads and ways of their importation have never been raised. This very fact has prompted the author to focus her attention on them.

The study of glass beads

The paper deals with the collections of glass artefacts from the following Don sites of the Saltovo-Mayatskoye culture: the Mayatskoye settlement and the Mayatskoye, Dmitriyevka and Yutanovka cemeteries (fig. 1). The objects in question are mainly beads (sparse finds of rings and inlays are not investigated in the paper). On the whole, a total of some 5,000 beads have been examined.

The analysis was carried out with the aid of a technique proposed by Yu. Shchapova (1989). The technique is based on a standardized description of the items under consideration and on a complex comparison of the morphological, technological and chemical data. Such a method enables one to attribute certain specimens to certain traditions and to treat them subsequently not only as archaeological finds and elements of a given material culture but also as an output of world glass-manufacturing.

Thus, the first stage of the work consisted of a morphological investigation. This has shown that the main morphological attributes of the beads, *i.e.* their shape, holes, decorations, dimensions and colour, are similar at all four sites. The fact can probably be accounted for by their common origin. The assemblage of such morphological peculiarities is characteristic of glass decorations recovered from the sites of the Saltovo-Mayatskoye culture and probably of synchronous beads as a whole.

For the examination of the technology of glass beads manufacture, a technological classification of glass decorations proposed by Z. Lvova (1979; 1980) was used. The principles of her classification stipulate a description of the glasswork methods including those of the liquid glass treatment.

While analysing the technology we distinguished 12 technological patterns proceeding from 1) the methods of glass treatment, 2) the techniques of the manufacturing of objects, and 3) the devices of the surface treatment applied after the main technological operations were over. The said patterns were in turn subdivided into six technological clusters according to the main methods of workmanship, *i.e.* beads made of 1) drawn pipes, 2) drawn rods followed by those manufactured by means of 3) a single wrapping, 4) blowing, 5) winding, and 6) casting.

Next the beads were classified according to the technique of workmanship and we distinguished those manufactured 1) individually, 2) as a mass production, and 3) as a mass production with the use of individual devices (Shkolnikova 1978). This approach gave us a clear idea of the diversity of technological devices being at the disposal of ancient masters. The analysis of the three major groups ratio has shown that at all four sites the mass produced beads predominated making up 78.1 % of the total. Those having been mass produced with individual devices made up 17.4 % and those manufactured individually accounted for 4.6 %. This implies that the majority of the beads were made in specialized workshops which had mastered the technology of mass production.

The chemical composition of Saltovo-Mayatskoye beads was determined with the aid of a quantitative spectral analysis. All of the glass was divided into three classes, *i.e.* 1) the sodium-calcium-silica (limesoda) glass - $\text{Na}_2\text{O} \times \text{CaO} \times \text{SiO}_2$, 2) the potassium-calcium-silica glass - $\text{K}_2\text{O} \times \text{CaO} \times \text{SiO}_2$, and 3) the lead-silica glass - $\text{PbO} \times \text{SiO}_2$. Class 1 accounts for 85.5 %, class 2 constitutes 3.6 % and class 3 makes up 10.9 % of the lot.

According to the kind of alkaline raw materials used, class 1 is subdivided into ash and soda glass, the former making up 66.7 % and those made with soda accounting for 33.3 %.

Class 2 comprises glass made with the aid of wood ash.

Class 3 includes lead glass the batch of which lacks alkali components.

The results of the morphological and chemical-technological investigation of the glass decorations enabled us to link the specimens recovered from the territory of the Khazar Chaganate, *i.e.* those belonging to the Saltovo-Mayatskoye culture, to certain glass-making traditions. The bearers of the said culture acquired their beads from the following glass-making centres: Egypt - 21.9 %, Syria - 70.6 % and Byzantium - 7.5 %.

In all probability, differently organized workshops emerged at the said centres. The fact implies either the integration of technological cycles, *i.e.* a multi-purpose production, or their differentiation, *i.e.* a specialised production. A glassware workshop is a complex entity. Glass-making comprises several technological cycles, namely melting, the manufacturing of objects and the ornamenting of the finished products. Though, when examining a finished article, one cannot determine whether the glass was melted of batch glass or of frit, it is quite possible to judge whether the item has been reheated or was manufactured continuously, right at the melter. Moreover, it is sometimes possible to determine in which kind of workshop the object was manufactured. Thus, the structural elements of the objects made of liquid glass coming straight from the melter form a continuous unit. Such specimens undoubtedly come from workshops with a totally continuous production cycle.

Sometimes, however, one can but venture an opinion about the likelihood of a certain process, since discerning glass structure elements and traces of the glass-making technique presents considerable difficulties, particularly in the case of complex objects. For instance, glass structure elements of mosaic beads are invariably continuous. The surface can be treated so minutely that a bead made out of several half-finished polychrome rods soldered together looks like an object made of one piece. It seems likely that such specimens were manufactured in specialised workshops which had a division of labour.

When an object is moulded out of a softened piece of glass, its structural elements are inevitably broken off leaving traces in the form of either two symmetrical spots, or flattened patches or else seams. The degree of cohesion of decorative elements is indicative of the aggregation state of the glass at the time of treatment. The emergence of 'car eyes', welding joints, traces of decorative facing or its exfoliation and moulding folds are the characteristics of an object made out of a half-finished product. Such objects can be made either in workshops with an

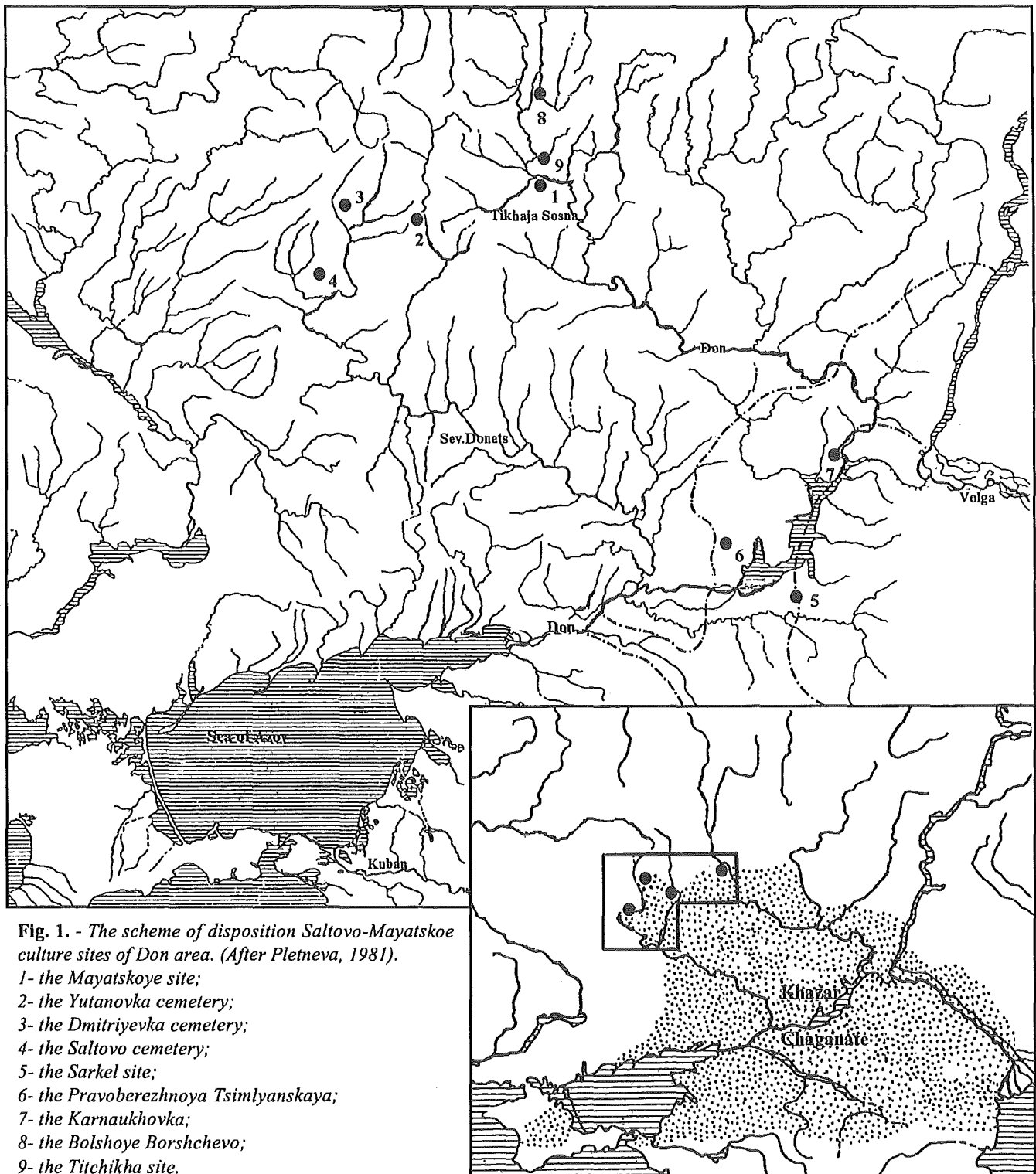


Fig. 1. - The scheme of disposition Saltovo-Mayatskoe culture sites of Don area. (After Pletneva, 1981).

- 1- the Mayatskoye site;
- 2- the Yutanovka cemetery;
- 3- the Dmitriyevka cemetery;
- 4- the Saltovo cemetery;
- 5- the Sarkel site;
- 6- the Pravoberezhnaya Tsimlyanskaya;
- 7- the Karnaukhovka;
- 8- the Bolshoye Borshchevo;
- 9- the Titchikha site.

incomplete production cycle treating only semi-finished products or in workshops with a complete production cycle and division of labour.

The chemical-technological analysis of the Saltovo-Mayatskoye culture glass beads enables one to determine the kinds of workshops in which they are likely to have been manufactured, *i.e.*

1) workshops with a totally continuous production cycle;

2) workshops with a total production cycle and with division of labour; among the workers there were skilled melters capable of glass-making, blowers manufacturing objects out of liquid glass, moulders who further treated the non-cooled products, blowers who dealt with half-finished products and polishers/decorators who treated the cooled glass;

3) workshops with an incomplete production cycle treating only semi-finished products;

4) workshops with an incomplete production cycle manufacturing only semi-finished products.

The existence of type 4 cannot be demonstrated conclusively. Yet there are grounds to believe it did occur. Items made of the so-called 'long' leaden glass, easily worked after reheating and therefore convenient for the manufacture of beads out of half-finished products, corroborate this assumption.

Given the above classification, it is worth noting that the Khazar Chaganate imported the products from provincial Byzantine workshops with a total technological cycle. However, these were not specialised and beads were just by-products manufactured in addition to tableware, bracelets, etc.

From Syria, products from specialised workshops of two types were imported, *i.e.* from workshops with a totally continuous production cycle and from those with a total production cycle and division of labour within the workshop itself.

From Egypt, beads were brought which had been manufactured either in specialised workshops with a total production cycle and division of labour or in workshops with an incomplete cycle (just polishing semi-finished products). Hence, it appears that there existed specialised workshops with an incomplete production cycle manufacturing only half-finished products with which to supply their 'branches'; the latter may have been situated at a considerable distance from the main centre.

The data on the types of workshops and the distribution of beads between the glass-making centres enable one to determine the standard of medieval glass-making in Syria, Egypt and Byzantium. While multi-purpose workshops still existed in Byzantium, a specialised production of beads as part of a diversified economy prevailed in Egypt and Syria. A specialised production guaranteed a high standard in all stages of glass-making, the mastery of high temperatures and complex utensils, a high quality of raw materials and finished products. Such a production was closely connected with world trade and implied a continuous exportation of beads to distant regions.

As stated earlier, the assemblage of glassware of the Saltovo-Mayatskoye culture was formed through importation. Beads worn by the bearers of the said culture were brought from the three traditional glass-making centres. No data are available for local glass-making in the Khazar Chaganate: it could hardly emerge in an early state formed on a poly-ethnic basis of nomadic, semi-nomadic and sedentary tribes. Most likely, only workshops with an incomplete production cycle could exist here; in such workshops, *i.e.* those of type 3 according to the above-mentioned classification, foreign artisans completed the imported half-finished products.

Trade routes

It is common knowledge that the territory of the Khazar Chaganate was traversed by major overland and river trade routes, including the one linking Asia and Europe (Kokovtsov 1932, 85-87, 102-103). Hence the important role of Khazaria in international trade (Artamonov 1962, 402-403; Novoseltsev 1990, 114), though the Chaganate proper produced but few goods. According to Istakhri, 'the land of the Khazars produces only (fish)glue sent out thence to all countries' (Kokovtsov 1932, 63-64). Sable, fox and marten furs were imported from the north through the Chaganate, probably via its capital city Itil. Ibn Hordadbeh specially mentioned beavers and silver foxes brought to Itil by merchants (Dorn 1844, 84). Such goods as wax, honey, flax, hides, and fish were also coming from the north via Itil (Karaulov 1901, 51; Kovalovsky 1956) to the markets of Armenia, Iran, Khorasan and Byzantium reaching Baghdad, Bukhara, Constantinople and even Alexandria (Artamonov 1962, 403). Articles of oriental workmanship were brought north in return. These included silverware and coins, Mediterranean carpets, precious silks, clothes, glass vessels, and decorations.

There is every reason to believe in the existence of a long-distance transit trade with certain caravans travelling all the way through. They carried goods, some of which passed into the hands of middlemen living along the trade routes. The latter levied several kinds of 'custom duties' for crossing a bridge or a mountain pass as well as for the services of trackers, carriers and pack animals. (Ierusalimskaya 1967, 1972, 1978). Trade routes were a source of income for the local people who were actively involved in transit international trade.

As stated above, the study of glass beads recovered from the Saltovo-Mayatskoye culture sites enabled us to trace their provenance, thus identifying the countries engaged in trading relations with the population of the Khazar Chaganate. Trade in finished articles could have been conducted either directly by the producing countries or through intermediary peoples who lived along international trade routes. The present author has already argued that glass beads were probably imported in the Khazar Chaganate from the Middle East through the passes in the western Caucasus (Mastykova 1993). In order to trace the western Caucasian route, the author investigated a number of museum collections of artefacts recovered from Caucasian sites.

A morpho-technological analysis of the collections in question enabled us to distinguish glass beads similar to those of the Saltovo-Mayatskoye culture recovered from the following North Caucasian sites:

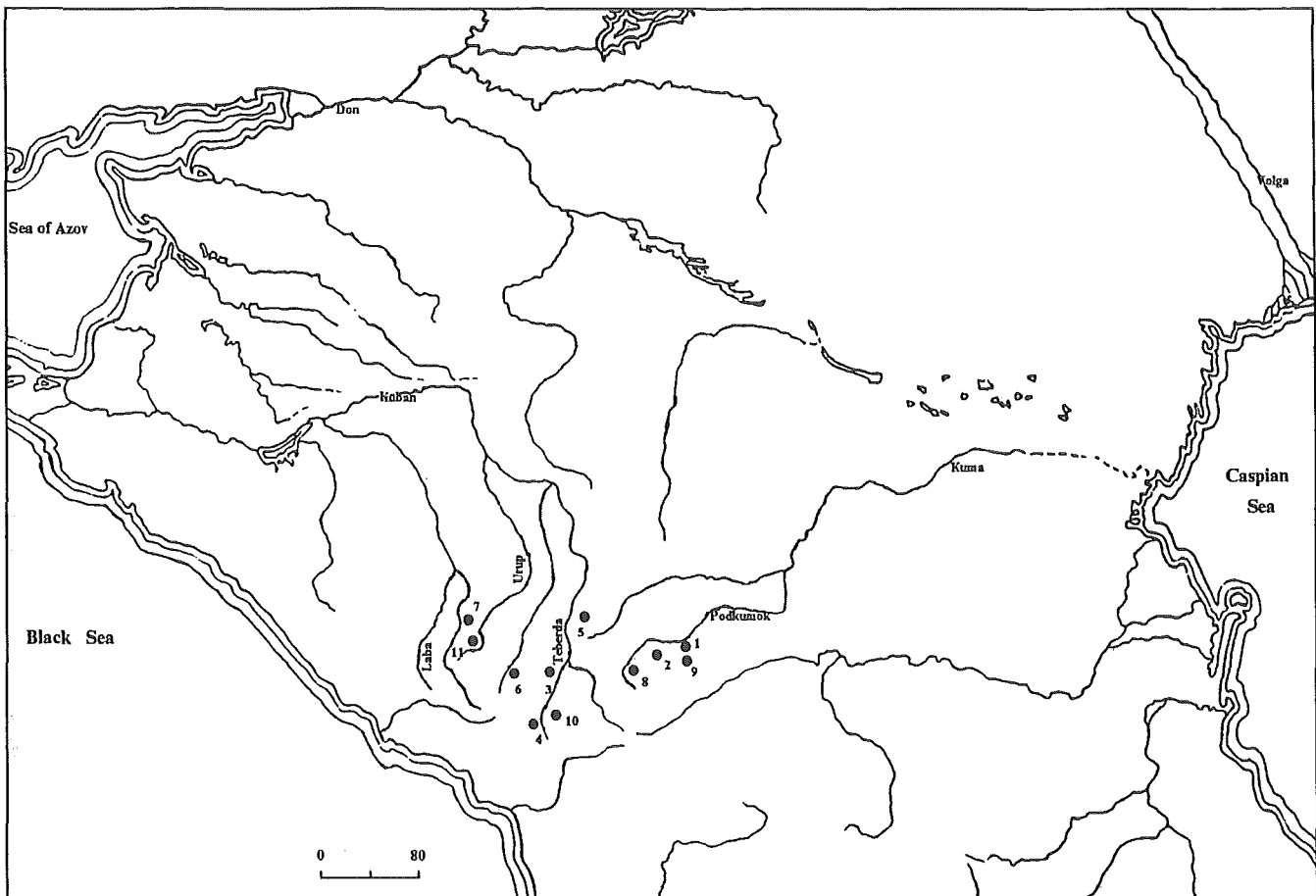


Fig. 2. - The scheme of investigated sites on the North Caucasus. (After Savchenko, 1996). 1- the Klin-Yar site; 2- the Rim-Gora site; 3- the Senta temple; 4- the Nizhnyaya Teberda cemetery; 5- the Khumara site; 6- the Nizhni Arkhyz site; 7- the Moshchevaya balka; 8- the Eshkakon cemetery; 9- the Lermontovskaya skala; 10- the Uzun-Kol; 11- the Kamenistaya balka

the Nizhnyaya Teberda cemetery in the vicinity of the Senta monastery, the rock burials of the Nizhni Arkhyz site, the “Shakhta N 6” cemetery some six kilometers from the Khumara site, the cemeteries of Eshkakon, Rim-Gora, Uzun-Kol, Lermontovskaya skala, Kamenistaya balka, Moshchevaya balka and Klin-Yar (fig. 2).

Mapping the glass beads enabled us to distinguish trade routes coinciding with the so-called Misimian and Dara roads, being the North Caucasian branches of the Great Silk Route.

The notion of the ‘Silk Route’ was introduced by German geographer K. Richthofen in the late 19th c. (Richthofen 1877, 454) as a mere designation of a network of roads connecting the main regions of Eurasia. However, it gradually embraced all kinds of intercultural contacts of the time. Throughout its functioning, the Great Silk Route was a bone of contention between several powers striving to control so profitable a road. The complicated military and political situation which arose along the Silk Route by the 6th century A.D. - which the Arabs’ conquests of the 7th-8th centuries did nothing to improve - drove the

merchants to adopt safer routes. In the mid-6th century, the North Caucasian branch of the Great Silk Route was established, which by the end of the century had become a permanent and regularly used trade route (Savchenko 1996, 51)¹.

In 1992, an expedition of the Institute of Archaeology of the Russian Academy of Sciences, headed by Ye. Savchenko with V. Kuznetsov as his consultant, carried out a ground reconnaissance of the North Caucasian branch of the Great Silk Route. In the course of this reconnaissance, the expedition succeeded in tracing the two offshoots of the said branch known from Menander the Byzantian’s record (1860), *i.e.* the Misimian and the Dara ones. The said fieldwork enabled the scholars to determine the opposite ends of the North Caucasian branch of the Great Silk Route, *i.e.* Sebastopolis and Pitiunt, the ports on the Caucasian Pontic shore, and the lower

¹ I am grateful to Yevgeni Savchenko for allowing me to acquaint myself with his as yet unpublished work.

reaches of the Volga (Kuznetsov 1993, 19; Savchenko 1996, 52), as well as tentative itineraries and relatively stable strong points.

According to the above-mentioned scholars, the Misimian road led from the Sebastopolis/Sukhumi area to the Tsebelda valley, then to the Kodor defile and across the lands of the Misimians, from there up to the Klukhor pass and down to the Teberda valley (Kuznetsov 1993, 23-24; Savchenko 1996, 61-62). Glass beads similar to those of the Saltovo-Mayatskoye culture were encountered at the Uzun-Kol cemetery on the right bank of the Teberda river. Further on, on the left bank of the Teberda river, a well-known archaeological complex of the 10th-century Senta temple is situated; similar beads were recovered from the nearby Nizhnyaya Teberda cemetery. From there, caravans followed the left bank of the Kuban to the Khumara site, the largest archaeological monument in the North Caucasus, which probably controlled the outlet of the Misimian road from the mountains to the lowland (Kuznetsov 1993, 26; Savchenko 1996, 60-61). Similar glass beads were also encountered at the 'Shakhta N 6' cemetery some six kilometres from the Khumara site. From this point, the road went up the Mara defile to the Kumbashi pass and down to the Kislovodsk depression. There, the major sites of Rim-Gora in the Upper Podkumok and Klin-Yar, situated north of the former, immediately attract one's attention. Glass beads similar to those mentioned above were recovered from the cemeteries of the two sites as well as from the Lermontovskaya skala and Eshkakon cemeteries. From here, caravans followed the Kalaus river valley to the Manych lake whence they travelled across the Kalmyk steppes to the Lower Volga (Kuznetsov 1993, 46-47; Savchenko 1996, 53-54) (fig. 2).

There are three more sites which yielded glass beads similar to those of the Saltovo-Mayatskoye culture, *i.e.* the rock burials at Nizhni Arkhyz and the Moshchevaya balka and Kamenistaya balka cemeteries. These are situated along the Dara road, which ran west of the Misimian one (Kuznetsov 1993, 47; Savchenko 1996, 63) over the Sanchar pass. Apparently, the Moshchevaya balka complex dominated the approach to the said pass (Ierusalimskaya 1978, 156-157). It is not far from this site, in the defile of the Great Laba and Urup rivers, that the Kamenistaya balka cemetery is situated. Moreover, the Dara road simply could not pass the Nizhni Arkhyz settlement, a major cultural, political and trading centre of the time (fig. 2).

According to Menander, the Misimian and Dara roads emerged in the 6th century A.D. and were used alternatively depending on the situation (Menander the Byzantinian 1860). It seems likely that in the 9th

century the Dara one was given preference; the archaeological record is indicative of this. Sets of glass beads from sites situated along it are more numerous, and bead types and morphological traits are more diverse in comparison with their analogues from the Misimian road sites. The fact can be accounted for by the greater number of caravans having followed the Dara road. It is worth noting that at the Dara road sites, beads of the 9th century predominate while along the Misimian road both 8th- and 9th-century beads can be encountered.

It seems quite likely that after crossing the North Caucasian passes both roads joined and caravans proceeded across the steppes to the Lower Volga following one and the same itinerary, but this section of the route cannot be traced on the basis of our main source, *i.e.* glass beads. Those reappear only in the steppe-forest Don area at the Saltovo-Mayatskoye culture sites. Caravans probably proceeded to Itil, the major market of the Chaganate, while some of them may have ventured even further, to the frontiers of the Chaganate.

Glass beads are not the only archaeological finds indicative of the arrival of caravans in the Khazar borderland. One can mention camel bones found at the Khazar sites of Sarkel, Pravoberezhnoya Tsimlyanskaya and Karnaukhovka on the Don (Pletnyova 1967, 147; Lyapushkin 1958, 313) as well as at the Slav Bolshoye Borshchevo and Titchikha sites (Gromova 1948, 121; Tsalkin 1969, 92; Moskalenko 1965, 68, 285) (fig. 1). The camel was hardly an indigenous species and therefore the finds seem to be indicative of trading relations with camels used as packing animals (Tsalkin 1969, 92).

Written sources also mention the use of camels in caravan trade. According to these sources, organizing caravans was no mean undertaking: they numbered several thousands of participants and required careful planning (Kovalevsky 1956, 18, 125, 127, 186, n. 239; Yakubovsky 1954, 39). Moreover, the overland trade was a high-risk enterprise. Masudi mentions that caravans plying between the Khazar land and Khorezm were always accompanied by the guard (Karaulov 1908, 46).

It is true that one cannot be absolutely sure about the trading itineraries running across the Khazar Chaganate: they varied depending on the season, weather and political situation. It is also quite possible that there existed other forms of trade and other ways of passing the imported goods into the hands of the local population. However, given the facts described above, we can adequately trace the itineraries of the caravans that contrived to reach the population of the north-western borderland of the Khazar Chaganate.

Conclusions

The investigation of glass beads enabled us to reach the following conclusions.

The overwhelming majority if not all of the glass beads worn by the bearers of the Saltovo-Mayatskoye culture during the period under consideration were imported from the south, *i.e.* from Syria, Egypt, and Byzantium.

The similarity of the bead sets encountered at the sites of the forest-steppe Don area and at those of the North Caucasus enables us to trace their importation along the Misimian and Dara roads of the North Caucasian branch of the Great Silk Route.

The homogeneity of the bead sets at the above-mentioned North Caucasian sites and their location along the well-known trade routes imply the prevalence of the transit caravan trade. Moreover, finds of beads and camel bones in the Don area are indicative of the fact that caravans actually reached those faraway areas in spite of the absence of beads in the intermediate steppe zone.

Judging from the quantity and richness of the bead sets, the Dara road had become prevalent by the 9th century.

Archaeological Materials

(1). The collections are kept at the State Hermitage, the Archaeological Museum of Voronezh University and the archives of the Institute of Archaeology of the Russian Academy of Sciences

(2). The collections are kept at the Stavropol Local Lore Museum, the Kislovodsk Local Lore Museum, the Karachai-Circassian Historical-Cultural and Natural Museum, the Moscow Museum of Oriental Art and the archives of the Institute of Archaeology.

Acknowledgement

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Bibliography

- ARTAMONOV M.I. 1940: Sarkel I nekotoryye drugiye ukrepleniya v severo-zapadnoi Khazarii (Sarkel and some other strongholds in north-western Khazaria), *Sovetskaya Arkheologiya* 6.
- ARTAMONOV M.I. 1962: *Istoriya khazar (History of the Khazars)*, Leningrad.
- DORN B.A. 1844: *Izvestiya o khazarakh vostochnogo istorika Tabari (Oriental historian Tabari's memoirs on the Khazars)*, Zhurnal Ministerstva
- Narogo Prosveshcheniya XIII, No 7-8.
- GROMOVA V.I. 1948: *Ostatki mlekopitayushchikh iz ranneslavyanskikh gorodishch vblizi g. Voronezha (Remnants of mammals from early Slav sites near the city of Voronezh)*, Materialy I issledovaniya po arkheologii, No 8.
- IERUSALIMSKAYA A.A. 1967: O severokavkazskom "sholkovom puti" v rannem srednevekovye (On the early medieval North-Caucasian Silk Route), *Sovetskaya Arkheologiya* 2.
- IERUSALIMSKAYA A.A. 1972: *Velikii sholkovyi put i Severnyi Kavkaz (The Great Silk Route and the North Caucasus)*, Leningrad.
- IERUSALIMSKAYA A.A. 1978: Alanskii mir na "sholkovom puti" (The Alanian world on the Silk Route), in: *Kultura Vostoka. Drevnost I ranneye srednevekovye*, Leningrad.
- KARAULOV N.A. 1901, 1908: *Svedeniya arabskikh geografov 9-10 vv. o Kavkaze, Armenii I Azaerbaydzhanе (The information of Arabian geographers of the 9-10th cc. A.D. on the Caucasus, Armenia and Azerbaijan)*, SMOMPK, Vol. 24, Vol. 38.
- KOKOVTSOV P.K. 1932: *Evreisko-khazarskaya perepiska v 10 v. (Jewish-Khazar Correspondence in the 10th c.)*, Leningrad.
- KOVALEVSKY A.P. 1956: *Kniga Akhmeda ibn Fadlana o ego puteshestvii na Volgu v 921-922 gg. (Ahmed ibn Fadlan's Book on His 921-922 Journey to the Volga)*, Kharkov.
- KUZNETSOV V.A. 1993: *Alano-osetinskiye etyudy (Alanian-Ossetian Essays)*, Vladikavkaz.
- LVOVA Z.A. 1979: *Tekhnologicheskaya klassifikatsiya izdelii iz stekla (po materialam rannesrednevekovykh steklyannykh ukrashenii) (Technological classification of glass articles (based on early medieval glass decorations))*, *Arkheologicheskii sbornik Gosudarstvennogo Ermitazha*, Leningrad, No 20.
- LVOVA Z.A. 1980: *Priznaki sposoba izgotovleniya izdelii iz stekla (po materialam rannesrednevekovykh steklyannykh ukrashenii) (Traces of manufacturing on glass articles (based on early medieval glass decoration))*, *Arkheologicheskii sbornik Gosudarstvennogo Ermitazha*, Leningrad, No 21.
- LYAPUSHKIN I.I. 1958: *Karnaukhovskoye poseleniye (The Karnaukhov settlement)*, Materialy i issledovaniya po arkheologii, No 62.
- MASTYKOVA A.V. 1993: *Steklo yugo-vostochnoi Evropy vtoroi poloviny I tys. n.e. (po materialam saltovo-mayatskoi kultury) (Eastern European Glass of the other half of the 1st mil. A.D. (based on the Saltovo-Mayatskoye culture))*, abstract of dissertation, Moscow.
- Menander the Byzantian 1860: *Prodolzheniye istorii*

- Agafyevoi (Agathius's Story Continued)*, St. Petersburg.
- MOSKALENKO A.M. 1965: Gorodishche Titchikha (The Titchikha site), in: *Iz istorii drevnerusskikh poselenii na Donu*, Voronezh.
- NOVOSELTSEV A.P. 1990: *Khazarskoye gosudarstvo I ego rol v istorii Vostochnoi Evropy I Kavkaza (The Khazar State and Its Role in the History of Eastern Europe and the Caucasus)*, Moscow.
- PLETNYOVA S.A. 1967: *Ot kochevii k gorodam (From camps to cities)*, Materialy I issledovaniya po arkheologii, No 142.
- PLETNYOVA S.A. 1981: *Stepi Evrazii v epokhu srednevekovyaya (Eurasian steppes in the Middle Ages)*, Arkheologiya SSSR, Moscow.
- RICHTHOFEN K. 1877: *China* Bd. I, Berlin.
- SAVCHENKO Ye.I. 1996: *Moshchevaya balka na severokavkazskom otrezke Velikogo Sholkovogo Puti (Moshchevaya balka on the North-Caucasian branch of the Great Silk Route)*, Chapter 3, manuscript.
- SHCHAPOVA Yu.L. 1989: *Drevneye steklo (morfologiya, tekhnologiya, khimicheskii sostav) (Early Glass (Morphology, Technology and Chemical Composition))*, Moscow.
- SHKOLNIKOVA N.A. 1978: Steklyannyye ukraseniya kontsa 1 tysyacheletiya nashei ery na territorii Podneprovya (Glass decorations of the late 1st mil. A.D. in the Dnieper basin), *Sovetskaya Arkheologiya*, No 1.
- TSALKIN V.I. 1969: Fauna iz raskopok Borshchevskikh I Romenskikh gorodishch (The fauna from the Borshchevo and Romny sites), *Sovetskaya Arkheologiya*, No 4.
- YAKUBOVSKY A.Yu. 1954: Khozyaistvennaya zhizn turkmen I karavannaya trgovlya Srednei Azii s Povolzh'iem I Drevnei Rusyu 9-11 vv. (The Turkmen economy and the caravan trade of Central Asia with the Volga area and Early Russia in the 9-11th cc.), in: *Ocherki po istorii turkmenskogo naroda I Turkmenistana v 8-19 vv*, Ashkhabad.

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The Distribution and Exchange of Mayen Lava Quernstones in Early Medieval Northwestern Europe

Introduction

Basalt lava querns were derived from a number of source quarries in Europe (Kars 1980); the only significant source as far as early medieval western Europe is concerned is the Eifel in Germany (Hörter, Michels & Röder 1951, 1955; Röder 1953; Parkhouse 1977). The material from which the querns were made was quarried from a large area, mainly around Mayen and Niedermendig, and is variously referred to in the literature as Mayen, Niedermendig or Andernach lava. The Andernach term is misleading, as it refers to the place on the bank of the Rhine from which the stones were shipped (in the post-medieval period the material was referred to as Cullen or Cologne Stone, for much the same reason). Since there is some doubt as to whether the Niedermendig area was quarried until after c AD1000, the present author prefers the term Mayen lava.

Volcanic stones have been favoured for milling and grinding in many different areas and cultures (Hunt & Griffiths n.d.). There are a number of factors which make the lava of the Eifel mountains suitable for the manufacture of querns. Its vesicular nature means that the surfaces remain rough, and there is a relative lack of granular disintegration. Extraction is relatively easy due to the tendency to natural fracture in large volume, it is reasonably durable and easy to work, whilst the relatively low density makes for easier handling and transport.

The presence of these items has long been recognised as an indicator of long-distance artefact exchanges or commerce. Long-distance export of Mayen material was well established by the Roman period (there is also evidence for prehistoric export: Steuer 1987) and continued until the present century. It has been recognised at a large number of sites in early medieval Europe from the seventh century onwards. Exploration of emporia has revealed several sites where querns have been found in significant quantities, notably Dorestad (Parkhouse 1976; Kars 1980); Haithabu (Jankuhn 1956; Schön 1995), London, York and Ipswich (the last three all mainly unpublished,

other than brief notes). The evidence from these major sites is complemented by isolated finds from settlement sites in England (Parkhouse 1977) and north-western Europe, particularly the Netherlands and Rhineland, and northern Germany and Denmark (Hermann 1968; Schön 1989, Nielsen 1987), as well as occasional boat finds (Ellmers 1972, 1974; Fenwick 1978). So far no synthesis has been published which sets these finds into the context of early medieval marketing strategies (but see the discussion of the material from Lower Saxony and Schleswig-Holstein in Schön 1995); until recently it was far from obvious whether these items represented regular marketing or simple opportunism. However Kars' statistical analysis (Kars 1980) of the major assemblage from Dorestad demonstrated that whilst some of the material represented stones used by the inhabitants of the trading settlement and its immediate hinterland, a significant component represented long-distance transit. More recent studies have identified other sites where quernstones were manufactured at a location between the quarries and the point of use.

This paper reviews the evidence for these workshops, and explores the relationship between the workshops and the overall distribution of the material between the seventh and eleventh centuries.

Distribution

The distribution is shown in fig. 1. An earlier map by the author was published in 1975, and subsequently followed by others (eg Hill 1981, fig. 202; Hodges 1982, fig. 32); the 1975 map is now seriously out of date, as may be expected. The present map, which should be seen as a statement of research in progress, has been compiled from several sources, including the works cited in the previous section. The map is not comprehensive. In particular, there are likely to be many more potential find spots from the Middle Rhine and areas closer to the source quarries; the paucity of finds shown here may be due to this author's inconsistent scanning of the literature. It must

also be admitted that the presentation of a single map gives a simplistic impression. The material from many of the sites shown is not susceptible to sufficient chronological precision to demonstrate any significant changes in pattern between the earlier part of the period under study and the later part, despite the changes to the structures of commerce and exchange which must have taken place, particularly during the ninth century.

What is important, however, is not the individual find-spots so much as the overall spread of material. Comparison with the 1975 map shows, as might be expected, a greater density of material reflecting the great volume of recent excavations, but also an extension of the earlier distribution, particularly in the area of the Jutland peninsular and the Oder/Elbe area. The importance of coasts and rivers is also of note. Apart from the emporia, which is where most of the major groups of material have been found, many of the isolated site finds are on, or close to, navigable waterways. There are some slight indications, however, that the network of Roman Roads may have been significant in the distribution of querns in the southern English midlands (Ellis-Alberda 1982, 65).

Typology

A basic typology for the hand-querns was proposed by the author in 1975 in respect of the Dorestad material (Parkhouse 1975).

- 1 Lower stones (bed stones), either plain (Type 1a) or with a narrow central hole for a spindle (Type 1b). The grinding surface is usually slightly convex; the degree of convexity tends to be less accentuated than Roman period material.
- 2 Plain flangeless upper stone (or runner), with central aperture or "hopper" through which the grain is introduced.
- 3 Upper stone with flange around hopper, which prevents spillage from the hopper.
- 4 Upper stone with flangeless central aperture and integral rynd
- 5 As type 4, but with flanged hopper.
(Types 4 and 5 appear to occur only at Dorestad)
- 6 Unfinished rough-outs or blanks, usually only very roughly dressed

(A further type, consisting of an upper stone some 10 cm thick with a concave upper surface, flangeless hopper and rounded edge bearing vertical inscribed striations, is described by King (1986, cat. no. 400 and fig. 5). Only one example is known, from London, dated to the eleventh to thirteenth century. The form, which in many respects is similar to (non-lava) Roman examples, is quite unlike any other lava quern from

the period, and King suggests that this stone may not be from the Mayen area.)

The basic categories of upper stone (types 2 and 3) may be sub-divided further according to the manner in which motive power is applied. Usually this will be by means of a handle socket, which may be drilled vertically through the upper stone, or obliquely from the upper surface to the side (see also Schön 1995, fig. 10).

Diameters are typically in the range 45-50 cm. There is some evidence from the Netherlands that stones towards the lower end of the range were used earlier in the period under consideration, and slightly larger ones from around the ninth century (Dr O. Harsema, pers. comm.; this seems to be supported by the evidence from Dorestad)

There were also mechanical mills. A very few mill sites of the period have been excavated; the best known English example is Tamworth (Rahtz & Meeson 1992) where stones significantly larger (c65-80 cm) than the hand-querns are found. Large stones of around 80cm diameter have also been found in England at London and at Springfield, Essex, which presumably indicate mechanical water-mills (pers. Comm. MoLAS and D. Buckley). It is possible, however, that some mechanical mills made use of stones which were no larger than hand-querns. At the water mill site at Omgård, Denmark, what is presumed to be a millstone (of gneiss, although there were a number of lava stones from the site) had a maximum diameter of only 45 cm, no larger than most hand-querns of the period, but substantially thicker (14.5 cm) than a hand quern (Nielsen 1986: it is not clear from the published report how many stones were hand querns and how many were millstones). A near-complete stone from Dorestad appears to have had no handle, but does have a rynd-socket on the underside and may also have been mechanically driven (Parkhouse 1975, 185 and fig. 4a).

In many instances, however, considerations of typology are of very limited use. The greatest part of the material is frequently so broken and/or abraded as to be unclassifiable, and there are cases (eg the high-status Middle Saxon site at Flixborough, E. Yorkshire, England) where despite a large number of lava fragments there is little that can be safely deduced from them. Curiously, the broken and abraded nature of the material seems to be far more of a problem with the early medieval material than with the Roman material, where it appears that a higher proportion of finds retain diagnostic characteristics. It is not entirely clear why this should be so. It is possible that the quarries worked during the Roman period produced stone which was less friable and less prone to fracture; alternatively, different processes of deposi-

tion may have occurred. It is more probable, however, that this apparent difference is the result of selective recovery during excavation, and selective inclusion of material in reports. More work remains to be done on the Roman material; there are some interesting differences from the early medieval material, in particular the frequent occurrence over a very large area of features such as the striations inscribed on the edges and upper surfaces of the runner stones, which serve no obviously useful purpose (for further comments see Parkhouse 1996, 218)

A further problem is that of residuality. Many sites which have produced early medieval material were occupied in the Roman period, when lava querns were also in use. If no diagnostic features survive, it may be impossible to determine the date of a particular item, for querns are rarely found in primary contexts.

Manufacturing Sites

There are several sites where there is evidence for the manufacture of lava querns. The type and quality of the evidence is not consistent, and inter-site comparisons are difficult, particularly where the volume of material is small. The following sites have been studied:

Dorestad

A detailed study of the large assemblage (c. 1100 items) from Dorestad has been undertaken (Kars 1980). The most interesting part of the study in the present context is that relating to quern thickness. A newly-manufactured lower stone is in the order of 6 cm thick, an upper stone slightly thicker. A statistically normal distribution would thus show thicknesses ranging between 2 to 3 cm to 6 cm, the thinner items representing stones reduced by use and re-dressing (at around 3cm stones are not heavy enough to perform well and may also be more prone to breakage). However, Kars demonstrates that the statistical distribution of the 500-odd Dorestad stones is more complex, with a bi-modal pattern of two distinct groups, one of 2.75-3.25 cm and the other of 6.75-7.25, which contrasts strongly with the arithmetic mean thickness of 5.12 cm. One group, with thickness around 7cm and representing about a third of the whole population, represents the fragments of "new" stones in Dorestad. This will include the rough-outs and the items broken during manufacture. In contrast the other group, around 3 cm thick, are the stones which were used and broken on site – a number of these show worn grinding surfaces, although the material is often too weathered to show this. Plotting of the two groups in relation to the excavated area

shows that the rough-outs tend to come from the harbour area, with those of smaller diameter coming from close to the former river. On the basis of this, it is suggested that manufacture took place close to where the raw material was being unloaded. Another concentration, within the main area of the settlement, seems to indicate the presence of a workshop. Stone-dressing debris of the sort found at Haithabu (see below) has not been found at Dorestad; its absence may be due to different artefact recovery techniques at the two sites (Schön 1995).

Haithabu

This large and important assemblage (5875 fragments weighing 1160 kg) has been studied in detail by Dr. Volkmar Schön (Schön 1989, 1995). There are, as might be expected, similarities with the comparably large Dorestad assemblage. Once again there is a distinct differentiation between used examples with thicknesses mainly in the range 2-8 cm (with a concentration towards the lower end of this range) and half-finished examples ranging between 6.5 and 11 cm.

The Haithabu material includes a number of items which are evidence for the manufacturing process. There are several fragments, either truncated cones or biconical pieces, which are the "cores" or plugs from the central hopper aperture, which have evidently been removed with considerable care. The two forms of core indicate that on some stones the hoppers were finished by a single groove inscribed around the core on one side, whilst on others the aperture was formed by working from both sides. The processes here seems to be rather different from that being used at London (see below). In addition, there are a small number of examples of small chips or off-cuts of stone which are interpreted as the waste from dressing.

The half-finished "blanks" seem to be concentrated in an area close to the centre of the settlement, but there appears to be little correlation with the distribution of waste products (cores and dressing waste).

London

Lava quern fragments have been recovered from a number of mid and late Saxon sites in London. The most important material is an assemblage of 235 fragments, which was recovered from behind a tenth century waterfront at the Thames Exchange site in 1989. As the assemblage is unpublished, other than an archive report (Parkhouse 1991) the material is presented here in greater detail than the other manufacturing sites.

Of the 235 fragments, 98 of the less diagnostic pieces (ie items where no dimension other than thickness was measurable, and which were impossible to identify as being fragments destined to become either

upper stones or lower stones) were discarded following basic recording, leaving 137 fragments for more detailed study. Amongst these, identification of joining fragments has reduced the number of items to 133.

Many of the fragments were large, representing at least a third of the original piece from which they had been derived. All however were broken to a greater or lesser degree prior to deposition, and in many instances insufficient survived to be able to measure parameters such as maximum and minimum radii or thickness, or to reconstruct the dimensions of the original object.

Four fragments had identifiable fully dressed grinding surfaces, and three of these had wear patterns indicating that they had been used. There were no such indications on the fourth piece, but use cannot be ruled out. A fifth piece was encrusted in mortar, suggesting that it might have been incorporated in the fabric of a building at some stage prior to its deposition. All of these fragments were relatively small pieces.

These five pieces apart, all the other items were unfinished stones which had not been completely worked up to a functional state. Their recovery from a single context strongly suggests that most, if not all, of the items had been closely associated prior to deposition.

Many of the items had been worked to a stage where it was possible to identify them as incipient lower or upper stones, and there appeared to be very few entirely undifferentiated blanks. Thus many of the stones showed traces of the central aperture (narrow, <50 mm for a lower stone, or wide, >60 mm for the hopper of an upper stone). A significant number had traces of flanges around the hopper.

Of the 133 items, 95 yielded evidence for a hole and 40 evidence for a flange. In some cases it is difficult to determine whether a stone was an upper stone or a lower stone, where for instance the width of the central aperture was in the range of 50-60 mm (too wide for a lower stone, too small for the hopper of an upper stone). In the case of some five stones, there was a wide central aperture but no trace of a hopper flange. There are parallels (eg the rather earlier material from Dorestad, Parkhouse 1976) for upper stones with no flange around the hopper, although they do not occur as frequently as the flanged hopper. There was no evidence for a rynd-chase on any of the stones; these however would have been added at the very end of the finishing process.

There were 42 stones which were definitely or probably lower stones, 46 definitely or probably upper stones, and the remainder either indeterminable or lacking the relevant area of the stone. There is thus a

roughly even balance between upper and lower stones.

It is difficult to assess the total number of stones represented, given the fragmentary nature of much of the material. A minimum number of 58 is obtained by adding the fractions of the total circumference surviving on each fragment, but the actual total may be considerably in excess of this.

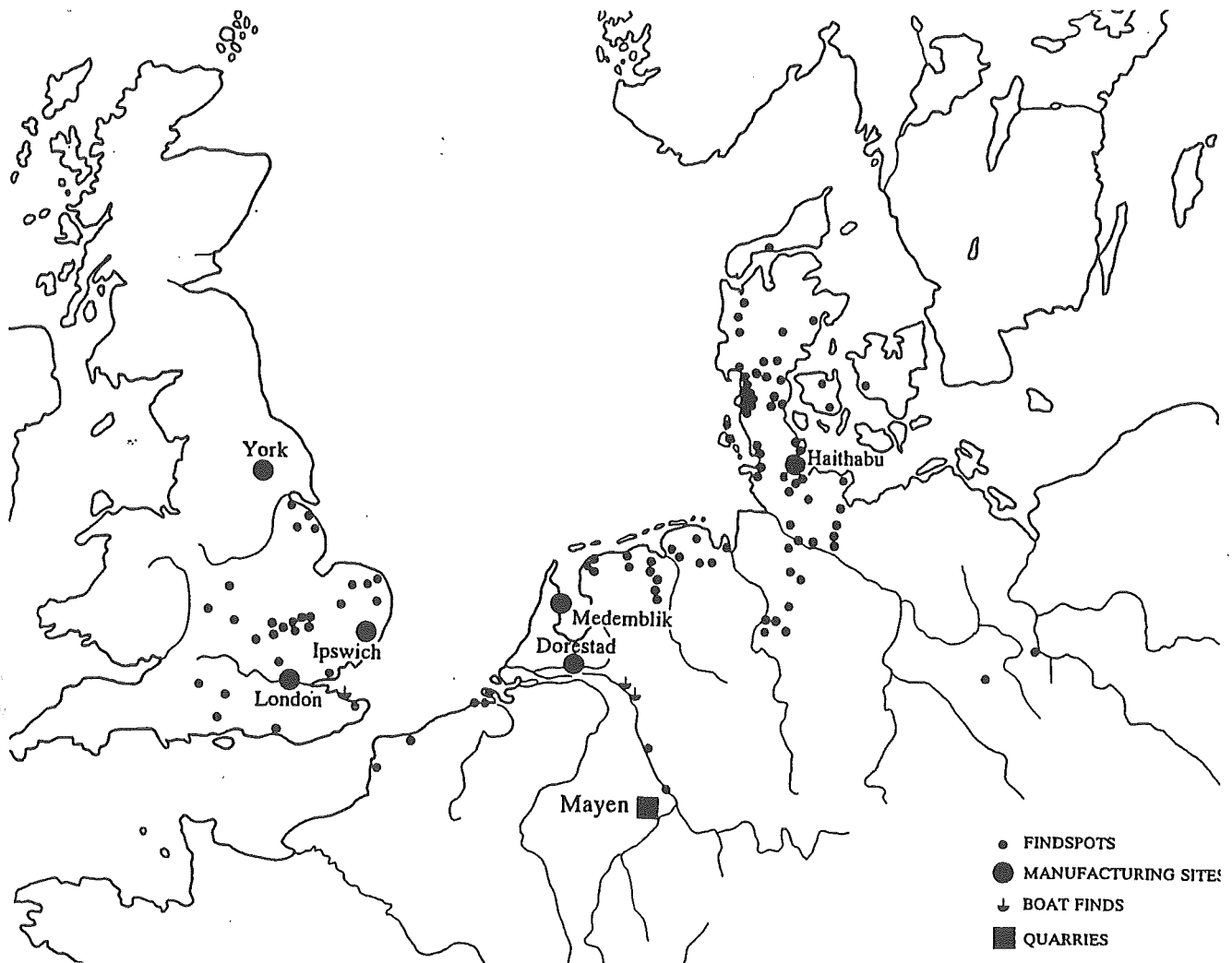
Detailed conclusions based on the dimensions of the stones are difficult to arrive at, owing to the fragmentary nature of the stones and their irregular, unfinished state. By the material's very nature, the most accurate measurements are of limited value. It seems probable that there was a "target radius" of around 250mm, although a few stones were clearly larger. No correlation between the thickness of a stone and its identification as an upper or lower stone could be demonstrated.

It was possible in the case of four of the more complete examples to estimate the original weight of the stones in their partly finished state prior to breakage. The weights were calculated as follows: 37.5 kg, 34.9 kg, 41.7 kg, 44.1 kg (mean 39.55 kg). Whilst this sample is small, the figures may give slight indications of cargo weights (see below).

The stones seem to have reached varying degrees of completeness. Very few seem to have been entirely undifferentiated blanks. In several instances, the central aperture had not been completed, the drilled perforations penetrating only part of the way through the stone. This may have been a high risk operation during the manufacturing process, and indeed some of the stones in this assemblage may have become broken by this very means. Two fragments contained large quartz inclusions, invisible except along the break, which may also have weakened the stone. There was no evidence for the small "cut-outs" from the hoppers of upper stones, noted at Haithabu. Dressing consisted for the most part (where it was definable at all) of rough dressing; however some had a much finer dressing of pecked lines. These latter stones would have been approaching a stage where the final dressing of the grinding surface would take place.

Many of the stones were broken along the edge, with obvious abrasion around the rim. During normal handling, particularly if the stones were stacked on edge, this is where a degree of breakage would be almost inevitable, and many of the Thames Exchange stones seem to have been damaged in this way.

It is likely therefore that this assemblage of material represents items broken at varying stages of the process of converting "blanks" (undifferentiated roughly circular stones in the state in which they were hewn from the quarries) into finished items.



Distribution of Mayen lava in the early medieval period (after Hermann 1968, Parkhouse 1976 and 1977, Nielsen 1986, Schön 1995, and personal notes)

The breakages are likely to have occurred at different stages in the manufacturing process.

The Thames Exchange assemblage differs from the Dorestad and Haithabu assemblages in one interesting respect; at London, there are none of the half-worked blanks with thickened but unperforated areas in the centre, roughly corresponding to the hopper area. All the stones with incipient hoppers have been worked to the stage where the central hole is being formed. Conversely, there do not appear to be stones from Dorestad or Haithabu which have been abandoned during the drilling of the central aperture. There are two possible explanations for this: either the material coming from the Eifel is being exported to London in a more advanced form of completion, or the Thames Exchange assemblage represents a single stage in the manufacturing process. The balance of probability must be in favour of the latter explanation, given that the London and Haithabu material are roughly contemporary. It is scarcely surprising if an

assemblage from a single archaeological context should differ from an assemblage gathered from many different contexts over large sites.

The Thames Exchange stones are likely therefore to represent either an accumulation of rubbish (ie stones unloaded at the waterfront which had been damaged in transport), or, more probably, the damaged debris of a quern-wright whose workshop had been located on or near the quayside. The absence of the small chips which would occur within a workshop where half finished stones were worked up into finished items may be a reflection of waste disposal practice in which small debris from everyday working was disposed of independently of items which broke during the processing, although such debris seems to have been scarce even amongst the Haithabu material. There were however a number of crescent shaped fragments which had clearly originated from the edges of half finished stones, the result of accidental breakage through careless handling.

The tiny proportion of stones with worn grinding surfaces representing broken items which had actually been used (as opposed to completed) are in some respects something of an anomaly. They may represent simply residual items (background noise), but it is difficult to explain why they should have occurred solely in this particular context.

Medemblik

Undressed millstones have been recovered from this isolated ribbon settlement along a waterfront (Besteman 1990, in which the illustrated example shows a roughout with prominent dressing marks around the outer edge and a flat proto-grinding surface).

Ipswich

A large quantity of material has been recovered from several sites in the centre of this important mid-Saxon site. Much of the assemblage was examined by the author in 1990; the greatest part consists of small undiagnostic fragments. There are at least two pieces which are evidently parts of unworked "blanks"; however, these are from post-medieval contexts (pers. Comm. Keith Wade). There must be a good probability that the material in the later contexts is derived from Middle Saxon deposits, although it should be remembered that lava was being imported into England, and especially East Anglia, until well into the post-medieval period.

York

A moderate amount of lava has been recovered from York, including assemblages from the Anglian levels at Fishergate, and from Coppergate. The Fishergate material includes what may be working debris, although none of the "blanks" characteristic of Dorestad, Haithabu and London are known to exist. One fragment, a truncated cone c5cm thick and 8.5 cm diameter, has been described as a possible "core", removed to create the hopper of an upper stone; neither of the main surfaces is worked and it does not appear to be a re-used piece, but it is not known how it would have been removed from the rough-out (Rogers 1988). If this identification is correct, it would be a parallel for similar items from Haithabu, although the Haithabu examples appear to have been rather more carefully worked than the York piece (see Schön 1995, plate 5). A second item, perhaps of similar origin, with a small perforation in one of the main surfaces, was noted by the author amongst the Fishergate material.

Alt-Archsum (Sylt) and Elisenhof

Schön (1995, 101 and fig. 37) notes two sites on the west coast of Schleswig Holstein where half-finished querns have been recovered. These sites are amongst

a number along this coast where lava querns have been found. Whilst most rural settlements would have been dependent upon marketing centres for supplies of material, the occurrence of half-finished querns here show that these sites were able to profit from their position on the trade route.

Other possible sites

The half-dozen or so sites noted above are the only ones known to the author where there is evidence, either direct or indirect, for the manufacture of finished material from rough-outs. Undoubtedly there will have been others. Sites such as Hamwih (Saxon Southampton) have produced quantities of querns, although none which can be shown to demonstrate manufacture on site. A few scraps of lava have been identified from the trial trenching of the emporium at Quentovic (Hill *et al* 1991; the items are too small to be diagnostic, *pace* the comment attributed there to this author). Ribe is also a site where evidence for manufacture might be predicted.

Boat Finds

Direct evidence of unfinished goods in transit is provided by a small number of boat finds. A vessel discovered during gravel-dredging in 1957 at Lüttingen (Nordrhein-Westphalia) contained Mayen lava querns and globular ninth-century Mayen-ware jars of ninth century date. Another vessel discovered during dredging, at Salmorth in 1964 contained about a dozen quern blanks, which were said to be rather small, thought to be of early medieval date (Ellmers 1972, 1974).

Comparable evidence from England comes from the Graveney boat. This vessel, dated by dendrochronology to *c* AD 927, contained two large unfinished fragments of quernstone, with a diameter of 0.46 m. It is suggested that the vessel was ideally suited to the transport of querns. Within the main hold area, two pairs of stones, totalling 0.32 m in thickness and stacked on end and perpendicular to the keel would have fitted comfortably between each frame, packed in with the rest of the cargo, which consisted principally of hops, together with Kentish ragstone and some Roman tile, presumably salvaged building material. It is suggested that the boat would have been capable of carrying a cargo of approximately 280 querns, with 28 querns in each of the ten frame spaces, weighing around seven tons (Fenwick 1978).

We may compare this calculation with the data extrapolated from the Thames Exchange material,

which is approximately contemporary with the Graveney cargo. Using the mean weights calculated for the Thames exchange querns, a cargo of 280 querns would perhaps have weighed around 10.9 tons. This disparity may be accounted for in part by the slightly greater diameter and thickness of the London material (which results in a volume some 1.35 times that of the Graveney querns); furthermore the capacity calculated for the Graveney boat is a minimum figure. It must also be remembered that in both these cases the quantity of measurable material is very small, and it would be unwise to base too many assumptions on such slender data. If cargoes were in the order of magnitude of around 9 tons, it is salutary to note that the entire corpus of excavated English material is unlikely to weigh more than a single cargo. Even the large Haithabu assemblage only weighed 1.25 tons (1,274.7 kg).

Non-traded items

Evidence for long-distance distribution of a commodity is not, in itself, evidence for trade (Grierson 1959). Apart from gift-exchange of luxury items, commodities such as pottery may themselves be the packaging for luxury items such as wine, or may be items for the personal use of traders and travellers, as has been suggested for some of the continental pottery imports in England (Hodges 1982, 57; 1991, 883). The importance of the lava querns lies in that they were utilitarian items, not luxury items, and moreover items which were less susceptible to breakage. We can thus be reasonably confident that in most instances the occurrence of lava querns indicates trade.

Nevertheless, there may be some sites where the presence of quernstones need not indicate trade. Such a site is Hollenstedt, near Hamburg, a ring-work constructed during Charlemagne's campaign against the Saxons in 804 (Ahrens 1973). Quernstones are amongst the items of military equipment required by the royal household and listed in the Capitulary of Aachen of c AD 802/3 (*MGH Leg II Capitularia Regum Francorum*, 77), and the occurrence of lava querns at Hollenstedt must be due to Charlemagne's army.

It has also been suggested that gift-exchange, as opposed to commerce, may be responsible for some imports. In this connection the oft-quoted correspondence between Offa of Mercia and Charlemagne of c AD 796 may be mentioned (*MGH Ep Kar Aevi II.100*, 145, quoted in Whitelock 1955, 779). Charlemagne's letter refers to "black stones" (*Petra nigra*) which have been interpreted as lava querns (perhaps for a royal mill such as that at Tamworth, which post-dated this correspondence by perhaps a half-century, but was

on a royal estate favoured by the Mercian royal household). This hypothesis, however, is unconvincing, as it is now apparent that lava querns were common imports and scarcely likely to attract the attention of monarchs, even those who delighted in the minutiae of their various building projects; furthermore, the lava can scarcely be described as being black, and the reference may relate to some other commodity such as Tournai marble (Rahtz & Meeson 1992).

Hollenstedt apart, there is no reason to suppose that the occurrence of lava querns is due to any exchange process other than trade.

Relative importance and distribution of other material

The superior characteristics of Mayen lava, and the relative absence of other stone of comparable quality, were evidently major factors in the "market penetration" which the lava achieved. Nevertheless, other stones were used for querns, and on many sites lava querns occur as well as querns derived from stone which had been quarried more locally. At Tamworth, for example, stones from two local sandstones occurred along with lava (the lava, in fact, need have come from no more than a single pair of stones); at Flixborough, by way of contrast, the regionally important Millstone Grit scarcely occurs amongst the quern material. At the eastern limits of the lava distribution, Hermann has shown the relative importance of porphyry quarried at a number of sites in the tributaries of the Elbe (Hermann 1968, fig. 22).

Along the Baltic coast, the distribution of lava querns overlaps with that of another important category of material, the Norwegian micaceous rock with minute garnets known as *Glimmerschiefer*. This material occurs at Haithabu, although it only forms 4% by weight of the total quern material. It occurs throughout Denmark, occurring more frequently in the north and east. Nielsen suggests that imports did not become widespread until the tenth century. At Schleswig, which had superseded Haithabu by the early eleventh century, the percentage of *glimmerschiefer* by weight had increased to c. 13% (Schön 1995), although lava querns still made up the greater part of the material.

Discussion

The occurrence of half-finished querns has now been attested from several sites, both emporia and boat wrecks. It is clear that a significant quantity, per-

haps all, of the stones exported from the Eifel were transported in partially finished form. Basalt lava querns are brittle items susceptible to damage in transport, and clearly there was less risk involved in trading either partly-finished stones or even "blanks" over long distances in boats than there was in trading finished articles in which much greater resources of time and effort had been invested.

As far as the identity of the traders is concerned, significant Frisian involvement in the lava commerce may probably be safely assumed, at least during the earlier part of the period under review, given that Dorestad was obviously an important point in the distribution. There are a number of references to Frisian traders, who travelled to London in the seventh century, York in the eighth century, and into the Baltic in the ninth century. Documentary sources also demonstrate their presence along several of the main riverine trade-routes of mainland Europe (Jeltema 1955). However, the Frisians were by no means the only traders. There are eighth century references to English traders in France in the eighth century, whilst Charlemagne's correspondence with Offa, referred to earlier in connection with *petra nigra*, complains of Saxon traders endeavouring to evade customs tolls by pretending to be pilgrims. We cannot be sure, therefore, of the relative importance of Frisian traders and those of other nationalities. Furthermore, the patterns at the end of the period under consideration are hardly likely to be the same as during the earlier part. The ninth century was a period of significant changes, including the growth of towns and the increased circulation of coinage, and in which the importance of the Frisians was eclipsed, amongst other things, by the activity of the Vikings.

It is instructive to compare the lava distribution with that of other commodities, eg pottery. The distribution of lava is more widespread than that of Rhinish pottery. This is due to the fact that lava querns would have had less market competition than pottery, which was made at a number of centres. The competition between Frisian and Frankish areas of commercial influence based on pottery distribution (see Hodges 1982, fig. 22) is not sustained by the lava. The crucial difference here may well be that the exchange of querns was a two-stage operation, in which the querns did not travel directly from quarry to end-user (or the end-user's local market), but via the emporia, where the raw material was worked up into a marketable product.

The virtually complete absence of unfinished material from sites other than the emporia would appear to indicate that manufacture of finished items was restricted to specialised workshops in the emporia. This is scarcely surprising, for the emporia were the focus

for so many other crafts and industries. However, it is important to note that a far greater quantity of material has been excavated in the emporia than from the smaller sites, and the impression of a specialised craft restricted to the emporia may be false. The half-finished items from Alt-Archsum and Elisenhof may indicate that some stones, if only a few, may have been worked outside the emporia; these sites, however, are situated directly on an important trade route, and we cannot be sure that they are an exception to the general trend.

It is difficult to determine whether the workshops in the emporia were working all the material up into finished querns, or whether a proportion were traded on in an advanced state for final dressing at the point of use. A workshop would not necessarily have contained great quantities of finished items; they may have been moved from the workshop immediately upon completion, if not traded (and the means by which they were traded is in itself uncertain) from the premises. The material from the Thames Exchange site in London, which appears to be the largest single deposit of excavated material in early medieval Europe, appears to be almost entirely rejects – broken stones which were no longer capable of being turned into finished products. Apart from the minute quantity of used fragments, there is nothing which can be seen as a brand new stone ready for use. The end-users of the stones would have had the skills needed to re-dress grinding surfaces, or regular access to a craftsman (perhaps an itinerant) with those skills; the final finishing of the stones could equally well have been undertaken at the point of use.

The Dorestad material would seem to indicate that at that site, only stones destined for use in the settlement were actually finished there; it is of course far from certain whether the site at Dorestad is in any way an analogue for Late Saxon London, and it must be remembered that the material under discussion here represents a period of several centuries during which the patterns of trade and exchange were by no means static. The changing marketing networks are illustrated by the Danish material, where Mayen lava querns are to some extent replaced during the tenth century by stones made from imported mica schist material from the north (Anne Bloch Jørgensen, pers. comm). One difficulty is that it is very difficult to compare like with like – by the time that the Thames Exchange material was being dumped behind the timbers of a new London waterfront, the networks of exchange based on the emporia were giving way to new ones. At present, however, we cannot compare Dorestad or Haithabu with mid-Saxon *Lundenwic*. Nevertheless, the study of intra- and inter- assemblage variability, whenever the opportunity presents itself,

will certainly help to illuminate our understanding of the means by which these items were manufactured and distributed.

Postscript

The comments in this article should be considered as a provisional statement. The author is conscious that there may be recent studies or important groups of material which should have been considered here. Any comments or further information will be gratefully received by the author.

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References

- AHRENS C. 1973: Die Untersuchungen an der karolingerzeitlichen Burg bei Hollenstedt, Kr Harburg - Ein Vorbericht, *Harburger Jahrbuch* 13, 72-104.
- BESTEMAN J.C. 1989: The pre-urban development of Medemblik: from an early medieval trading centre to a medieval town, in: H.A. HEIDINGA & H.H. VAN REGTEREN ALTENA (eds), *Medemblik and Monnickendam. Aspects of medieval urbanisation in northern Holland*, Amsterdam, 1-30.
- BESTEMAN J.C. 1990: North Holland AD 400-1200: turning tide or tide turned? In: J.C. BESTEMAN, J.M. BORS & H.A. HEIDINGA, *Medieval archaeology in the Netherlands*, Assen, 91-120.
- ELLIS-ALBERDA A.J. 1982: De contacten tussen Groot-Friesland en Angel Saksisch Engeland, vooral op het gebied van de handel, *It Beaken* 44, 49-72.
- ELLMERS D. 1972: *Frühmittelalterlichen Handelsschiffahrt in Mittel- und Nordeuropa*, Neumunster.
- ELLMERS D. 1974: Nautical Archaeology in Germany, *Int. J. Naut. Archaeol.* 3, 137-145.
- FENWICK V. 1978: *The Graveney Boat*, Brit. Archaeol. Rep. Brit. Ser. 53.
- GRIERSON P. 1959: Commerce in the Dark Ages: A Critique of the Evidence, *Trans. Roy. Hist. Soc.* 41, 123-140.
- HERMANN J. 1968: *Siedlung, Wirtschaft und gesellschaftliche Verhältnisse der slawischen Stämme zwischen Oder/Neisse und Elbe*, Berlin.
- HILL D.H. 1981: *An atlas of Anglo-Saxon England*, Oxford.
- HILL D.H., D. BARRETT, K. MAUDE, J. WARBURTON & M. WORTHINGTON 1990: Quentovic Defined, *Antiquity* 64, 51-58.
- HODGES R. 1982: *Dark Age Economics: The origins of towns and trade AD 600-1000*, London.
- Hodges R. 1991: The eighth-century pottery industry at La Londe, near Rouen, and its implications for cross-channel trade with Hamwic, Anglo-Saxon Southampton, *Antiquity* 65, 882-887.
- HÖRTER F., F.X. MICHELS & J. RÖDER 1951, 1955: Die Geschichte der Basaltlavaindustrie von Mayen und Niedermendig 1-2, *Jahrbuch für Geschichte und Kultur des Mittelrheins und seiner Nachbargebiete* 2, 1-32; 6, 7-32.
- HUNT P.N. & D. GRIFFITHS (n.d.): The suitability of basalt, andesite and other volcanic stone for querns, millstones and grinding purposes, in: L. BROWN & F. ROE (eds), *Quern Study Group Newsletter 2 (circa 1992)*.
- JAHNKUHN H. 1963: *Haithabu, ein Handelsplatz der Wikingerzeit*, 4th edn, Neumunster.
- JELLEMA D. 1955: Frisian Trade in the Dark Ages, *Speculum* 30, 15-36.
- KARS H. 1980: Early Medieval Dorestad, an Archaeo-Petrological Study, Part 1: General Introduction. The Tephrite Querns, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 30, 393-422.
- KING D. 1986: Petrology, Dating and Distribution of Querns and Millstones. The Results of Research in Bedfordshire, Buckinghamshire, Hertfordshire and Middlesex, *Univ. London Inst. Archaeol. Bull.* 23, 65-126.
- NIELSEN L.C. 1986: Omgård. The Viking Age Watermill Complex, *Acta Archaeologica* 57, 177-204.
- PARKHOUSE J. 1976: The Dorestad Quernstones, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 26, 181-188
- PARKHOUSE J. 1977: *Early medieval basalt lava quernstones and their use as an indicator of trade*, unpublished MA thesis, University of Manchester.
- PARKHOUSE J. 1991: *An assemblage of lava querns from the Thames Exchange site*, City of London, unpublished archive report for Museum of London.
- PARKHOUSE J. 1996: Stone objects, in: J. PARKHOUSE & E.M. EVANS, *Excavations in Cowbridge, South Glamorgan, 1977-88*, Brit. Archaeol. Rep. Brit. Ser. 245, 215-220.

- RAHTZ P. & R. MEESON 1992: *An Anglo-Saxon watermill at Tamworth*, CBA Res. Rep. 83.
- RÖDER J. 1972: Die Mühlsteinbrücke von Mayen, *Bonner Universitätsblätter*, 35-46.
- ROGERS N. 1988: Quern Queries, *Interim* 13 (4), 35-38.
- SCHÖN V. 1989: Betrachtungen zum Handel des Mittelalters am Beispiel von Mühlsteinfinden aus Schleswig-Holstein, *Hammaburg* 9, 185-190.
- SCHÖN V. 1995: *Die Mühlsteine von Haithabu und Schleswig*, Berichte über die Ausgrabungen in Haithabu 31.
- STEUER H. 1987: Der Handel der Wikingerzeit zwischen Nord- und Westeuropa aufgrund archäologischer Zeugnisse, in: K DÜWEL *et al.* (eds), *Untersuchungen zu Handel und Verkehr der vor- und frühgeschichtlichen zeit in Mittel- und Nord-europa* 4, Göttingen, 113-197.
- WHITELOCK D. (ed) 1955: *English Historical Documents* 1.

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The origin of commercial fisheries and the trade of stockfish in the northern part of Western Norway

Borgund in Sunnmøre

Borgund is known from written sources as the most important medieval commercial and administrative centre of Sunnmøre. With its three or maybe four churches, Borgund was also the most important ecclesiastical centre between Bergen and Trondheim.

Archaeological excavations and registrations 1950-73 have shown a densely built up area with a surface of approximately 45,000 m², 4 km east of the centre of Aalesund. From this area, about 5,000 m² have been excavated.

Dating

Borgund is mentioned once in the Snorre's Saga of the Norwegian kings; in the saga about Olav the Saint, it occurs in connection with episodes which took place here about 1027-28. Here the name Hundsvær is mentioned, a fishing weather situated on some small islands a short distance west of Borgund and also well-known up till the 20th century.

The archaeological finds – among them two Urnes buckles and an Ethelred coin (1004-1009) – tell us that the small town can be dated back to the 11th century. A cluster of buildings, the ‘Årestuekomplekset’, has been dated by Asbjørn Herteig to the second half of the 11th century and not later than 1100 (Herteig 1957, 464).

Datable objects bear witness of activity on the site from the early 11th century until 1400 (Lossius 1977, 45-50). A merchant is mentioned here in 1400. Ceramic finds also indicate activity in the 15th century. However, a taxpayers' list for 1520 mentions no inhabitants.

We may consider that we are dealing with a densely built up area, a permanent settlement and commercial activity from the early 11th century onwards, with the 12th, 13th and first half of the 14th century as its flourishing period, the site having been definitely and finally deserted before 1500.

The excavations took place many years ago and the excavation and documentation methods, together with the state of preservation, are not the best ones conceivable for a stratigraphic and topographical analysis. In this paper, I will therefore make no attempt at a chronological differentiation of the finds, but discuss the period of the town as a whole.

Topography – settlement

Borgund lies at the *Borgundfjorden*, a fjord well-known as a spawning area of pelagic cod. The Bor-

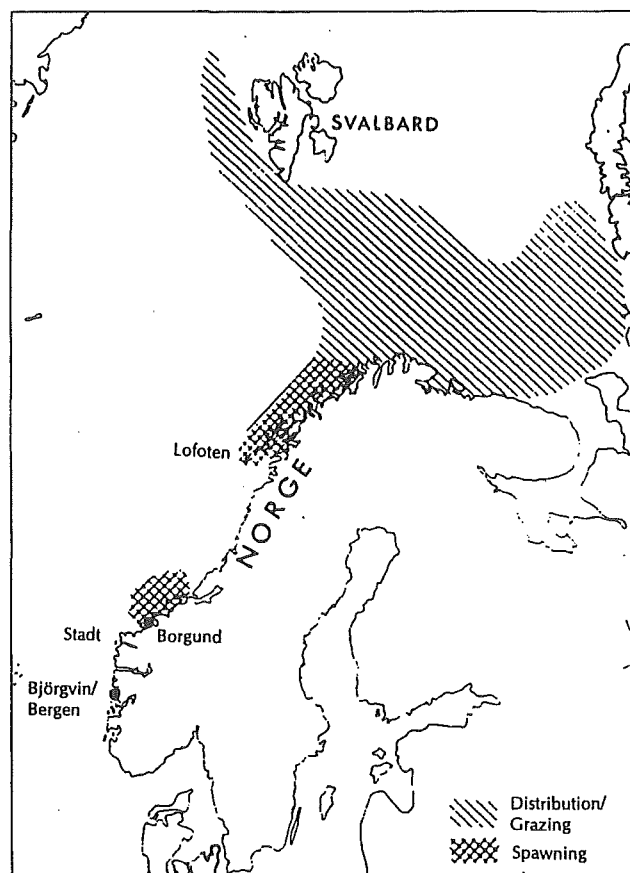


Fig. 1. - The distribution, grazing field and spawning-grounds of Norwegian-artic cod (based on Iversen 1983:4).

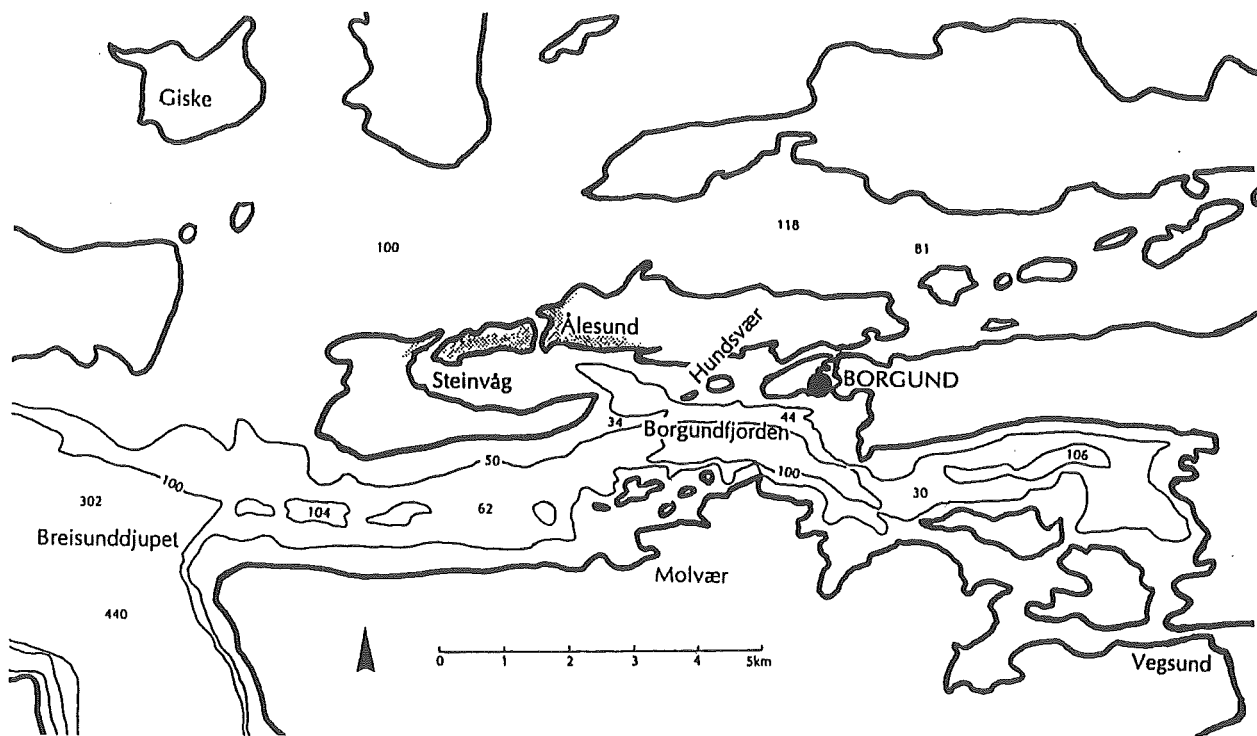


Fig. 2. - Borgundfjorden.

gundfjorden fisheries from January to April are known as one of the greater fisheries of southern Norway as far back written sources can tell anything about it.

The 'town area' is situated on the level east of the present parish church – originally the medieval St. Peter's church. To the south the area faces against the Borgundfjorden, where we still can observe landing-stages for boats dating back to the town-period. To the east the shallow and protected Klokkersundet stretches in to Katavågen (*kati* = small boats, a name used frequently for small harbours in the district) limiting the area against the north.

The excavated remains tell us about a town and a range of activities clearly oriented to the sea and to ways of living connected with the maritime environment. Its central location at the junction between the inner and outer fjord as well as the close connection to the seaway leading to northern Norway, made this site ideal. It offered excellent harbour facilities for boats and small ships, suitable areas for building constructions, and last but not least, it was close to the fjord, rich in fish, all of which explain the location.

Facing Klokkersundet and behind wooden piers, rows of postholes were found and explained as remains of warehouses with a length of more than 30 m. The area covered by these excavated warehouses has a surface of approximately 600 m² and more houses are supposed to have stood in the zone which has not yet been investigated. Similar warehouses are

also found towards the north, in Katavågen. Here, we can also see dug out hollows which are supposed to be remains of boathouses.

Behind the warehouses, traces of dwelling- and commercial buildings were found. The best documented of these is the so-called '*Årestuekomplekset*', remains of which have come to us and have been partly conserved as the focal piece in the exhibition at the *Medieval Museum of Borgundkaupangen* (Sørheim 1988, 1990).

On the headland, the marble church, consecrated to St. Margaret, faced the fjord. A cross section in the present parish church revealed the remains of the medieval St. Peter's church. This church lies at the top of the town area, behind the '*Tinghaugen*' where the local *things* were held. Immediately this site, the remains of another marble church - the St. Matthew's or Christ church - are located. Three stone churches - maybe four according to the recorded names - tell us about considerable wealth in this district. It should also be noted that Borgund was the centre of considerable commercial activities of the church.

Without discussing this in detail on this occasion, I should mention that the manor of one of the most extensive estates in medieval Norway was to be found in the small island of Giske, just outside Aalesund. The owners of Giske, who also owned houses in Bergen, are mentioned in connection with Borgund. For lack of a good harbour at Giske, Borgund may have served as the harbour for their merchant

ships. 'Giskeætta' must have had considerable interests in the trading activity that took place in and in the neighbourhood of Borgund. Together with the church, they may even have dominated this trade.

Also worth mentioning is the fact that Borgund developed close to 'Skuggen', a farm belonging to the mighty Earl of Lade near Trondheim at the end of the Viking period

The economy of the county

From its very beginnings the settlement of north-western Norway shows a clear tendency towards locations on the coastline. Fisheries and the catching of sea mammals, later in combination with farming, formed the basis of the economy of the district. For almost 1000 years, large-scale commercial trading of catches and fish products have formed the way of life here. The combination of farming and fishing was the common way of life.

Commercial fisheries

The twelfth century was a very important phase for the development of trade. At this time the development of the North-European long-distance trade started; it has been called 'The commercial revolution of the middle ages' (Lopez 1971). The volume of trade increased strongly and new types of goods appeared. Corn, wood, cloths and fish products dominated more and more extensively the traditional trade in luxury goods. The peasant-tradesmen and proprietors-tradesmen were gradually replaced by professional town merchants (Nedkvitne 1983, 16).

In this paper, I make a distinction between a fishing-industry based mainly on domestic consumption, and fishing based on trade; put otherwise, a distinction between *hjemmefiske* (fishing for one's own pan), and professional fisheries where the catch and subsequent products were mainly intended for sale. When the production became specialised to the point that professionalised workmanship and retail and distribution channels were needed, the time was ripe for the foundation of trade-centres and towns. The exceptions were the sacral and administrative centres.

Borgund may have started at the very end of the Viking period or in the early Christian Middle Ages as a local point of junction for seasonal meetings between people from the fjords and those from the outer islands of Sunnmøre, and/or for fishing whether for visiting farmers or for their own supply. Its development into an important market town and major

church centre must have been brought about by more important impulses. I find it interesting to ask why this happened and also to look at the role of Borgund from a greater national and international perspective.

The Borgundfjord and the fisheries of Sunnmøre

Fish and fish products were the first important large-scale export products of Norway. In contrast to what happened further south, the medieval herring fisheries had bigger volume than that needed to cover the inland demand. The supply of salt was then, as it was later, the minimum factor for the production. In 1553, it is mentioned that the Hanseatics of Bryggen in Bergen were selling herring according to old traditions (Nedkvitne 1988, 471-2). Quality herring was in fact imported. It was the commercial production of stockfish which from about 1100 that provided the Norwegians for the first time with a considerable export product for a greater European market. Until the 17th century, stockfish – the so-called '*Bergensfisk*' – dominated Norwegian foreign trade (Dyrvik 1979).

The main spawn of pelagic cod takes place in Lofoten. The Lofoten fisheries are first mentioned in a source of that time (about 1103), when king Magnus' sons reinforced an older regulation imposing on every man fishing from '*Vågar*' to give five fish to the king (Morknskinnar 384). The Snorre saga also says that King Eystein (1103-23) built fishermen's sheds and a church there (Snorre 1942, 533). From the 1170, '*Vågar*' is known from written sources as the most important market place for stockfish in northern Norway.

Some of the stockfish also spawned as far south as Møre (Eliassen 1983, 4). A deep rift in the continental shelf leads the fish into the *Breisundet* and the *Borgundfjord*. The fjord is 12 km long. Its depth varies mainly between 50 and 125 m. In this fjord, extensive cod-fishery takes place from January until April; like all fisheries, it varies from year to year, often as a consequence of the water temperature. A colder climate period like the late medieval one may have influenced the movements of the shoal in way detrimental to the fishermen.

The fisheries of the Borgundfjord are carefully described by Hans Strøm in '*Søndmørs beskrivelse*' – a description of Sunnmøre dating from 1762-66. At this time, the fisheries were important: 249 '*Fioringfar*' (big fishing boats) with 1449 fishermen took part in 1756 (Strøm 1762, 472). At his time the cod net was common (*ibid.*, 476).

From the first protocols related to the administration of estates from 1656 and onwards, we may

learn that the fishermen from Sunnfjord, Nordfjord and Sunnmøre took the lead when it came to adapting and adopting new equipments such as cod nets and long lines. At the end of the 17th century, the fishermen around the Borgundfjord had the most advanced fishing equipment found along the Norwegian coast. Written sources confirm that cod nets and long lines first were used in Norway in protected fjords, mainly in the Borgundfjord and to a certain extent further south. Juridical diplomas from the beginning of the 17th century, concerning use and theft, demonstrate that long lines for cod were used at the end of the 16th century (Nedkvitne 1988, 438-40).

The written information mentioned is, however, 100-150 years younger than the time when the last tradesman left Borgund.

The question is whether the commercial cod fisheries along the coast of Sunnmøre, and particularly in the Borgundfjorden, can be traced back to the beginning of the Middle Ages. Was the quality of the equipment of the same leading standard as it was later? Were the fisheries limited to the protected and shallow fjord or did they fish on the open sea, at the 'Storegga', the excellent – and later fully used – fishing bank 70 km off the coast, where the continental shelf drops off into the depths of the Atlantic ocean. Can the excavations at Borgund tell us anything about this?

The most ideal fishing equipment - representativeness?

The fisheries are regarded as a very traditional occupation where innovations were often opposed to. In spite of that, we must assume that every fisherman was trying to find the ideal form for his equipment, taking into account the tradition he was a part of, his means and the technology he mastered. In later times, we archaeologists are faced with a problem. What we collect during our diggings is not supposed to be what Bjørn Hebba Helberg calls 'the ideal' (Helberg 1993, 88). The most ideal equipment was the one used most often and therefore it was also the most subject to damage. It was used on the sea and often lost there. What we find when digging are leftovers, equipment no longer found usable; alternatively, they could have been artifacts that also had additional on land functions (for instance warp/net?-weights).

Even if through all time fishing and the hunting of sea mammals has been the most important part of the economy of coastal Norway – as I believe it to have been – the details of the equipment connected to this economy have scarcely been investigated. The conservatism of the fishermen and their dislike of com-

prehensive innovations make this material well-suited for retrospective analysis. The older descriptions of fishermen's tools are, however, hardly detailed enough to explain the nature and origins of the items which archaeologists are supposed to interpret many years later. This is particularly valid in the case of the most numerous finds, the weights.

I do not know if there are remains from medieval nets. What we have left are some floats and net-weights which are difficult to identify and interpret. Nets from later times are adequate comparative material, but the weights have generally been removed. Normally, unfashioned pebbles or bags with sand or gravel were used and these are difficult to identify in the archaeological finds.

I have had very great help from the article, which O. Nordgaard wrote in 1908 on the development of the Norwegian fisheries, particularly because the paper was drafted at a time when fishing tools which are to a certain extent comparable to the medieval ones were still in use or at least known. His interpretation is therefore based on a deeper understanding than that of the present author who has been brought up in the industrialized post-World War II times. It is also to be regretted that I have not been able to study the as yet unpublished finds of fishing tackles from other important medieval excavations, and notably Bryggen in Bergen, which I suppose could offer a more detailed chronology of the types. A study of the fishing tackles for Bryggen is now in progress. The northern Norwegian material is known to me particularly through Bjørn Hebba Helberg's unpublished master's degree thesis (1993).

Fishing tackles from Borgund

The fishing methods we can retrospectively and using the knowledge of fisheries of later periods, expect to trace in Borgund are first and foremost the handlines used in stationary positions or '*djupagnsnøre*' ('*juksa*' and the trolling lines or '*dorgesnøre*'. From about 1600, the long line is known according to written sources (Myklebust 1971, 20). Nets are known from the Middle Ages onwards. Of particular interest is the introduction of cod nets because it was popularly – but mistakenly – held that the inventor of the cod net, Claus Nielsen, lived at the Borgundfjord and that it was introduced here for the very first time in 1685 (Strøm 1762, 448-449). Whether the use of cod nets can be traced back to the Middle Ages is, however, a matter of uncertainty. We may assume that here nets and closing nets were mostly used for herring and maybe for salmon (Vollan 1960, 203-204).

Hooks

Four barbed iron fishing hooks were found. More hooks from Borgund are listed, but could not be found in the museum reserves. Three of the hooks are complete. Their lengths are 7.6, 8.4 and 9.0 cm. One has a straight shank with an eye for the line and with an open bend of the hook, as with Helberg type I A. The others have the shank and the eye bent inwards as with those of Helberg type IV A (Helberg 1993: 110). The hooks are slightly different from the northern Norwegian material where the ends most frequently were splayed (beaten flat). They are also 1-2 cm longer than the majority of the hooks known there. While the straight-shanked hooks or J-hooks have been the traditional fishhook for all kinds of fish until the 1940s, the bended-shank hooks may possibly have been more suitable for passive fishing as when using a long line (Helberg 1993, 176). The number of finds is, however, too small to allow for any conclusions.

Weights

The most frequent type of objects from Borgund connected to fisheries are the weights. The purpose of the weights is to bring the line with the hook down to the wanted depth at an appropriate speed, and to keep it there. A heavy weight will make it possible for the hook to be dropped quickly, to prevent undesired fish in shallower waters to bite or gnaw away the bait. The form of the sinkers is also of importance for sinking the hook sink rapidly and for maintaining it in the water in a proper way.

It is not always easy to see whether a weight is a sinker, a net weight or has other functions. Stone weights, often made of soapstone and with one hole in it, are used on the warp-weighted looms, but such weight stones might also have been used on fishing equipments, as sinkers or net weights. In a thesis on the textile crafts in medieval Trondheim, Kari Gjøl Hagen states that 'there is no logical explanation for the use of warp weights with more than one hole' (Hagen 1994, 51).

Except for use in steelyards, I can hardly think of any other possible need for weights made of this material, than for fisheries. Therefore, I assume most of the weights with more than one hole to have been fishing weights. A closer analysis of the form, based on weight and form, their capacity to bring the hook in a proper way to the desired depth, and their ability to cut through the water and the currents in a effective way, will have to be taken into consideration when trying to explain their use. I will, however, return to the use of the 'classical warp-weight' later.

The material

A strikingly common denominator for the weights from Borgund, both concerning the fishing weights and the weights supposedly meant mainly for looms, is the dominating use of soapstone. Only five of the sinkers identified are made of other species of rock. There are no metal weights (such as those common in later periods) and no specimens of weights made from clay.

Soapstone is a very suitable stone for making weights because it is soft and convenient to shape, being easy to bore suspension holes in it. Fragments from broken soapstone vessels were frequently used as weights. Siri Myrvoll Lossius suggests that most of the soapstone vessels were made in Hardanger, south-east of Bergen (Lossius 1977, 67), but soapstone also occurs in this district and may have been found locally. Soapstone was also frequently used as a building material, particularly for architectural details in windows- and door openings in the stone churches. Leftovers from the buildings of the many churches here were usable as small objects such as weights. The almost exclusive use of soapstone bears witness to the ample supply of this material.

Sinkers for trolling lines (dorgesøkker, from the old Norwegian: dorg; Nynorskordboka).

When trolling, the fishing line is dragged through the water after the rowing-boat. The hooks do not go very deep, and mostly smaller fish are caught in the upper layers of the water. The fishing line consists of the line, a sinker, a snood (a hook-carrying branch line) and at least one hook.

It is important to prevent the line from rotating. This can be done by using a sinker which is asymmetrical. The suspension holes, one at each end, are also placed in such a way as to obtain a balance when the line is dragged through the water. Therefore, a sinker for trolling lines often has a boat-shaped form, with a straight or slightly curved back and a hanging 'abdomen'. Weights of this kind may – just like any other stone – also have been used as net sinkers. O. Nordgaard (1908, 84) states that some of the sinkers of this type can be defined as net sinkers because of cross-like traces left by the rope with which they had been fastened. Such traces were not encountered in the course of the present investigation.

From Borgund, we have a total of 19 sinkers that can be defined as trolling sinkers. We also have 8 formless shards with two holes which may have been used in the same way, but I leave them out as being uncertain evidence in this context.

Twelve of the sinkers have a nearly straight or slightly convex back. Their weight varies from 90 to 637 g. The two heaviest ones are different from the rest, weighing 518 and 637 g. When these are not

taken into account, the average weight is 159.7 g. Seven sinkers have a distinctly concave back which gives them a banana-like shape. The smallest of these has a weight of only 45 g., the biggest one weighs 454 g. The average weight is 159.7 g.

On the whole, our trolling sinkers are heavier than those from northern Norway: Most of them weigh less than 100 g, even if there are some specimens of about 350 g. These might have been used as net sinkers according to Helberg (1993, 179).

Deep bait line (djupagnsnøre, from old the Norwegian: djúpshofn (Nynorskordboka).

On Möre, a common handline is called *djupsagnsnøre* (deep bait line). In northern Norway it is called *jupsaang, juksaagn* or shortly *juks* (Aasen 1918: Djupsogn).

In terms of form and weight, the sinkers are adapted to the desired depth of fishing. It is generally assumed that the weight of the sinkers in northern Norway should amount to 250 g per 18.5 m depth (translated into the metric system) (Simonsen 1983, 13). The force of the currents must also be taken in consideration. Bait hooks are used from a boat in stationary position drifting in the current. The line is used passively, waiting for the fish to bite on the baited hook; alternatively, the hook, provided with some sort of bait such as for instance a shining sheet of metal reflecting a convincing impression of a herring, is moved quickly up and down (*rykk, pilk*) it being hoped that curious fish will be attracted by the hook. The later category is not known from the Middle Ages.

There is not the same need to avoid rotation of the line as with the trolling line. Consequently, the sinkers do not have the special non-symmetric shape to avoid this. These sinkers can also have been used as net weights.

The most simple way of making a sinker is providing a pebble with a groove for the line. We have only one of this kind, weighing 740 g. An oval flat stone with a groove around the edge was heavier, weighing 909 g. In terms of shape, weight and kind of stone used, these objects differ from the rest of the sinkers and may be regarded as net weights.

Tree long sinkers or fragments of sinkers had grooves over their heads leading to a perforation in the middle, like Nordgaard fig. 50, '*dypagnsteene fra det nordlige Norge*' (1908, 92); they are comparable to Helberg type IV (1993, 117). This type is called '*jarnstein*' (ironstone) in northern Norway. They were probably used exclusively for the '*juksa*' (handline) for '*skrei*' (cod spawn) and other sorts of deep sea fish. In northern Norway, they are heavy, weighing 1200-2103 g for the Helberg type III which are long

sinkers with encircling grooves around the end but no holes, and 300-1500 g for type IV which are long sinkers with a hole and groove from the hole over the end. Only one of our sinkers comparable to type IV is complete; weighing 432 g, it is small in comparison with the northern examples.

We have only one example of the '*jarsteintyp*' of Helberg type II (1993, 117) with an encircling groove around and over the head. Weighing 1299 g, it is the heaviest one in our material. Nordgaard compares this with a sinker from Shetland, where the line is tied over the head and the snood is tied around the stone. This was meant to prevent the snood from intertwining with the line. Later an iron bar, called '*jarsteinsrompe*' in northern Norway, was used. A thicker, stiffened rope could also do the job, as we may deduce from a drawing by Hans Strøm from 1762 (fig. 9). A line like this with a heavy sinker of the northern '*jarsteintype*' (Helberg type II) is also kept in the collections at the Sunnmøre Museum; it comes from Uksnøy, Haram in Sunnmøre and was used until 1931 for fishing halibut.

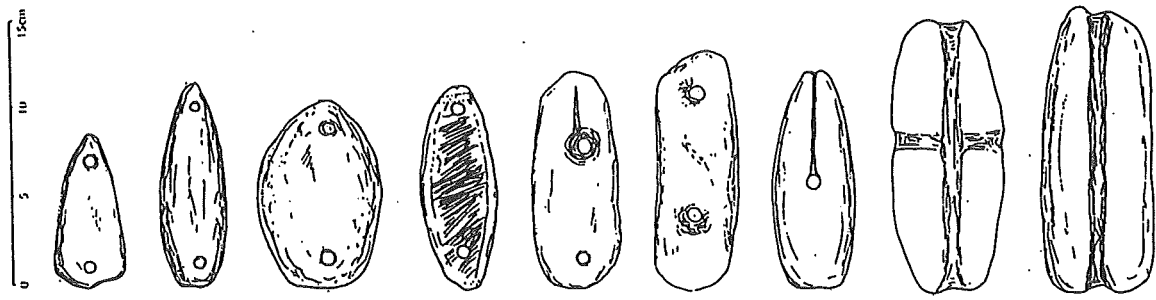
The main group of deep bait sinkers – which are, however, also usable as net weights – are the long and mostly plane stones with holes symmetrically placed in the middle of each end. Discussing the use of a similar sinker dated by a runic inscription to 650-750 A.D., Nordgaard says that the main line was connected to one hole and the snood to the other. In weight, the 16 complete examples from Borgund vary from 105 to 1380 g. The last one and two sinkers of 828 and 966 g respectively are different from the rest, being rather heavy. If we disregard them, the average weight is only 214,6 g, which is considerably lighter than northern '*juksa*'-weights, the '*jarstein*'.

Line runners

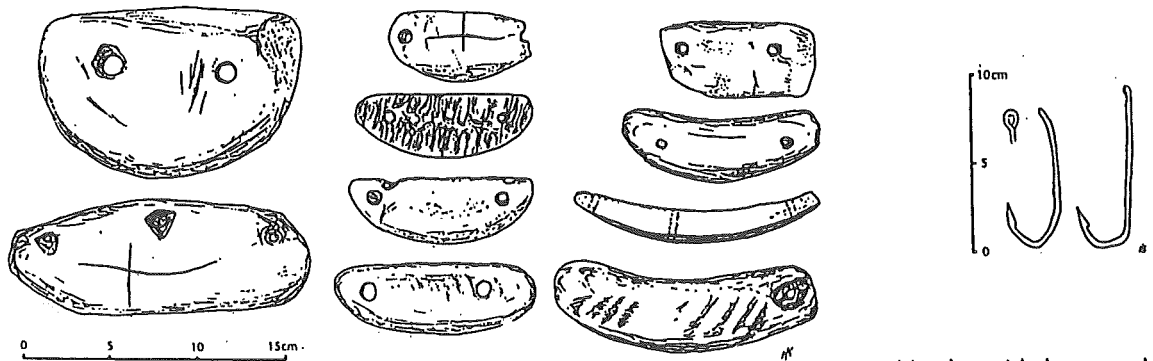
We shall also mention the find of a fork-shaped line-runner or '*vabein*' equipped with a wooden peg to fasten it to the gunwale. It was made of bone. Different forms of line-runners are used when fishing with a handline in order to pull the line in while protecting both line and gunwale.

Fishing nets

As said earlier, it is not easy to find adequate analog equipments of more recent date to explain the medieval net weights. Most often, the weights are removed from the oldest nets which are being preserved in museum collections.

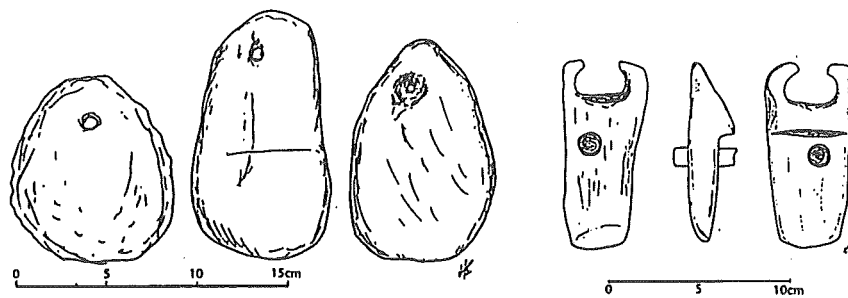


Sinkers for deep bait lines (*Djupagnsnøre/juksa*).



Sinkers for trolling lines.

Hooks with bent and straight shank.



"Classical warp weights" or net-sinkers?

Line runner (*Vabein*)

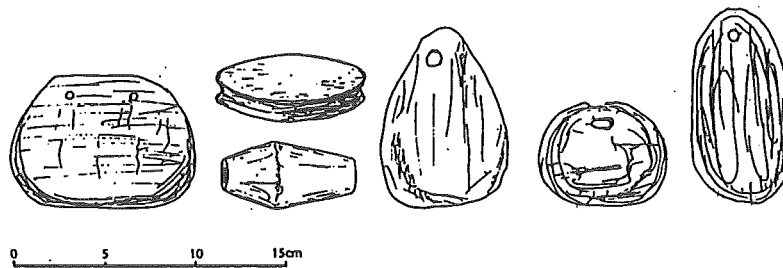


Fig. 3. Floats made of wood and pine bark (to the right).

Net weights

According to the examination by Nordgaard, only one, 233 g heavy barrow-shaped weight with a longitudinal hole can with certainty be identified as a

net weight. This is because Nordgaard compares them with similar weights, made from burnt clay, of his own time. A globular ball made of marble provided with an iron pin, may also have been part of the

fishing tackle. Judging from its weight of 3.55 kg, I will this object to be an '*ilestein*', an anchor stone for a long line or a net.

Two other weights have already been mentioned.

Floats

Five different types of floats are present:

- A) made of tree; pear-shaped with one hole in the end (3 specimens).
- B) made of wood; circular disk with a groove around the edge (3)
- C) made of wood; bag-shaped, upper flat edge with two small holes (1).
- D) made of pine bark, almost elliptical, one hole in the end (1), and:
- E) made of pine bark, almost circular with one hole near the edge (1).

Net needles and knotting peg

Two tree-needles are supposed to be used for reparations or netting. Asbjørn Herteig has interpreted a flat peg with one straight and one convex side, as a '*re*' or a '*kjølve*' used for knotting the mesh. If this is correct, this would give a mesh of 2.6 cm (= one side of the mesh, measured from knot to knot), exactly the same as in a modern herring net.

Warp weights - net weights?

The material studied includes 129 weights with one hole. Most of them are plane and pear-shaped, with the hole in the narrow end, but there are variations in shape ranging from circular ones to more cigar-shaped ones. The finishing varies from almost untouched fragments of soapstone vessels to nicely polished examples. A few of them were engraved with signs, one of which can be interpreted as an owner's mark, but most of them have very simple occasional cross marks like those which can be seen on weights from Bryggen in Bergen (Øye 1988, 60, fig.III.4.2.).

At this point, I have found no reason to divide the type into further subtypes.

Usually weights like these are taken to be warp-weights, but apart from the fact that they do not have the typical streamlined shape of the typical fishing sinkers, there is no reason why these weights should be considered unsuitable for use at sea? Particularly in shallow and quiet waters, where the shape of the sinker is not too significant, or on passive fishing tackles as nets, they would to my opinion have been usable as sinkers.

The interpretation of the use of these weights depends on the approach and questions of the research-

er. Textile researchers like Karin Gjøl Hagen (1994, 212) for instance define them, after a thorough discussion, as 'classical warp weights'. Discussing the weights from Oslo, Liv Marit Rui (1991, 113-129) does the same, as does Ingvild Øye (1988, 58-70) for the Bergen finds with very few reservations. On the other hand, we find J. M. Stean and M. Foreman who, with fisheries as a basic interests, describe identical weights from English finds clearly as net weights (Foreman 1988, Fig. 12.9).

I will not go into the debate here. I believe that weights like these may have been used as sinkers or net weights when they were available. Taking into account their large number, particularly when compared to the finds of fishing weights, I have, however, to refer to what I said earlier about representativeness and more particularly about the loss of fishing tackle on sea; as a result, I assume these weights meant to be used mainly on land, as warp weights.

Osteological material

The osteological material collected from between 1954 and 1962, a total of 24,593 fishbones, has been classified by Kaare Sunde of the Zoological Museum in Bergen (Sunde 1972). The bones had been picked up by the archaeologists, without the soil being sieved. Judging from my own experience in collecting bones by sieving (Sørheim 1979, 5-7), I find the collected bones not to be very representative of the total variety of fish. Only the largest fragments are recovered. Bones from small fish such as herring for instance are totally missing.

Apart from that, bones from three species dominate: Cod 16.3%, coalfish 32.0% and ling 50.7%. The number of ling-bones is surprising. Today ling is being fished at 100-400 m depth at '*Storegga*', but there is also plenty of ling to be found in the mouth of the deep fjords of Sunnmøre. Finds of ling-bones therefore do not presuppose open sea fisheries. The depth however demands long lines with heavy sinkers, which were not to be found in Borgund. The most reasonable explanation of this, is that ling was not fished by fishermen living in or fishing out from Borgund. The ling was fished by fishermen/farmers in the district and brought to Borgund for sale. The modest percentage of cod-bones is more easily explained. Cod was mainly fished and dried in the winter and spring and thereafter sold as valuable stockfish and not consumed in any quantity in Borgund. But, stockfish was also made from ling, so the dominating number of ling-bones really is a matter of discussion.

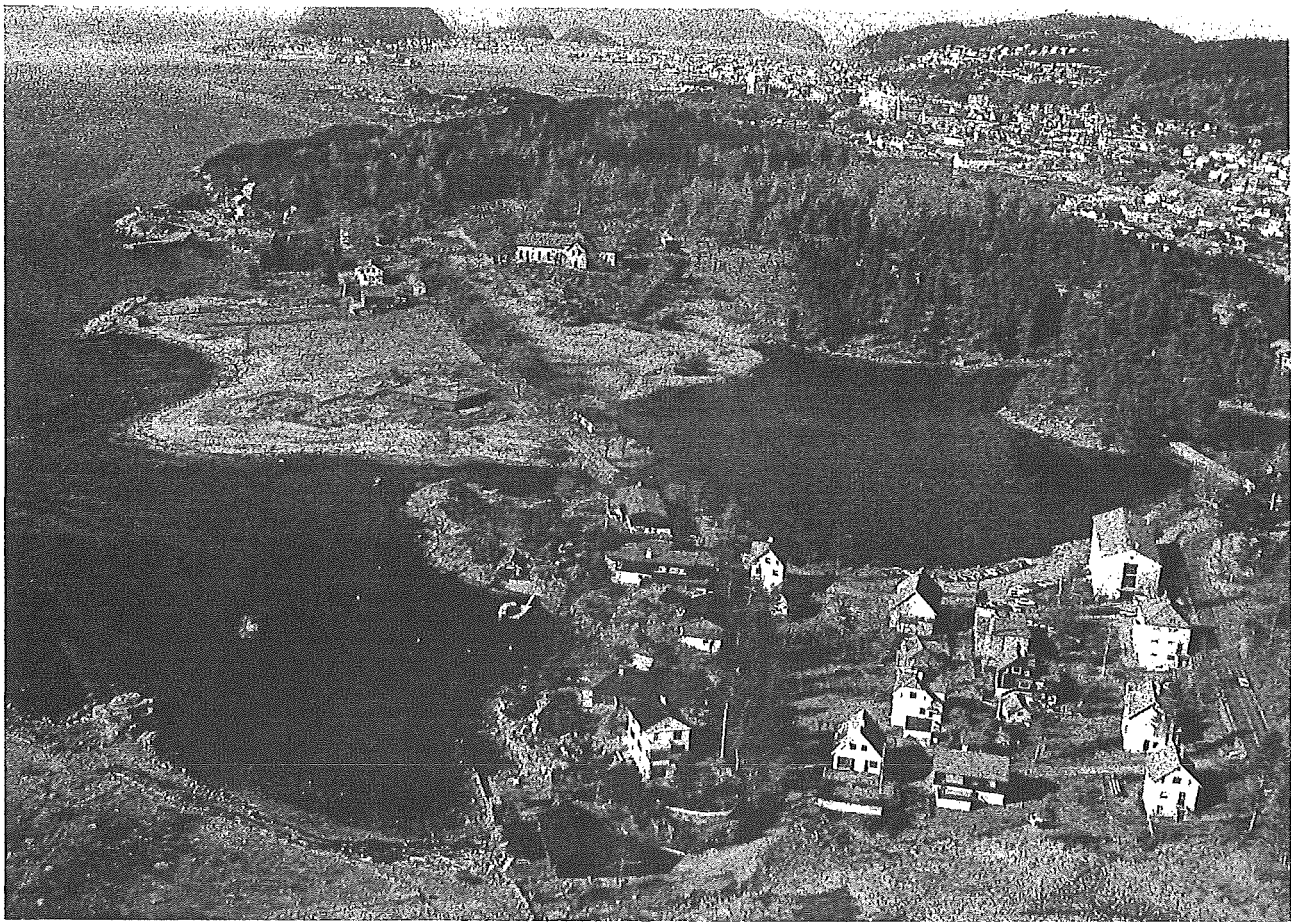


Fig. 4. - Borgund. The town area is on the peninsular in front of the church (St.Peters). The Borgundfjord to the left. Foto R. Engvik.

Conclusions

The general history of the district and the obvious orientation towards the fjord tell us that the existence of Borgund was based on maritime communication and economy. The number of long warehouses tells us about large quantities of goods for barter. It would be hard to explain such an extensive exchange of goods as based exclusively on local seasonal trade or non-professional fisheries. We may assume Borgund developed up as a stable place for fish from the Borgundfjord and from the surrounding district connected to the general growth of long distance trade, the founding of towns and trading centres in Northern Europe, the demand for fish from the catholics, and stockfish as the main export product of Norway. The merchants of Bergen became the main buyers or middlemen of the fish from Borgund.

The stockfish from this district is much closer to the market than the fish from Lofoten. Therefore, I assume that the commercial fisheries of this district must have started very early. The export of fish from Borgund may of course have found its way abroad via a direct route, but there are reasons to believe that we

can see the start of the commercial fisheries and the growth of Borgund as a parallel to that of Bergen and in connection with the very beginnings of Bergen as an international trading-centre as early as the 11th century.

I suppose that important members of the Giske-family may have taken a major part in the trade, and they may be also having organised parts of the fisheries. The church became a major economic participant here. The tithe was often paid in fish, and this had to be disposed of.

The trolling lines were probably first and foremost used for fishing coalfish, intended for domestic consumption by the inhabitants of Borgund. For the winter and spring fisheries for Borgund-cod, the deep bait line is supposed to have been the main tackle. Based on information from the finds from Borgund, it has earlier been claimed that the nets were frequently used in the Middle Ages (Vollan 1960, 203). In my opinion, this is drawing a somewhat too strong a conclusion from the few finds of certainly defined elements of nets and net-production. There is no evidence supporting the conclusion that nets have been used to fish for coad in the Middle Ages in this area.

The nets for herring were used here according to a letter sent from Giske at the beginning of the 15th century (Sulebust 1981, 273). Herrings being needed as bait, this presupposed a certain amount of fishing for herring alongside the fishing for cod.

The light deep bait sinkers testify to fishing in shallow waters, mainly in the protected fjord when it comes to Borgund, Molvær or Hundsvær and other harbours along the fjord serving as points of departure. If there really was some open sea fishing as far off as 'Storegga', traces of that would have to be found on the outermost islands. Such fisheries are not, however, supposed to have started before the 17th-18th century (Nedkvitne 1988, 435). The great percentage of bones from ling tell us, however, about a deep sea fishing. The lack of heavy weights leads me to the conclusion that the ling was fished by fishermen outside the Borgundfjord and brought to Borgund to be sold for consumption here during the warmer months of the year when stockfish was impossible to make.

In northern Norway, a change in technology about 1100-1400 can be demonstrated with the emergence of heavy 'juksa'-sinkers for deep sea fishing, combined with 'rullevein' (with a moving roll to draw the line over) and new types of boats (Helberg 1993, 194). These new tackles have not been found in Borgund. I therefore think they concentrated the main fisheries, as earlier, in the protected Borgundfjord and the neighbouring shallow fishing places close to land.

The next major change in the fisheries of Sunnmøre occurred later, in the 17th century when they learned to use long lines and cod nets, and started the open sea fishing at 'Storegga'.

Borgund cannot follow its history up to recent times. I have mentioned signs of problems in the 14th century. The Black Death in 1349-50 and following epidemics must have been catastrophic for the market-town and its activity. 63.7% of the neighbouring farms were deserted (Sulebust 1981, 278). The church estates were also suffering, with ensuing problems for the economy of the ecclesiastical centre Borgund. When at the same time foreign merchants were allowed to trade north of Stadt, the fishermen sent their products directly to Bergen and Borgund lost its role as staple. To a certain extent the shallow harbour may have been a growing problem.

In conclusion, Borgund should be highlighted as the leading centre of the northern part of Western Norway and its role in the new economic system emerging from the end of the Viking period in the 11th century onwards: The change in trade was one leading from trading farmers dealing in small quantities of luxury goods to professional fishermen (in combination with farming) and tradesmen trading

large quantities of supplies for consumption. Borgund became a main staple-place for the tradesmen of Bergen. I do not think I exaggerate when saying that the foundation of the later development of Møre og Romsdal into the decidedly most important county of fisheries, and of Aalesund – the only 150 years old, present-day successor to Borgund – as the recent leading export harbour for fish and fish products from Norway, was laid in Borgund almost 1000 years ago.

Bibliography

- DYRVIK St. (red.) 1979: *Norsk økonomisk historie 1500-1970 I*, Bergen.
- ELIASSEN J.E. 1983: Fisk og fiskerier i Nord-Norge, *Ottar* 6.83, Tromsø.
- FOREMAN. M. & STEANE J.M. 1988: The archaeology of medieval fishing tackle, in: *Waterfront archaeology. Proceedings of the third International conference, Bristol, 1988*, CBA Research Report 74, Oxford.
- HAGEN K.G. 1994: *Profesjonalisme og urbanisering*, Universitetets Oldsaksamling Skrifter. Ny rekke. 16, Oslo.
- HELBURG B.H. 1993: *Fiskeriteknologi som uttrykk for sosial tilhørighet. En studie av nordnorsk fiske i perioden 400-1700 e.Kr.*, Unpublished thesis for the Master's degree, University of Tromsø.
- HERTEIG A.E. 1957: Kaupangen på Borgund, *Borgund og Giske I*, Bergen, 421-472.
- HERTEIG A.E. 1989: *Borgund in Sunnmøre. Topography, history of construction, state of research*, Ålesund.
- LOPEZ R.S 1971: *The Commercial Revolution of the Middle Ages 950-1350*, Engelwood Cliffs (N.J.).
- LOSSIUS S.M. 1977: *Kleberkarmaterialet fra Borgund*, Arkeologiske avhandlinger fra Historisk museum 1, Bergen.
- Morkinskinna 1932: *Morkinskinna*, published by Finnur Jonson, København.
- MYKLEBUST B. 1971: *Borgundfjordsfisket*, Fiskeridirektoratets skrifter, Serie fiskeri V, No. 3, Bergen.
- NEDKVITNE A. 1983: *Utenrikshandelen fra det Vestaffeldske Norge 1100-1600*, Bergen.
- NEDKVITNE A. 1988: "Mens Bønderne seilte og Jægterne for." *Nordnorsk og vestnorsk kystøkonomi 1500-1730*, Bergen.
- NORDGAARD O. 1908: *Træk av fiskeriets utvikling i Norge*, Det kgl. norske Videnskabers selskabs skrifter, 1908 No. 1, Trondhjem.
- Nynorskordboka 1986: *Nynorskordboka. Definisjons- og rettskrivingsordbok*, M. HOVDENAK e.a. (eds.), Oslo.
- PETERSEN J. 1951: *Vikingetidens redskaper*, Oslo.

- RUI L.M. 1991: Kljåsteiner - Vevlodd, in: *De arkeologiske utgravinger i Gamlebyen, Oslo* 8, Oslo, 113-130.
- SIMONSEN P. 1983: Gamle fiskesøkk, *Ottar* nr 145, 6, Tromsø, 12-16.
- STRØM H. 1762: *Physisk og Oeconomisk Beskrivelse over Fogderiet Søndmør, beliggende i Bergens Stift i Norge. Første Part*, Sorøe, Faksimileutgave Børsums Forlag, Oslo, 1957.
- STRØM H. 1766: Do. *Anden Part*.
- SULEBUST J. 1981: Bosetning og næringsforhold i Borgund sogn i seinmellomalderen og nyere tid, L.I. in: HANSEN (red.), *Seinmiddelalder i norske bygder*, Oslo-Bergen-Tromsø, 262-322.
- SUNDE K. 1972: Report to Førstekonservator A. E. Herteig 10/4-1972, The archive: *Middelaldersamlingen*, University of Bergen.
- SØRHEIM H. 1979: *Arkeologisk utgraving på Kontrasjæret, Oslo, 1979*, unpublished report, The archive, Riksantikvaren, Oslo.
- SØRHEIM H. 1988: The Medieval Museum of Borgund-kaupangen, conflicting interests between the goal of the archaeologists and the wishes of the public, *Tromsø. Kulturhistorie* 8, Tromsø, 79-94.
- SØRHEIM H. 1990: Borgund - en gammel kaupang, et nytt museum, *Viking* LIII, Oslo, 117-140.
- VOLLAN O. 1960: Garn og garnfiskeri, *Kulturhistorisk leksikon for nordisk middelalder* V, Malmø.
- ØYE I. 1988: *Textiles equipment and its working environment, Bryggen in Bergen c 1150-1500*, The Bryggen Papers, Main series 2, Bergen.
- AASEN I. 1918: *Norsk ordbog*, Kristiania.

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European commercial Arctic Whaling reconsidered – Archaeological Data

Abstract

Owing to the general economic and political situation in the early post-medieval period, whale oil became an important article in western European trade. European commercial arctic whaling began in the 16th century in Labrador. It was started by Basque whalers from the Bay of Biscay. From the very beginning of the 17th century, English, Dutch and Danish-Norwegian whalers, instructed by Basque experts, established whaling stations along the coasts of Spitsbergen, Jan Mayen, North Norway and Russia. Up to the 1980's, our knowledge of commercial arctic whaling, its structure and development, as well as of the trade in whale oil, was based mainly on written sources. Archaeological investigations carried out during the last two decades by Canadian, Dutch, Danish, Swedish, Norwegian and Polish archaeologists have revealed new data that partly change this picture. This paper presents the archaeological results and discusses new interpretations.

Introduction

Three aspects of the topic need defining in order to demarcate its scope. They are:

1. European commercial whaling
2. Arctic
3. The contribution of archaeology to the study of the topic.

Regarding the first point, the most important limitation concerns the concept “commercial”. A dictionary definition of the adjective *commercial* is “having profit as the main aim”. In other words, it is the potentially profitable whaling carried on in the Arctic by European countries on a business-like footing that is of interest here. Consequently, whaling done by native inhabitants of the Arctic is beyond the scope of this article.

The concept “commercial” should also be given a chronological limitation in the present context. Euro-

pean whaling began during the Iron Age, or at least in the early Middle Ages. It is difficult to say when it shifted from merely covering the primary needs of the whalers and their social groups to having a purely commercial significance. Here, I choose to draw this line at the transition from the late Middle Ages to the Modern era, i.e. from the 16th century.

The term “European” covers a number of countries and/or areas, as well as nationalities, which carried on whaling in the Arctic. An overview of the history of whaling will be given shortly, but I can mention here the countries which were involved, namely:

- Spain and France – or more precisely the Basque area on either side of the Pyrenees
- the Netherlands
- England and Scotland
- Germany
- Denmark-Norway
- Sweden

The definition of “Arctic” is not only a question of latitude, it also concerns climate, flora and fauna. Several definitions of the Arctic exist, from the oldest which says that it embraces the area north of the Arctic Circle, to the most recent one, which defines the Arctic as the area north of the 10° C July isotherm. None of these definitions are particularly appropriate in the present context. Western European whalers were not interested in lines drawn on a map. They captured the animals wherever they found them in northern waters (Fig. 1). Whaling in sub-arctic areas was extremely important for the development of arctic whaling. I am therefore compelled to extend the geographical delimitation somewhat. Hence, the area which is of interest for us encompasses: Labrador and Newfoundland, the Davis Strait, Greenland, Iceland, the coast of North Norway, Spitsbergen and Jan Mayen, and part of the arctic coast of Russia.

Consequently, the basis for my discussion will be both Arctic and North Atlantic whaling. Hence, the earliest phase of whaling carried on by western Europeans, the medieval Basques in the Bay of Biscay, lies beyond the scope of this article.

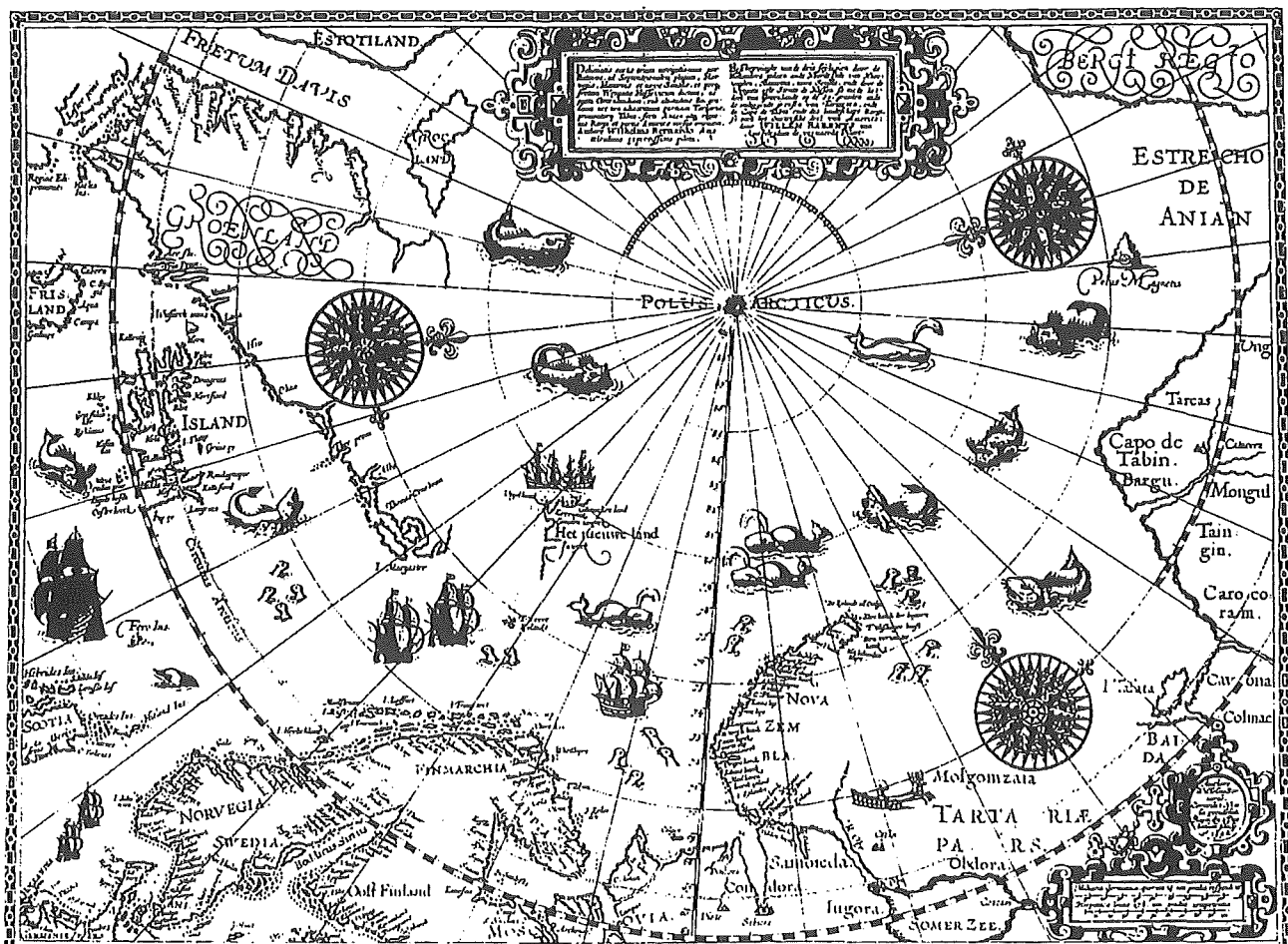


Fig. 1. - The arctic map of Willem Barents, published in 1598. Rijksmuseum, Amsterdam.

The archaeological data can be considered from two angles, the archaeological contribution that already exists, and/or the information which the discipline can offer in general terms as regards research into the premises for European commercial whaling in the Arctic.

If we choose the first perspective, i.e. the archaeological research that has already been done, we limit the discussion geographically. Archaeological investigations of relics of European commercial whaling have so far been carried out in the following areas:

- the Labrador coast, specifically one locality in Red Bay
- Jan Mayen, mapping and limited excavations
- Svalbard, extensive mapping and the excavation of some ten localities, together forming the bulk of the total archaeological effort
- the coast of North Norway, where a limited amount of fieldwork has been carried out.

I know of no archaeological investigations of European commercial hunting in other arctic and/or sub-arctic areas, i.e. Iceland, Greenland or the coast of northern Russia.

Based on the archaeological investigations that have already been carried out on this topic, I will

limit my discussion here to Labrador, Svalbard and North Norway.

Point of Departure

I will begin by outlining the cultural and economic basis for European commercial whaling and its development in the Arctic, chiefly based on historical research, i.e. historical models constructed on the background of studies of what has been written down. I will then present selected examples of archaeological excavations of whaling stations in the aforementioned areas and discuss what these have contributed towards research on the topic. Finally, I will very briefly take up the relationship between the archaeological and the written sources and discuss this from a theoretical and methodological viewpoint in relation to the question in hand.

I would have liked to have presented an overview of European commercial whaling in the Arctic as a continuous process. Much of the historical literature, indeed, contrives to present it in this manner. However, I agree with Vaughan (1984) that the earliest phases of European whaling are still a mystery.

Another problem is that historical literature on the subject fails to take account of two of the most important aspects of this form of hunting, namely the international composition of the whaling crews and the fact that whaling was chiefly organised on the merchant company level and not the national level. Thus, extensive studies of western European archives have resulted in historical works on Danish-Norwegian whaling (Dalgård 1962), Dutch whaling (De Jong 1972; 1978; 1979), German whaling (Brinner 1913), and British whaling (Jackson 1978). I agree with Vaughan (1984:123) that we must as quickly as possible begin writing a non-national history of European whaling.

Commercial whaling in northern waters took place in various parts of the North Atlantic and Arctic:

1. Basque whaling in Labrador and Newfoundland waters in the 16th century,
2. western European whaling in central areas such as the waters off Iceland, Greenland, Spitsbergen, Jan Mayen, North Norway and part of northern Russia, which began at the end of the 16th century and continued until the second half of the 19th century, and
3. western European whaling in the Davis Strait from the end of the 17th century until the First World War. What was the background for the whaling in these areas?

This period of western European history saw a number of historical processes that were important for the development of western European commercial whaling. The most significant of these are:

1. The shift in the political and economic balance from southern Europe, first westwards to Spain and Portugal, and later to northern Europe which, in the 17th century, was the centre of European business activity.
2. Urbanisation processes and growth in populations, as well as a strong rise in economic prosperity.
3. Development of seafaring traditions and technology.
4. Geographical discoveries, chiefly undertaken by maritime superpowers such as Spain, Portugal, France, the Netherlands and England, and which led to, for instance, two important developments – reports of rich faunas in the Arctic Ocean and a debate on who had the right to exploit the natural resources of the newly discovered hunting grounds.
5. The origin and development of commercial trading and the growth of certain kinds of industry.

The upheavals in post-medieval Europe created a demand for a number of goods, including goods which whaling provides. As Dalgård (1962) wrote in his work on Danish-Norwegian whaling, the northern and western European textile industry had a great demand for oil as early as the 16th century. Hacquebord (1985:9) also wrote about the need for whale

products. At the beginning of the 17th century, the population and prosperity of the trading towns of western Europe increased, thereby leading to a greater need for oil and fat. Moreover, because of high corn prices, smaller quantities of oil-bearing plants were grown, resulting in a shortage of vegetable oil. There arose a great demand for substitute products, which the whalers could meet. A large part of the whale oil was, furthermore, used as raw material in the soap industry and in shipbuilding. The woollen industry also used it. It also found a use in oil lamps, both indoors and outdoors. Oil was also refined from the knuckle bones, and the bones themselves were used as building materials.

In addition to the blubber and bones, uses were gradually found for the baleen plates (or whalebones), for example as mirror frames and knife shafts. The demand for whalebones increased towards the end of the 17th century, when corsets and hooped skirts became fashionable.

The Basques from both sides of the Pyrennees had been hunting whales in the Bay of Biscay since the early Middle Ages. It is difficult to judge whether the medieval Basque whaling had a commercial significance. However, we know that as early as the 14th century, the King of Spain awarded privileges to certain whaling towns, such as San Sebastian, in exchange for a share of the blubber. How the Basques developed the whaling from being an activity taking place in inlets along the coast of the Bay of Biscay to one that was carried out at sea has been little studied, as Dalgård (1962), for example, pointed out.

According to Barkham (1984), as the stock became decimated in the Bay of Biscay, the Basques gradually shifted their attention to the richer grounds off Iceland and then, later in the 16th century, to subarctic regions, initially Labrador and Newfoundland. Hunting began there in the 1530's, but mostly took place from 1548 to 1588. As problems with the natives increased and the stock there, too, became decimated the activity declined and the last Basque expedition to Red Bay on the Labrador coast which we know of took place in 1603.

Barkham, however, put forward another hypothesis about the development of Basque whaling off Labrador. He suggested that it was not a shortage of whales which led to the voyages to Labrador, but rather that developments in Basque shipbuilding techniques and access to capital opened up new opportunities.

One thing is, however, certain. The Basques, for quite a long time, were alone in carrying on commercial hunting of whales and, hence, late in the 17th century, they held exclusive knowledge and skills associated with this occupation.

English merchants from the Muscovy Company had long been interested in whaling as a means of meeting the demand for oil. As early as 1577, they acquired the sole right from Queen Elizabeth to carry on whaling "within any seas whatsoever". However, a precondition for this monopoly was that Basques were employed as instructors. This took place early in the 17th century off Svalbard. In 1611, when the first English vessels reached Spitsbergen, they had six harpooners from St. Jean de Luz (Vaughan 1984: 125). This was how the history of western European commercial whaling began in the high-Arctic.

It was not long before the Dutch, too, began producing whale oil. As part of the worldwide expansion of trade which they implemented during this period, they sent their ships both north to the Arctic Ocean and all the way to South Africa.

A principal reason why the Netherlands had economic and cultural premises for taking part in arctic whaling was that Dutch merchants specialised in acting as middlemen in trade throughout Europe. There was no lack of willing capital. Rich seafaring traditions also existed. Willem Barents' observations of rich whaling grounds off Spitsbergen in 1596 were recorded in diaries and, along with maps of arctic waters, formed the basis for the expansion to this area (Fig. 2). In the first period from 1614 until the 1640's, Dutch whaling off Svalbard and Jan Mayen was monopolised by the Noordzee Company established in Amsterdam as a counter to the English Muscovy Company.

From 1611 to about 1660, whales were intensively hunted off Svalbard, and the grounds off Greenland and Jan Mayen were also exploited by western European whalers. At that time, there were whalers from England, the Netherlands, Denmark-Norway and Germany, as well as the Basques.

All these nations, along with Sweden, also exploited the grounds in the Davis Strait, south and west of Greenland. According to historical models, they were used because of ever-decreasing catches in the central area.

Whaling took place on the various grounds partly simultaneously, partly during different periods, and took different forms. I do not have space, here, to go into detail about these aspects, and will now concentrate on the whaling grounds where archaeology has already provided a contribution.

It is necessary, at once, to underline a very important aspect. There were two main kinds of whaling, pilot whaling where the slaughtered animal was towed to land and processed at stations built on the shore, and pelagic whaling which took place far out to sea, close to the pack ice, and where the blubber was either cooked to produce oil on-board ship or packed

into barrels to be processed in the home country. It is only pilot whaling that has left any material traces for archaeologists to study in the arctic regions, if we ignore the potential for marine archaeological investigations of wrecked vessels.

Status of archaeological Research

Archaeological investigations of the Basque whaling station at Red Bay on the coast of Labrador began with mapping in 1977. Excavations of structures on Saddle Island in Red Bay and marine investigations of a Spanish galleon with its cargo of whale oil, that had been wrecked in the vicinity, continued from 1979 (Tuck & Grenier 1989). The work revealed the remains of ovens used for cooking blubber and houses belonging to this 16th century Basque land station.

On Jan Mayen, archaeological investigations were carried out in 1968 by Reidar Berthelsen (Bertelsen 1975), in 1983 and 1987 by Lauwrence Hacquebord (Hacquebord 1991), and in 1987 by Svend Erik Albrethsen (pers. comm.). They involved both mapping and excavations, and took place at at least five places on the island.

Fieldwork concerning western European whaling in North Norway was begun by Povl Simonsen in the 1950's. He partially investigated two sites, at Hollenderbakken in Hasvik (Sørøy) and at Skagen on Vardøya (Simonsen 1982). The next phase took place in 1990 and involved a continuation of the excavation at Skagen, carried out by Roger Jørgensen, who also organised mapping at several places along the coast (Jørgensen 1994).

Svalbard has undoubtedly seen the greatest archaeological effort so far. Investigations of western European whaling there have gone on for almost a century, and can be divided into two main periods.

The first period, from 1898 to 1913, involved a few excavations carried out by non-archaeologically trained investigators. The second period, from 1955 up to the present day has concerned archaeological studies carried out by Norwegian, Danish, Swedish, Finnish, Dutch and Polish archaeologists.

The most important investigations which I will particularly deal with here, are:

- the "Smeerenburg project" (1979-81), led and published by Lauwrence Hacquebord, concerned excavations concentrated on Amsterdamøya, at the legendary 16th century Dutch whaling station of Smeerenburg (Hacquebord 1984 a);
- the "Danskøya project", led and published by Svend Erik Albrethsen, made important discoveries in graves (Albrethsen 1989);

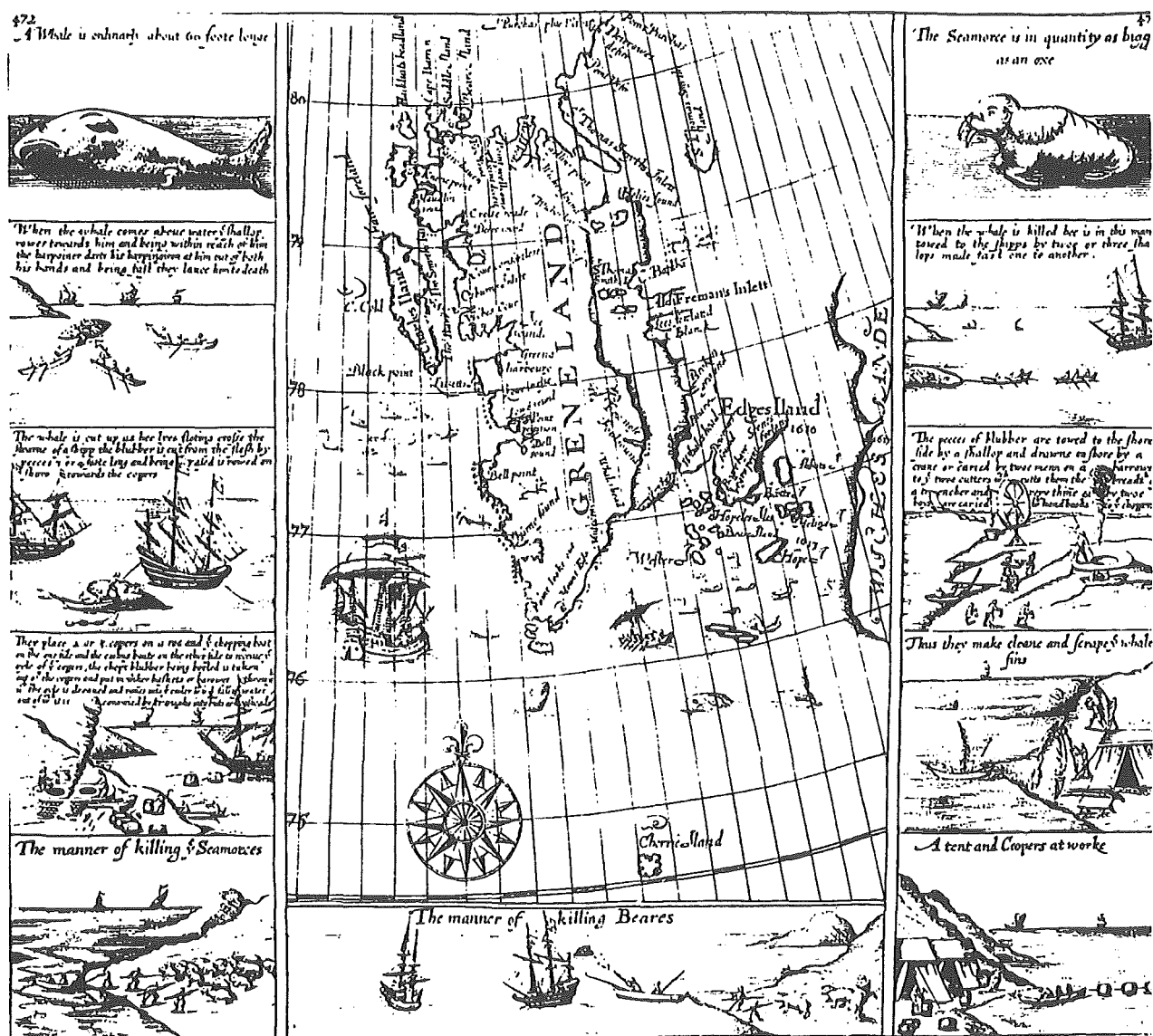


Fig. 2. - Map of Spitsbergen, by Thomas Edge 1625. Rijksmuseum Amsterdam.

- mapping carried out by Tromsø Museum, including several emergency excavations led by Roger Jørgensen (e.g. Jørgensen 1985).

I will now consider the direct cultural and economic premises for western European commercial whaling in the Arctic in the light of archaeological research. Before I discuss the empirical material, I will formulate the elements contained in the concept, "premises" for this hunting. These are:

- demand and market,
- available whaling grounds,
- technology, including ability to adapt to arctic regions,
- capital,
- human resources, i.e. qualified labour,
- social norms,
- political aspects, including legal questions regarding rights to natural resources in the Arctic and international relations between nations.

I will concentrate on three whaling grounds, the Labrador coast, Svalbard and the coast of North Norway.

1. Labrador and the Basque whaling in the 16th century

Tuck (1981) wrote that historical information about this whaling is very limited. However, it is not clear whether the reason for this is lack of written sources, or lack of research (Fig. 3). Archaeological investigations are therefore vital for throwing light on the premises for this particular whaling. The excavations in Red Bay revealed several structures and large quantities of objects, including thousands of pottery shards some of which were of a luxury nature. The ceramic typology, metal objects and architectural data strongly suggest that:

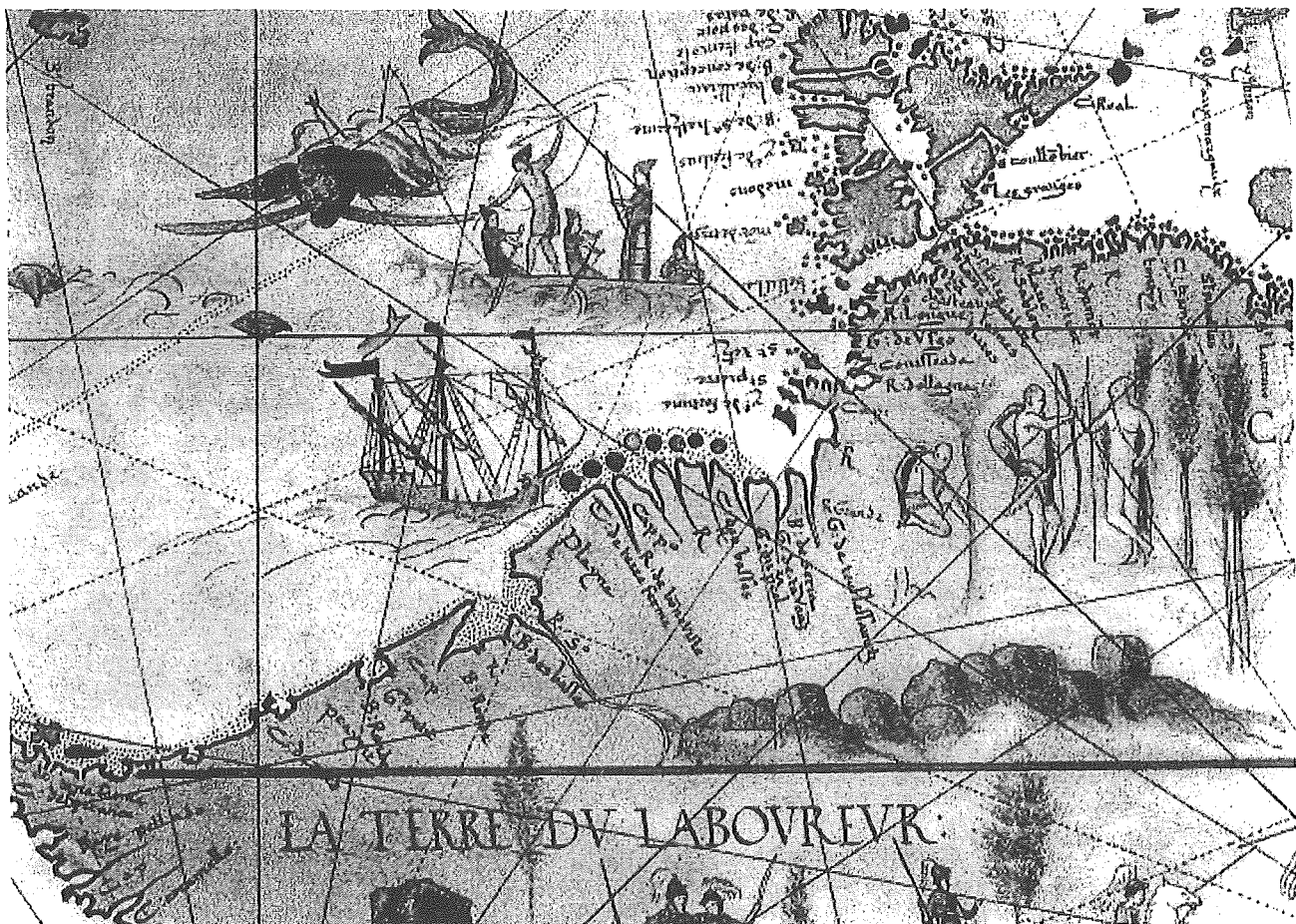


Fig. 3. - Details of Labrador from a map of the world 1546, by Pierre Desceliers, showing whaling in progress.

1. The station in Red Bay also had other purposes, in addition to whaling-related activities. Some finds indicate extensive drying of cod. Fishing is confirmed by the discovery of fish hooks.
2. The activity at the station was not only seasonal, but probably in some periods went on all the year round.
3. Tuck defined a few of the material structures as remains of dwellings for persons of relatively high status.

An excavated blubber oven confirms that Basque technology from Labrador was identical with the method of recovering whale oil used somewhat later in Svalbard. It must be assumed that the remainder of the whaling technology was also more or less like that which was used there, since Basque expertise was employed by the English and Dutch on Spitsbergen.

In my opinion, the excavations so far carried out in Labrador confirm that the settlement at Red Bay, in fact, had more the character of a year-round colony than a whaling station. Whaling was probably the main reason for the establishment of the settlement, but its inhabitants also carried on other activities.

Hence, the profile of the settlement in Labrador will reflect several elements of the whaling carried

on by Basques from their villages on the Bay of Biscay early in the Middle Ages. So far, we unfortunately have nothing about aspects of sex in Red Bay, nor whether families lived there.

Questions surrounding commercialism and capitalism cannot be answered unequivocally. However, the presence of a Spanish galleon with its cargo of whale oil, which was wrecked in Red Bay, indicates that the settlement at Labrador had permanent contact with its home country and commercial interests stood behind the activity. However, in my opinion, the Red Bay inhabitants were less dependent upon merchants and companies than the whalers on the centrally located grounds in the 17th to 19th centuries.

2. Svalbard

Lawrence Hacquebord has undoubtedly performed the greatest effort here with his excavations at the Smeerenburg station on Amsterdamøya (Hacquebord 1984 a). The outcome of his archaeological work is very interesting as regards the relationship between the results of historical and archaeological research (Fig. 4).

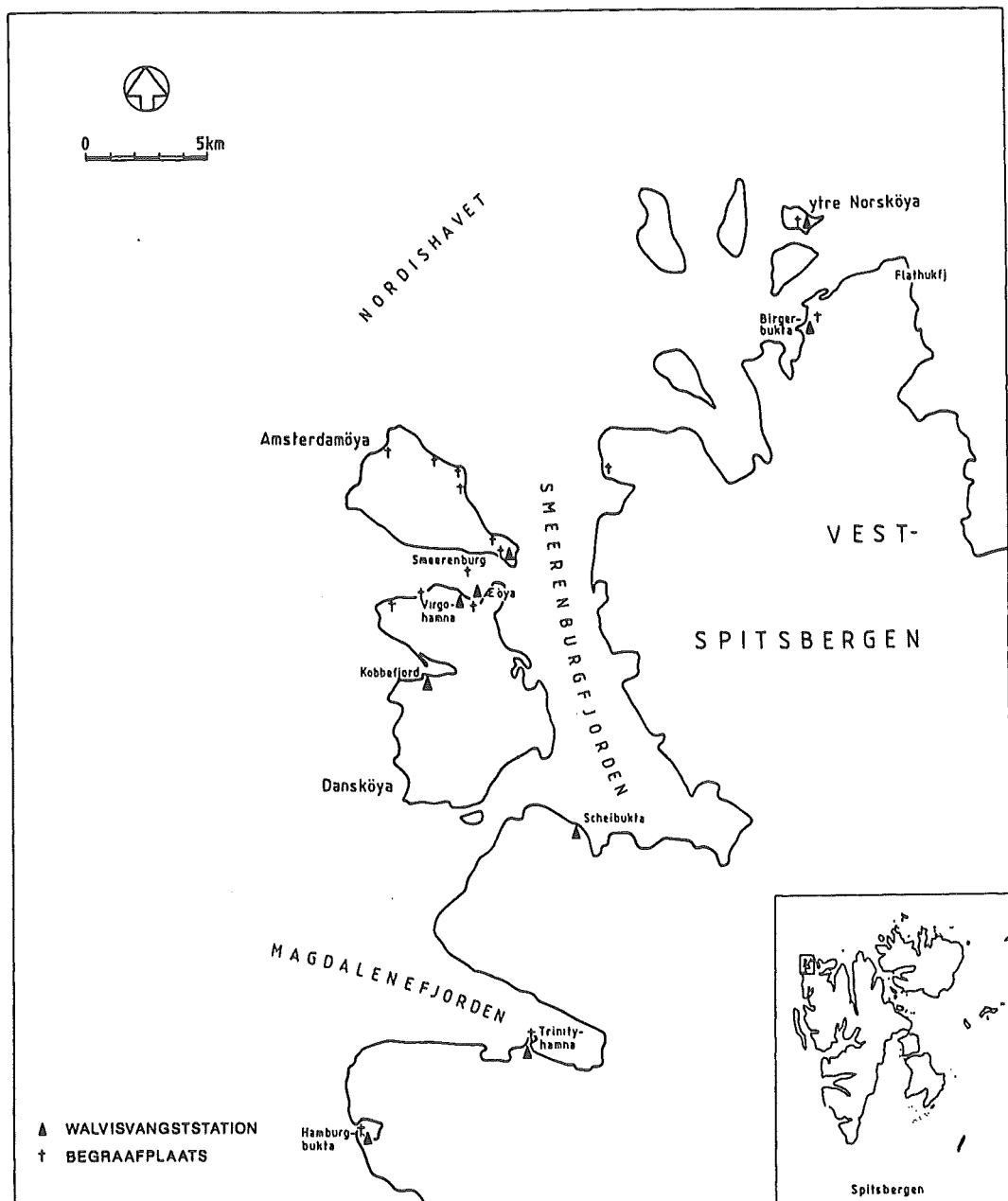


Fig. 4. - Smeerenburg and Dansköya in Spitsbergen. After Hacquebord 1984a.

In several historical publications, even as recently as the 1980s, Smeerenburg was described as a pulsating seasonal town with up to several thousand inhabitants, streets, churches, restaurants and even brothels. It was, in other words, described as a national symbol of Dutch power and the influence of Dutch capital in the Arctic, almost on a level with Batavia (i.e. Djarkata) in the South.

The reality uncovered in Smeerenburg proved to be completely different. The archaeological data showed that Smeerenburg was indeed a pulsating seasonal settlement, but no more than a whaling station with up to 210 people living and working on land, in addition to the crews on vessels. There were no other structures in Smeerenburg than seven ovens

used to cook blubber, some dwellings and warehouses, and a cemetery. Smeerenburg functioned from 1614 until about 1660.

Hacquebord's excavations also revealed that it was not possible to talk of a Dutch whaling activity at Svalbard in the 17th century. The various ovens belonged to different chambers in the Noordzee Company from different parts of the Netherlands. They were not built simultaneously, but at intervals. Behind them, simple, small dwellings were built, which incorporated design features that are typical for the various parts of the Netherlands corresponding to the various chambers, from Zeeland, Frisia, and north and south Holland.

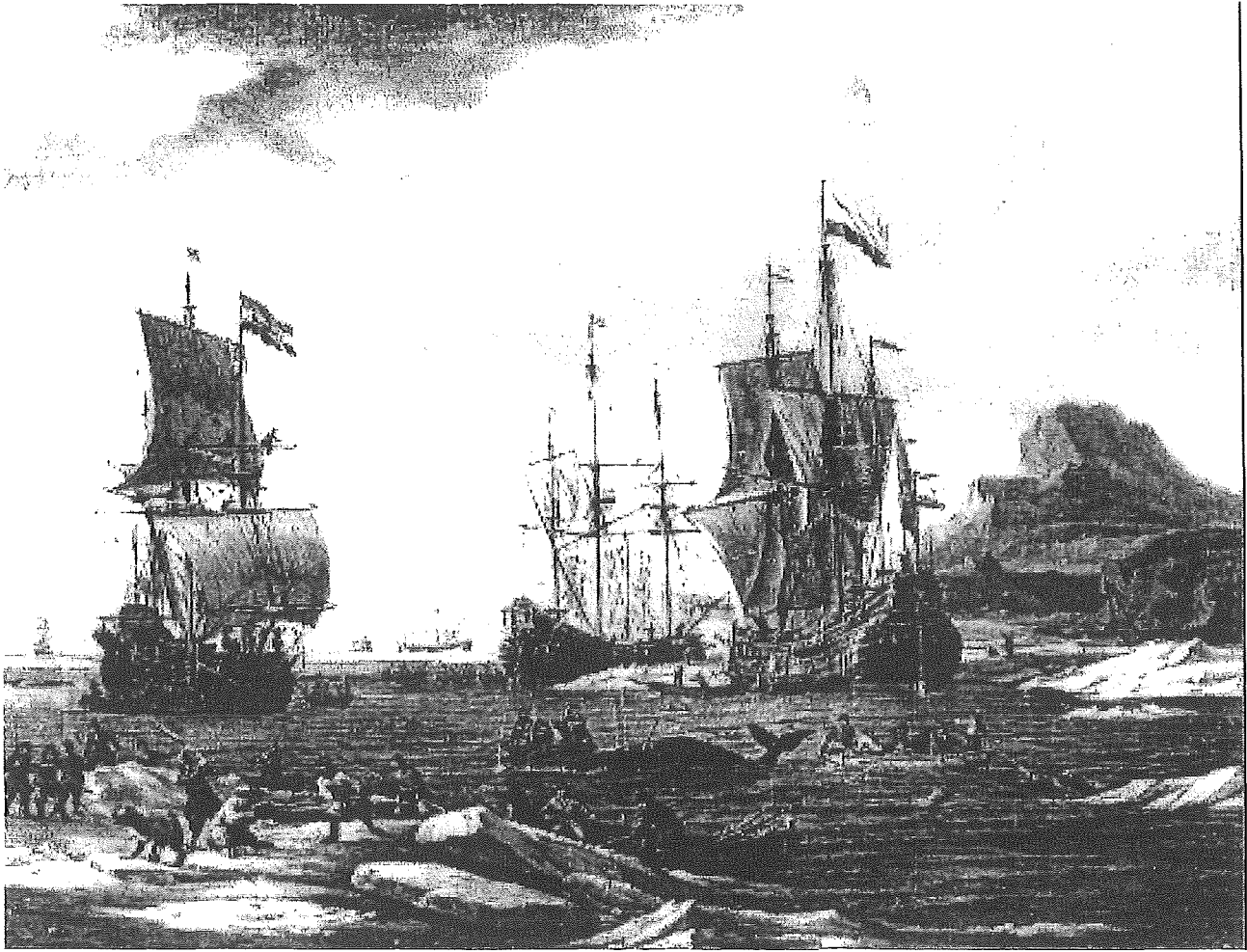


Fig. 5. - Dutch whaling in Spitsbergen around 1690, by Abraham Storck. Maritiem Museum, Rotterdam.

The conclusion is that the Dutch whaling cannot be placed in the category of a national industry. This also reflects the political situation in the Netherlands following independence. The Netherlands was not a nation state, but a confederation of various territories. A great deal suggests that the capital to fit out the whaling expeditions also came from the individual parts of the country, even though the merchants were formally linked together in the powerful Noordzee Company (Fig. 5).

A great deal of information regarding the background for Svalbard whaling derives from work done on the grave finds by Hacquebord and Albrethsen. Mention must also be made of physical anthropological studies by Maat (1981) and work done by Vig-Jensen (1989) on textile material deriving from the graves investigated by the Danskøya project.

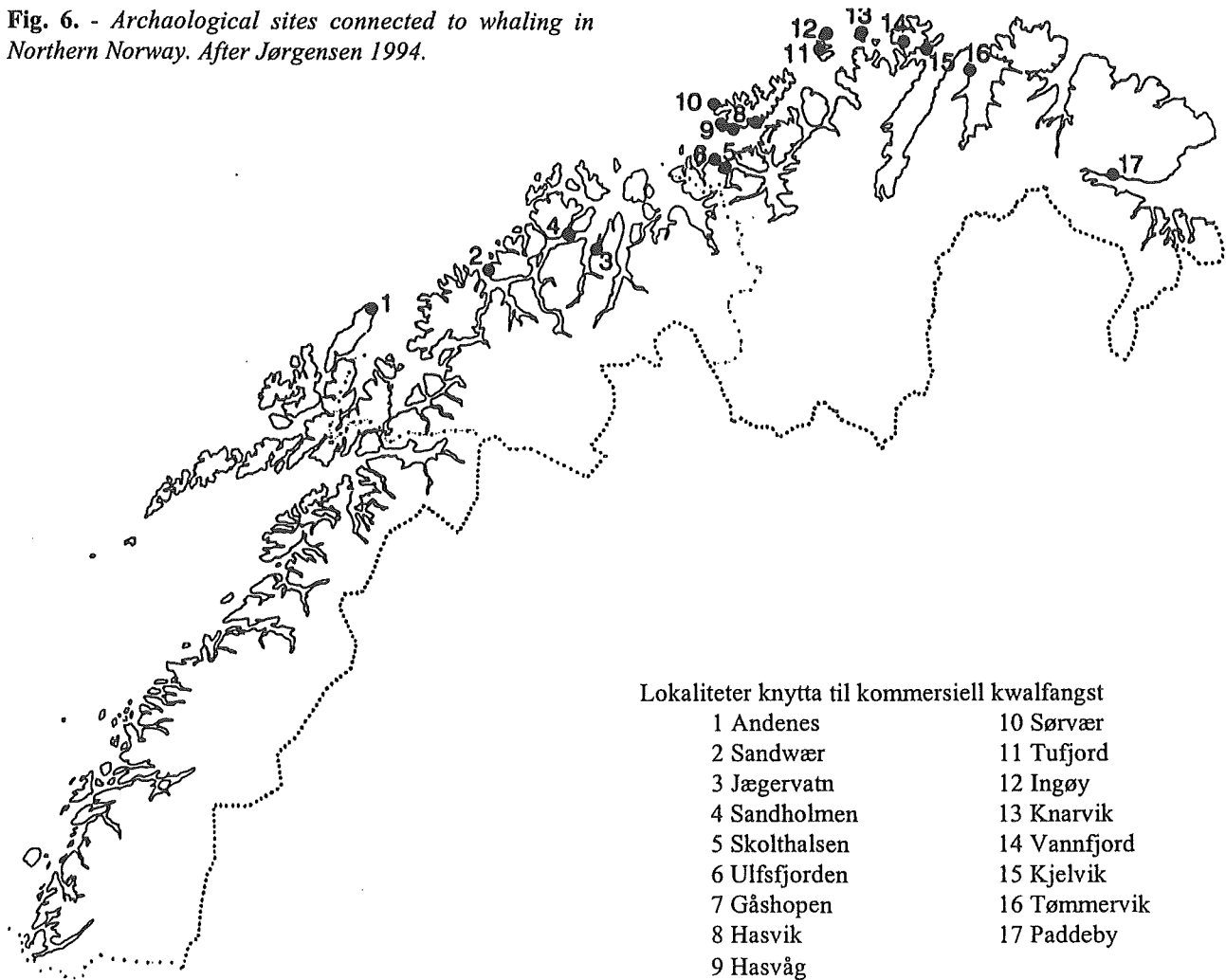
Hacquebord calculated that there are about 900 graves of whalers, just in the northwestern part of Spitsbergen. He investigated about 50 of them and, with the help of specialists, found out that 80% of those buried died of scurvy. Mortality among the crews is also relevant for the questions of supply of

qualified labour, whether whaling was a dangerous activity, and not least whether it can be looked upon as an occupation. Written sources quite often refer to the difficulties which the companies experienced in hiring crews. The supply of labour was a problem. Apart from the harpooners, men lacking seamen's qualifications were generally taken on.

An interesting fact revealed by the physical anthropological data (Maat 1981) was that, in addition to young men, some older people in their 60's and 70's sailed to Smeerenburg in the 17th century. The skeleton of one of the oldest clearly showed that he had become seriously disabled prior to his last journey to Spitsbergen. According to Hacquebord (pers. comm.), this proves the existence of a training system for the crews whereby whaling apprentices were given instruction in the hunting and production processes. This is part of the organisational aspect of the whaling which, in turn, is one of the premises for the activity.

The graves that were excavated also revealed how much consideration their colleagues showed by giving those who died a decent burial. By degrees, some

Fig. 6. - Archaeological sites connected to whaling in Northern Norway. After Jørgensen 1994.



whalers involved in the pelagic whaling were also buried on Spitsbergen. That they did not receive a seaman's grave at sea may, in part, mean that they were not seamen. Burial rituals, with bodies placed in coffins and located in an east-west direction, correspond precisely with burial traditions from the Continent.

The work on the textile material carried out by Vig-Jensen (1989) revealed another important aspect; the crews had a rather international composition. Hacquebord (1984a) considered that there are grounds for believing that the crews fitted out in the Netherlands included whalers from the Netherlands, Germany and perhaps also Norway. However, he stressed that Englishmen were excluded from being employed in crews sent from the Netherlands. This demonstrates two points. Firstly, whaling expeditions fitted out from different parts of the Netherlands were not limited by the borders of European countries when it came to the nationality of the labour force, perhaps precisely because of recruitment problems. Secondly, the competition between England and the Netherlands for the trading hegemony in Europe is also reflected at this level.

The political situation and the question of rights to the natural resources of the Arctic are also illustrated by the fact that one of the ovens in Smeerenburg belonged to whalers from Denmark-Norway. The Danish king asserted his sovereignty over Spitsbergen. His claim must have played a major role in the debate concerning the rights since his whalers succeeded in placing their oven in Dutch Smeerenburg.

One of the most important results of Hacquebord's research is his hypothesis that climatic changes in the Arctic influenced the development of Svalbard whaling (Hacquebord 1984 b). Based on archaeological evidence, he showed that the settlement at Smeerenburg had three different phases (Hacquebord 1984 a). Following the second phase, Smeerenburg lost its role as a settlement, only the individual ovens remained in use. One of the most important reasons was the shifting climate, with alternating warmer and colder periods during the 17th century. In the warmer periods, the pack ice withdrew from the coast of Svalbard, and the Greenland right whales followed it. The distance between the whales and land stations was too large for efficient activity at Svalbard. In the

colder periods, the whales returned along with the ice and the activity could be resumed. It was largely scientific analyses which provided the basis for this hypothesis, but Hacquebord, himself, stressed that it was founded on an archaeological manner of thinking.

Using archaeological data, Hacquebord calculated the production capacity of the ovens in Smeerenburg. Comparison with the value of the oil on the European market, which he obtained from written sources, showed that Svalbard whaling was never an outstandingly lucrative business. The question of why whaling was carried on despite this can only be answered by analysing the social and cultural conditions in 17th century Europe. In my opinion, it was concern for the needs of other branches of industry, textile, soap and shipbuilding, which was the continual driving force.

Hacquebord's research also revealed an impressive collection of archaeological data on whaling technology and the everyday life of Smeerenburg's inhabitants. I cannot go into detail here, but must refer interested readers to existing literature on the subject (Hacquebord 1984 a).

Archaeological work on Svalbard is still playing an important role. Extensive mapping of historical relics in the archipelago are forming the basis for quantitative analyses of the whaling. These have enabled us to demarcate the most important areas where land stations were established, and by mapping what we may term "viewing points", it is possible to suggest which parts of the Svalbard waters were of greatest interest to the whalers (see e.g. Jasinski 1989; Jasinski 1994).

3. *The coast of North Norway*

Little archaeological research concerned with this topic has been carried out along the coast of North Norway, but what exists is quite interesting and is relevant in the present context.

Written sources tell us that western European whalers, including English, Dutch and Basque, were operating here already quite early in the 17th century. Early literature implies the presence of several whaling stations from this period in North Norway (Fig. 6). In the 1950's, Povl Simonsen carried out trial excavations at two of them (Hasvik and Gåshopen) and defined them as Dutch whaling stations (Simonsen 1982), (Fig. 6). Lawrence Hacquebord visited one of these in the 1980's and pointed that the visible foundations most strongly resembled the buildings excavated on the Labrador coast and that they can therefore be defined as Basque. Jørgensen (1994) described the results of the trial excavations which he carried out at this locality early in the 1990's, and

concluded that the structures that are preserved have nothing to do with whaling. He also analysed the cultural monument records and oral tradition concerning 19 possible whaling plants in North Norway and concluded that no definitely defined western European whaling stations exist in North Norway, with the possible exception of one on Sandholmen in the borough of Karlsøy in Troms.

What does this signify, if Jørgensen's conclusions are correct? In my opinion, ignoring the purely methodological aspect of the mapping of cultural monuments (they may have been destroyed, or we have difficulty in finding them), the answer lies in the political and social structures in North Norway at that time.

Written sources quite clearly refer to stations in North Norway, but also mention some extensive restrictions, such as the confiscation of equipment belonging to foreign whalers, etc. They also describe dues which had to be paid to the Danish-Norwegian crown.

In contrast to Svalbard, North Norway was not a "no-man's land". Aspects of sovereignty probably greatly curbed the possibilities for foreign activity on land in this part of Denmark-Norway. Another aspect is the relationship between the local population and foreign whalers, which could also have limited this activity. A large portion of the foreign whaling on the coast of North Norway was most probably carried out without any land stations. Whales that were killed were cleaned of blubber on the outer side of the ships, and the blubber was taken to the Continent, or to Svalbard, to recover the oil.

Conclusion

The survey of archaeological research has shown that the contribution played by archaeology to throw light on the topic in question is relevant to many of the elements mentioned earlier. For instance, in my opinion, archaeology provides good data concerning the technological and human aspects, including social organisation, which are necessary premises for commercial whaling in the Arctic. Archaeological research has also provided information about the whaling grounds and the production capacity. What archaeology has so far provided less knowledge about is markets, access to capital and political matters. Here, the results from the Arctic need to be compared with archaeological material from the Continent.

Finally, I wish to say a little about the mutual roles played by archaeology and history in research regarding the topic in question. Firstly, I want to pose the question – why involve archaeology in research into recent cultural history? The historians, after all, have written sources.

I believe that the written sources alone often give an over-simplified view of the past. They throw little light upon everyday life, natural environments, topographical conditions and contexts, and the cultural landscape. Especially regarding the present topic, the written sources from the 17th century are limited in their scope and degree of detail. They mainly provide information about administrative matters.

The difference between archaeology and history not only lies in the different nature of the sources, but also in research tradition. Unfortunate situations can arise when archaeologists feel themselves obliged to adjust their own data to existing models. Keller (1989) described these risks very thoroughly in his work on Norse settlement in Greenland. The same applies to Hacquebord's research which "pulls" the Dutch whaling in Svalbard down to its real dimensions. It is perfectly obvious to me that written sources cannot possibly reflect every aspect of human behaviour – just as not every aspect can be traced through archaeological material.

Ideally, a researcher should master both branches of science equally well, but this is a Utopian situation. Nevertheless, we should have respect for one another's subject field and types of sources. However, it is natural that for archaeology, the perfecting of problems and methods will chiefly be related to the material culture.

References

- ALBRETHSEN Svend E. 1989: Archaeological investigations of 17th century whaling on Svalbard, *Acta Borealia* 1989:1.
- BARKHAM Selma Huxley 1984: The Basque Whaling Establishments in Labrador 1536-1632 – A Summary, *Arctic* 37, 4, 515-519.
- BERTELSEN Reidar 1975: Jan Mayen og det første arktiske oljeeventyret, in: *Vårt verk*, AS Norsk Jernverk 3, 6-11.
- BRINNER Ludwig 1913: Die deutsche Grønlandsfahrt, in: *Abhandlungen zur Verkehrs- und Seeschichte VII*, Berlin.
- Dalgård Sune 1962: *Dansk-norsk hvalfangst 1615-1660. En studie over Danmark-Norges stilling i Europæisk merkantil expansion*, København.
- DE JONG Cornelis 1972: *Geschiedenis van de oude Nederlandse walvisvaart, deel I: Grondslagen, ontstaan en opkomst 1612-1642*, Pretoria.
- DE JONG Cornelis 1978: *Geschiedenis van de oude Nederlandse walvisvaart, deel II: Bloei en achteruitgang, 1642-1872*, Johannesburg.
- DE JONG Cornelis 1979: *Geschiedenis van de oude Nederlandse walvisvaart, deel III: Noten bij deel twee, tabellen, grafieken, bijlagen*, Johannesburg.
- HACQUEBORD Louwrens 1984a: *Smeerenburg. Het verblijf va Nederlandse walvisvaarders op de westkust va Spitsbergen in de 17e eeuw*, Groningen.
- HACQUEBORD Louwrens 1984b: The History of Early Dutch Whaling: A Study from the Ecological Angle, in: *Arctic Whaling. Proceedings of the International symposium...*, Arctic Centre, University of Groningen.
- HACQUEBORD Louwrens 1985: *Smeerenburg. Vitnesbyrd fra Svalbards tidligste historie*, Arktisch Centrum, Groningen.
- HACQUEBORD Louwrens 1991: Hvalfangst på 1600-tallet, in: Susan BARR & Jan MAYEN, *Norges utpost i vest. Øyas historie gjennom 1500 år*, Oslo.
- JACKSON Gordon 1978: *The British Whaling Trade*, London.
- JASINSKI Marek E. 1989: Maritime aspects of Svalbard Archaeology, *Norsk Sjøfartsmuseum Årsberetning* 1988, 85-106, Oslo.
- JASINSKI Marek E. 1994: Archaeological studies of the Renard Glacier 1 site, Spitsbergen – Recapitulation, *Spitsbergen Geographical Expeditions* 1994, UMCS University, Lublin, 9-21.
- JØRGENSEN Roger 1985: Norsk arkeologi på Svalbard, *Tromsø*, kulturhistorie 5, 101-120, Tromsø.
- JØRGENSEN Roger 1994: Kommersiell kvalfangst i Nord-Norge på 1600-tallet, *Tromsø*, kulturhistorie 26, Tromsø.
- KELLER Christian 1989: *The Eastern Settlement Reconsidered*, Oslo.
- MAAT G.J.R. 1981: Human remains at the Dutch whaling stations on Spitsbergen, A physical, anthropological study, in: *Early European Exploitation of the Northern Atlantic 800-1700*, 153-198, Groningen.
- SIMONSEN Povl 1982: Den tidligste nederlandske kvalfangst i Nord-Norge, *Ottar* 138, 13-15, Tromsø.
- TUCK James A. & GRENIER Robert 1989: Red Bay, Labrador: World Whaling Capital AD 1550-1600, St. Jones, New Founland.
- VAUGHAM Richard 1984: Historical survey of the European whaling, in: *Arctic whaling, Proceedings of the International symposium...* Arctic Centre, Groningen, 121-134.
- VIG JENSEN Lars 1989: Menig man bag hvalfangsten ved Svalbard på 16- og 1700-tallet, in: ARLOV Thor B. (ed), *Studier i arktisk kulturhistorie*, Rapport 3 fra Svalbardprosjektet, 21-37.

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Salt, Trade and Crafts. The Origins of an early Town on the Southern Baltic Coast

During a meeting between the Emperor Otto III and the Polish prince Boleslas the Brave in the year 1000, at the grave of St. Adalbert in Gniezno, new principles of church organization in the young Polish State were specified, among other matters. According to Thietmar of Merseburg, a contemporary German chronicler, the established Gniezno archbishopric was consigned to Radim, the brother of the mentioned martyr (Adalbert). Subordinated to him were Reinbern, bishop of the Kolobrzeg Salt Church (*Salsae Cholbergiensis aecclisiae episcopum*), Poppo of Cracow and John of Wroclaw with the exception of Unger of Poznan (IV, 45).

Salsa Cholbergiensis, the present Kolobrzeg, was a later well-known early town near the mouth of the Parseta river, on the Pomeranian Baltic coast (fig. 1). In the year 1000, it was recognized as one of the main centres of Boleslas the Brave's state, equalling in importance Cracow on the upper Vistula and Wroclaw on the Oder. The establishment of a bishopric in Kolobrzeg indirectly indicates its political function as a place governing the coastal region and previously – in the second half of the 10th century – included in the State of Polanian Piasts (*Historia* 1972, 307-316).

As a matter of fact and for a long time, Kolobrzeg did not fulfil the function of a principal church centre in Pomerania. At a not precisely specified point in time, between 1005 and 1012, bishop Reinbern was assigned to the entourage of the Polish ruler's daughter who was married off to Svjatopolk, son of Vladimir, a Kiev prince. In 1012, he was imprisoned together with the young married couple in Kiev and died shortly afterwards (Thietmar VII, 72). Nothing is known of his successors in Kolobrzeg. We may assume that Reinbern's leaving his bishopric was linked with the failure of his missionary activities in Pomerania.

The inhabitants of that region became politically independent probably during the crisis in the Piast monarchy in the 1030s (*Historia* 1972, 316-326). According to *Altahenses Maiores Annals*, a certain Siemysl, duke 'of the Pomeranians', came to the im-

perial court in Merseburg. He was granted equal rank to the Polish Casimir and the Czech Bretislav. We know that Casimir managed to regain rule over the coastal area, but only over its eastern part, while his son, Boleslas the Bold, lost it again. The swampy Notec valley then became the Polish-Pomeranian borderland, an area of frequent armed encounters and a starting-point for predatory excursions. This impasse was broken by Boleslas the Wrymouth only in the 1120s. He subordinated to himself Gdansk Pomerania and imposed superior feudal authority upon Wartislav, the ruler of the western region of Pomerania. There followed moves to renew the Christianization of these territories.

Kolobrzeg played an essential role in these events. Anonymus Gallus (II, 28, 38), describing Boleslas the Wrymouth's excursions in 1103 and 1107, recalled that in both cases the Polish prince surprised the Pomeranian duke in Kolobrzeg. The first time, he fled from the stronghold, the second time, he paid homage. In consequence, Boleslas subordinated to himself 'almost the entire then existing State'. This is why researchers acknowledge, not without reason, Kolobrzeg as the place where, in the 11th century, an independent Pomeranian statehood began to emerge. It was a duchy, which in the first half of the 12th century stretched up to the river Peene in the west and the Leba in the east. At the beginning of 1125, the town on the Parseta was visited by Otto of Bamberg who build the Blessed Virgin Mary Church there (*Vita Prieflingensis* II, 20; Ebo II, 18; Herbord II, 39).

Likewise, the exceptional position of Kolobrzeg was maintained in the Pomeranian Duchy in later times (Leciejewicz 1960; Bollnow 1964, 106-150). In the second half of the 12th century, following the division of Wartislav's State between his sons Boguslas and Casimir, two castellans, representatives of the two dukes resided in the said stronghold. This division was maintained also by their successors until the Kolobrzeg region was taken over by the bishop of Kamien in the years 1248 and 1276. Each duke collected fees from his own inn near the Kolobrzeg stronghold; the local salt-works were at their disposal

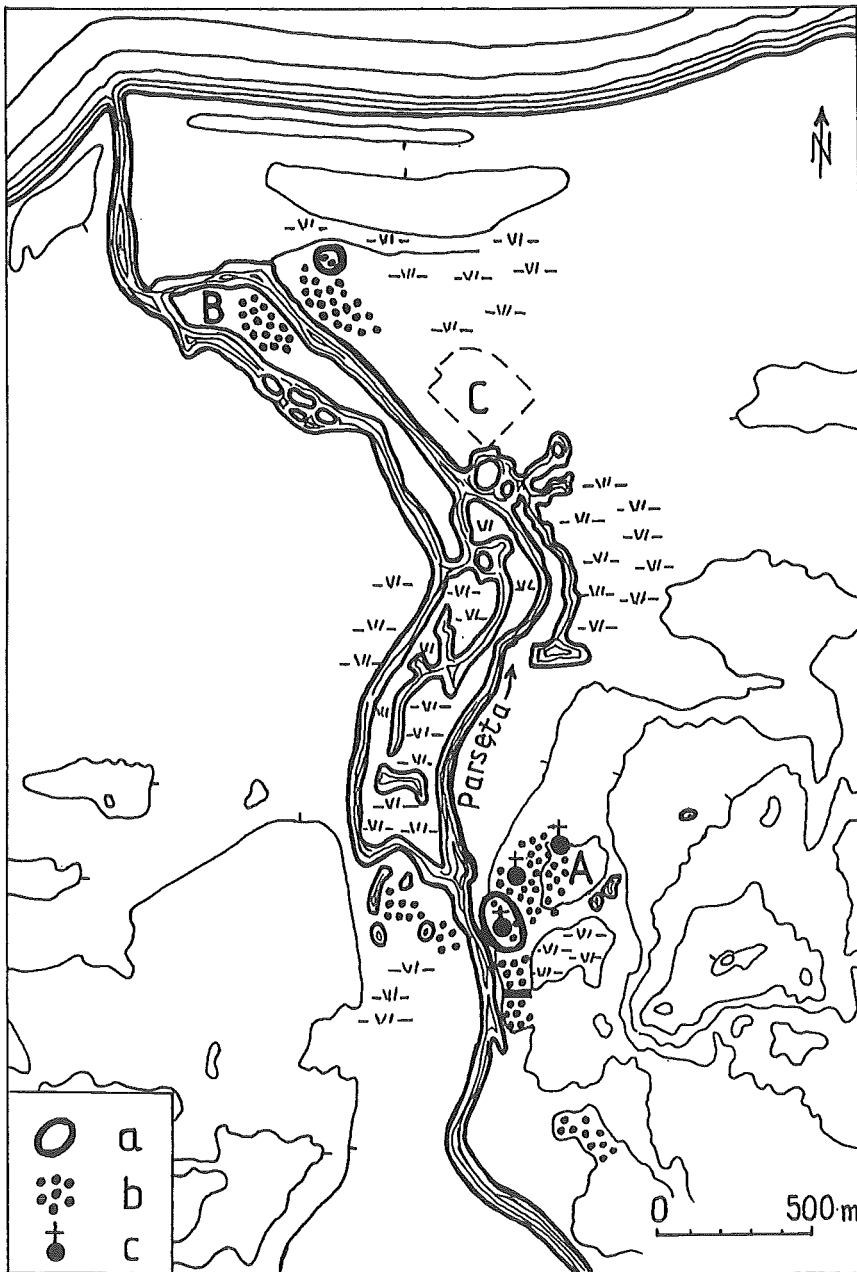


Fig. 1. - Kolobrzeg at the turn of the 12th and 13th centuries:
 A. the settlement complex in the area of today's Budzistowo;
 B. salines (Mons Salis);
 C. town founded in 1255 on the Lübeck law.
 a. stronghold;
 b. the settlement area;
 c. church.

and they both - and probably together - coined money at the local mint. Considering Pomeranian relations, Kolobrzeg was at the same time a significant centre of religious life. In time but prior to 1219, the Blessed Virgin Mary Church, built in the north, outside the stronghold by Otto of Bamberg, rose to the rank of a collegiate church. St. Peter's Chapel, inside the stronghold, was mentioned in documents, albeit after the inhabitants deserted it. St. John's Church, situated in the northern suburb and handed over to the Benedictines in Great Poland Mogilno in *c.* 1222, has been preserved to our times.

As may be seen, written records have presented Kolobrzeg as an important political, economic and religious centre. When relating the activities of Otto of Bamberg, Herbord wrote about the difficulties that

missionary had 'because her [*i.e.* that town's] inhabitants, almost without exception, sailed, concordant with merchants' customs, seeking trade on remote islands, while those who stayed behind maintained to be unable to accept anything new during the absence of their fellow townsmen' (II, 39). As a matter of fact, Kolobrzeg lacked the convenient communication links with distant rural supply areas such as Wolin, Uznam and Szczecin at the Oder or Gdansk at the Vistula estuaries did have. Yet, there existed a tract up the Parseta river which, after crossing the Pomeranian lake-land heights, led to Poznan, Gniezno and Kruszwica. This was the area from which Otto of Bamberg returned from his missionary itinerary in 1125.

Another motive appearing in written records defines the reason of Kolobrzeg's particular importance in the

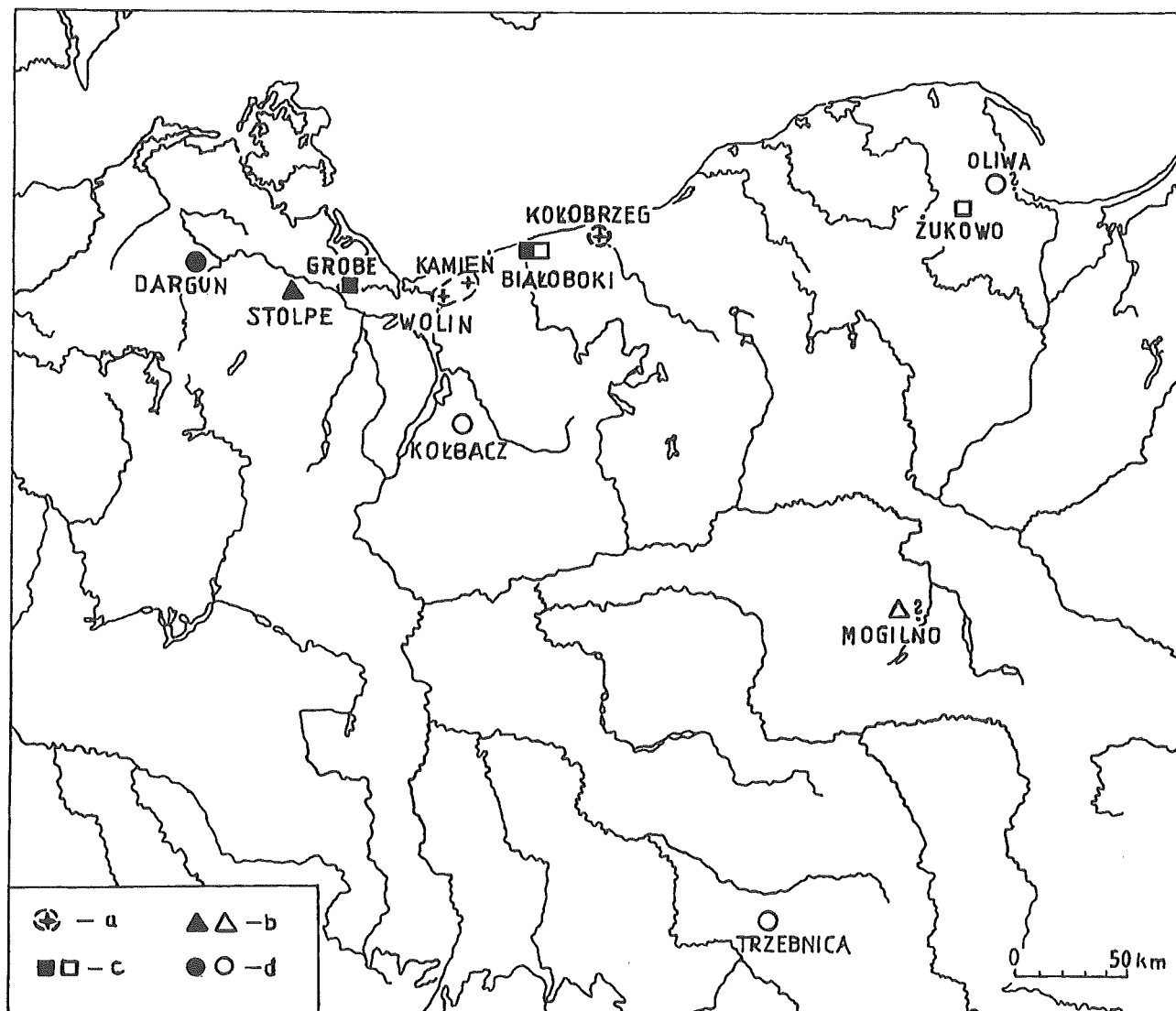


Fig. 2. - Church institutions owning salt-works in Kolobrzeg in the second half of the 12th century and the first half of the 13th century. a. the Pomeranian bishop and capitular congregations; b. Benedictines; c. Premonstratensians; d. Cistercians. Full marks: second half of the 12th century; empty marks: first half of the 13th century.

early Middle Ages. It concerned salt production. The name '*Salsa Cholbergiensis*' appearing in Thietmar's report may indicate that those local salt-works were also known in Germany in those times.

The question concerning the origin of the toponymy of Kolobrzeg is likewise connected with the relation written by the Merseburg bishop. The conjecture that it was distinguished as a place situated 'near the [probably sea-]shore' seems to be most likely (Polish: *kolo* - near, *brzeg* - shore) (Lecieje-wicz 1960, 337-338). Some linguistic experts assert that '*kolo*' rather meant '*kól*' (pile) or '*pal*' (pale); therefore, Kolobrzeg would have been a place where the sea or river shore was strengthened with a palisade (e.g. Zagórski 1964). The first opinion, however, was emphasized by Herbord, Otto of Bamberg's biographer, who wrote that the town '*super litus maris sita est*' (II, 39). Pile-driving or paling would

not have been something exceptional in harbour or defensive facilities.

Thietmar's report leads to a further conjecture, namely that the original name of that place was '*Sól*' or perhaps '*Solec kolo brzegu*' (Salt near the shore). Using the form '*Salsa Cholbergiensis*' twice, the chronicler seems to have attested that both terms (written with capital letters) referred to a toponymical unit while '*Cholbergiensis*' is undoubtedly an adjective. The fact that at Reinhern is named as the local superior priest '*presul Salsae Cholbergiensis*' (Thietmar VII, 72) indicates that '*Salsa*' was used as a noun and this word should be Slavonic interpreted as '*Sól*' or '*Solec*'. It should be remembered that the well known centre of salt production in Little Poland had originally (in the 12th century) been called '*Magnum Sal*' (in Polish: '*Wielka Sól*'); the later disappearance of the main substantive member with the

adjective form changing into 'Wieliczka' occurred only in the later Middle Ages.

There is no reason to doubt the significance of the local salt-works in the 12th century, when the town was described using an abbreviated name *Cholbreg* by Anonymus Gallus, *Colbrege*, *Colubrega*, *Colobrega* by Otto of Bamberg's biographers, or in the Germanized form *Cholberg* by scribes who penned later documents (PUB; Leciejewicz 1960, 348-356; Bollnow 1964, 151-163). In 1140, the income from the salines was given to the Pomeranian bishop. It may be that profits from the exploitation of salt springs contributed to the fact that at the time when the duchy was divided between the Wartislav's successors, there also occurred a division of the local castellany. The dukes, sometimes with mutual consent, granted the use of salt-works to monastic orders, at times even beyond the boundaries of their dominion: at Grobe near Usedom, Dargun near Demmin, Bialoboki near Trzebiatów, Stolpe on the Peene, Kolbacz in the Pырzyce region, Zukowo and Oliwa in Gdansk Pomerania; they did likewise in Silesian Trzebnica and probably in Great Poland Mogilno. We mention here only grants given until the moment the town became subject to the Lübeck Law in 1255. The very location of those monasteries clearly indicates the extent of the Kolobrzeg salt trading (fig. 2).

What do archaeological data tell us about this subject? The oldest traces of early medieval settlement in the Kolobrzeg area were discovered exactly at sites of former salt-works, in the northern part of the so-called *Mons Salis*, the present Salt Isle. In 1958, we found there an occupation layer containing hand-made ceramics of the Sukow-Dziedzice type which may be dated to the 6th-7th centuries (Leciejewicz 1962b, 140-141; Losinski, Olczak & Siuchninski 1971, 86-88). The location in the Parseta fen, about 1 kilometre from the spot where the river now enters the sea and a place most unsuitable for dwelling, suggests that it was the very salt springs which enticed settlers in those times.

Nonetheless, the settlement development proper occurred somewhat later. Excavations carried out in the years 1954-1958 indicate that in the second half of the 8th century or the beginning of the 9th century, a settlement grew up situated about 3 kilometres up the Parseta, at the foot of the flat morainic plateau (Leciejewicz 1960, 54-81; Losinski, Olczak & Siuchninski 1971, 26-48; Losinski 1972, 280-291). There, a narrowing of the valley facilitates the crossing of the river, making it relatively easy. In the mid-9th century, a stronghold was built on the right bank of the river, and it may be assumed that it occupied an area of about 2.5 acres. The stronghold was reinforced with a solid wood-earth embankment with a

framework construction. The inner part of the stronghold, revealed in the area investigated, contained rooms with walls made of wattle and sometimes even framed. Excavations have also revealed that the inhabitants engaged in fishing (mainly at sea) and also in other activities: iron-working, the treatment of antler and amber, etc. (Losinski & Tabaczynska 1959; Leciejewicz, Losinski & Tabaczynska 1961; Leciejewicz 1962a). At the turn of the 9th-10th centuries and located between one of the rooms and the embankment, a workshop existed producing horn combs and ferrules, amber beads and pendants. One of the combs found is comparable to those from Birka – suggesting that an itinerant craftsman worked in Kolobrzeg. A fragment of bronze scales, a Norwegian bracelet made of the same metal, and beads made of glass, bloodstone or mountain crystal confirm the existence of distant trade contacts. Therefore, the Kolobrzeg stronghold acquired characteristics of a trading and crafts centre or of an early-town type, well-known in that time in the Baltic zone (Leciejewicz 1985; Losinski 1995).

Excavations carried out by Władysław Losinski between 1959 and 1974 in the close vicinity of Kolobrzeg shed an interesting light on conditions affecting the emergence and development of the early town at the mouth of the Parseta (Losinski 1972; 1982). On the fringes of the stronghold and located defensively on high banks of river valleys or lake troughs, settlements developed intensively in this region in the 7th-8th centuries. In many ways, these centres resembled Feldberg-type strongholds in northern Polabia. At the decline of the 8th and beginning of the 9th centuries, inhabitants of some of those settlements joined in the trend to engage in distant trade which developed in those times in the Baltic zone. Settlement layers revealed fragments of Arabian dirhams, sometimes parts of merchants' equipment and imported articles. Traces of barter were accompanied by remains of production activities, above all iron-working, but also the treatment of bronze, antler and amber. In addition, it should be mentioned that two silver hoards were found in that region; they are the oldest ones known along the southern Baltic coast and include fragments of or complete Umayyad and early Abbasid dirhams hidden at the beginning of the 9th century.

The most interesting find, however, has been that of a barrow cemetery at Swielubie discovered near the stronghold at Bardy, located near the Parseta cross-over about 16 kilometres up its course (Losinski 1972, 240-273; 1995, 71-73). Among other graves, it numbered graves of Scandinavian origin. This would indicate that in the neighbourhood, a market with far-reaching connections functioned and this effectively underscores the exceptional position of the Bardy

stronghold within the contemporary tribal organization. This cemetery was used throughout the 9th century. The essential question is: what was the relation of ethnically different inhabitants of the Bardy-Swiełubie group to the builders of the Kolobrzeg stronghold at the mouth of the Parseta?

This question cannot as yet be answered while only the final outcome of the development is known. The strongholds referred to were deserted at the turn of the 9th-10th centuries (Losinski 1972). The spacious fortified settlements of local communities gave way to small strongholds, usually located in river valleys, and probably to be interpreted as the seats of local magnates. Only the strongholds in Kolobrzeg and Bialogard, situated a day's journey upwards the Parseta continued to develop successfully. We may assume, therefore, that the development of the early town in Kolobrzeg led to an economic and probably political integration in that region. Kolobrzeg became the main centre of the tribe living in the river basin of the lower and middle Parseta (Leciejewicz 1985). When, in the second half of the 10th century, the region between the mouths of the Oder and the Vistula was included in the realm of Mieszko I, the town became the place of the Piast's central administration in Pomerania. Archaeological proof of those changes is provided by the renovation of defence fortifications discovered during excavations. As we know, shortly afterwards, i.e. in the year 1000, a bishopric was likewise installed there.

Judging from the archaeological evidence, the further development of the town took its course without evident perturbations (Leciejewicz 1962b; 1983). In the second half of the 11th century, the site of the stronghold expanded considerably; inside, a number of metallurgical blacksmiths' workshops were installed, replacing former fortifications. Finds also attest to the existence of other crafts: bronze-working, the working of antler and amber; moreover, the evidence also points to fishing (mainly at sea) and to the development of trading contacts extending to Scandinavia, Germany and Ruthenia (Losinski & Tabaczynska 1957; Leciejewicz, Losinski & Tabaczynska 1961; Rulewicz 1995). In the 10th-11th centuries, the settlement spread beyond the embankment, and open outlying household aggregations appeared where production activities were continued. Written records indicate that in the 12th century inns and probably also a market were in existence. As has already been mentioned, at least two churches were also built in the suburb.

Therefore, archaeological work revealed certain characteristics of the earliest development of Kolobrzeg, illegible through or barely referred to in written records. Firstly, it shows that an early town grew

up within a developed settlement environment where agriculture and animal breeding constituted the basis of existence (Leciejewicz 1962b, 54-81; Losinski 1972). Kolobrzeg therefore had a rural supply area which on the one hand ensured the provision of the means necessary for life - above all food - and was on the other hand an absorptive market for the goods produced locally or imported. The many and complex links with the rural supply area are attested to by finds of 9th-11th century silver hoards, which are obviously concentrated in the close vicinity of the town (Kiersnowscy 1959; Leciejewicz 1960, 316-337). Some pertinent information relating to rural settlement in those times and revealed in 12th-13th century documents also supports this interpretation.

Secondly, as a result of the archaeological discoveries, we know that trade and handicraft production were the basic premise for economic development just as this was the case in other early town settlements in the Baltic region in those times. As regards Kolobrzeg fishing at sea of course took an important place among those activities (Rulewicz 1995). It is significant that remains of herring constituted about 90% of the ichthyological remains discovered there, both in the oldest layers dated to the 9th century and in the later ones up to the 12th/13th centuries. Some archaeological finds seem to indicate that at least in the 11th-12th centuries, herring was an important trade article exported inland to Great Poland and Silesia (Leciejewicz 1991).

One of the necessary measures facilitating the export of that popular fish was its preservation. Salting was the basic treatment. Here, we again confront the issue of the role of the exploitation of the salt sources in the earliest history of Kolobrzeg. Next to traces of settlement on Wyspa Solna (Salt Isle), the prevalence of herring among ichthyological vestiges seems to provide archaeological evidence of the importance of this economic sphere in the life of the town at the mouth of the Parseta.

The earliest development of Kolobrzeg is characterized by many features common in origin to those identified in other early town settlements in the Baltic zone during the early Middle Ages. In spite of its location on a site with considerably less favourable communication possibilities than the best known trading and handicraft settlements in that region, such as Birka, Hedeby or Wolin, it fulfilled an essential economic function as a production and trading place not only with the nearby and relatively well-developed rural supply area but also with more distant regions. Kolobrzeg owed its particular position, however, to local natural resources, to brine which yielded - after saline treatment - highly valued salt. This was certainly a decisive factor in the settlement acquiring a

central position in the lower Parseta region. We may add that also in the later Middle Ages, salt production continued to be one of the economic foundations of the town situated directly on salines founded in 1255, under the Lübeck Law.

Kolobrzeg may therefore be included in the category of medieval European towns, the origins and development of which were connected with the exploitation of salt, a mineral raw material sought after as an important nutrient, often as a product needed to preserve perishable food. In those times, Saxon Lüneburg and Halle/Saale on the German-Slavonic border in Central Europe also owed their development to salines. We have so far observed several convergences with regard to Wieliczka in Little Poland which, since the 11th century, acquired characteristics of an early town settlement, even though its development in this sphere was certainly limited by the central economic and political functions of nearby Cracow. Obtaining salt also formed the basis of the economic prosperity of some settlements in Halic Ruthenia (Udec, Kolomyja) and likewise in Transylvania.

We should also keep in mind the existence of production centres of this sought after raw material in the Eastern Alps, near Salzburg, the former Roman Iuvavum – its new early medieval name expressed symbolically the local occupation with salt trading. The example of Venice which, from obscure 6th century settlements of salt-makers and fishermen was transformed during the early Middle Ages into the 'Queen of the Seas' and acquired decisive power for the fate of a great part of the Mediterranean Sea, indicates demonstratively that this production sphere could – in appropriate socio-political conditions – become an essential premise of lasting economic progress.

Whatever the case, these few examples show how salt production contributed in various ways to the economic growth in certain regions and to the establishment of towns there. Nor is there any doubt that the subject of the function of salt-works in the development of early European towns deserves additional comparative studies.

Written sources

- Anonymus Gallus: *Galli Anonymi Cronicae et gesta ducum sive principum Polonorum*, ed. C. MALECZYŃSKI, Monumenta Poloniae historica, nova series (= MPH n.s.) II, Kraków, 1952.
- Ebo: *Ebonis Vita s. Ottonis episcopi Babenbergensis*, ed. J. WIKARJAK & K. LIMAN, MPH n.s. VII:2, Warszawa, 1969.
- Herbord: *Herbordi Dialogus de vita s. Ottonis epi-*

- scopi Babenbergensis*, ed. J. WIKARJAK & K. LIMAN, MPH n.s. VII:3, Warszawa, 1974.
- PUB: *Pommersches Urkundenbuch I*, hrsg. v. K. CONRAD, Köln, Wien, 1979.
- Thietmar: *Kronika Thietmara*, ed. M.Z. JEDLICKI, Biblioteka Tekstów Historycznych III, Poznań, 1953.
- Vita Prieflingensis: *S. Ottonis episcopi Babenbergensis Vita Prieflingensis*, ed. J. WIKARJAK & K. LIMAN, MPH n.s. VII:1, Warszawa, 1966.

Bibliography

- BOLLNOW H. 1964: *Studien zur Geschichte der pommerschen Burgen und Städte im 12. und 13. Jahrhundert*, Köln, Graz.
- Historia 1972: *Historia Pomorza I*, red. G. LABUDA, wyd. 2, Poznań.
- KIERSNOWSCY T. & R. 1959: *Wczesnosredniowieczne skarby srebrne z Pomorza. Materiały*, Polskie Badania Archeologiczne 4, Warszawa, Wrocław.
- LECIEJEWICZ L. 1960: Wczesnosredniowieczny Kolobrzeg, *Slavia Antiqua* VII, 307-392.
- LECIEJEWICZ L. 1962a: Investigations concerning early medieval Kolobrzeg in Pomerania, *Archaeologia Polona* V, 133-147.
- LECIEJEWICZ L. 1962b: *Początki nadmorskich miast na Pomorzu Zachodnim*, Wrocław, Warszawa, Kraków.
- LECIEJEWICZ L. 1983: *Zur Frage der Stadtentwicklung auf dem Gebiet des pommerschen Herzogtums im 12./13. Jahrhundert*, Lübecker Schriften zur Archäologie und Kulturgeschichte 7, 131-146.
- LECIEJEWICZ L. 1985: Die Stammesburgen als Ausgangspunkt der frühen Stadtentwicklung an der pommerschen Ostseeküste, in: *Society and Trade in the Baltic during the Viking Age*, Visby, 171-184.
- LECIEJEWICZ L. 1991: Zum frühmittelalterlichen Heringshandel im südlichen Ostseegebiet, *Zeitschrift für Archäologie* 25, 209-214.
- LECIEJEWICZ L., LOSINSKI W. & TABACZYŃSKA E. 1961: *Kolobrzeg we wczesnym sredniowieczu*, Wrocław, Warszawa, Kraków.
- LOSINSKI W. 1972: *Początki wczesnosredniowiecznego osadnictwa grodowego w dorzeczu dolnej Parszty (VII-X/XI w.)*, Wrocław, Warszawa, Kraków, Gdansk.
- LOSINSKI W. 1982: *Osadnictwo plemienne Pomorza (VI-X wiek)*, Wrocław, Warszawa, Kraków, Gdansk, Łódź.
- LOSINSKI W. 1995: Zur Genese der frühstädtischen Zentren bei den Ostseeslawen. Burg - Burgstadt - Stadt, in: *Zur Genese mittelalterlicher nicht-agrarischer Zentren in Ostmitteleuropa*, Berlin, 68-91.

- LOSINSKI W., OLCZAK J. & SIUCHNINSKI K. 1971: *Zróżdla archeologiczne do studiów nad wczesnośredniowiecznym osadnictwem grodowym na terenie województwa koszalińskiego IV*, Poznan.
- LOSINSKI W. & TABACZYNSKA E. 1959: *Z badan nad rzemioslem we wczesnośredniowiecznym Kolobrzegu*, Poznan.
- RULEWICZ M. 1995: *Rybolóstwo Gdanska na tle osrodków miejskich Pomorza od IX do XIII wieku, Gdańsk Wczesnośredniowieczny IX*, Wrocław, Warszawa, Kraków.
- ZAGÓRSKI Z. 1964: *Kolobrzeg 1. Słownik Starożytności Słowiańskich 2*, Wrocław, Warszawa, Kraków, 445.

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The extent and development of the Worcestershire medieval salt industry, and its impact on the regional economy

Summary

The salt industry of Droitwich in Worcestershire was once one of the principal industries in the English Midlands, and produced a commodity that served many essential purposes. Extensive remains of that industry have recently been uncovered in a series of excavations, and these have confirmed that it has had a long history being first established in the Iron Age. Salt continued to be produced here up to the early 20th century.

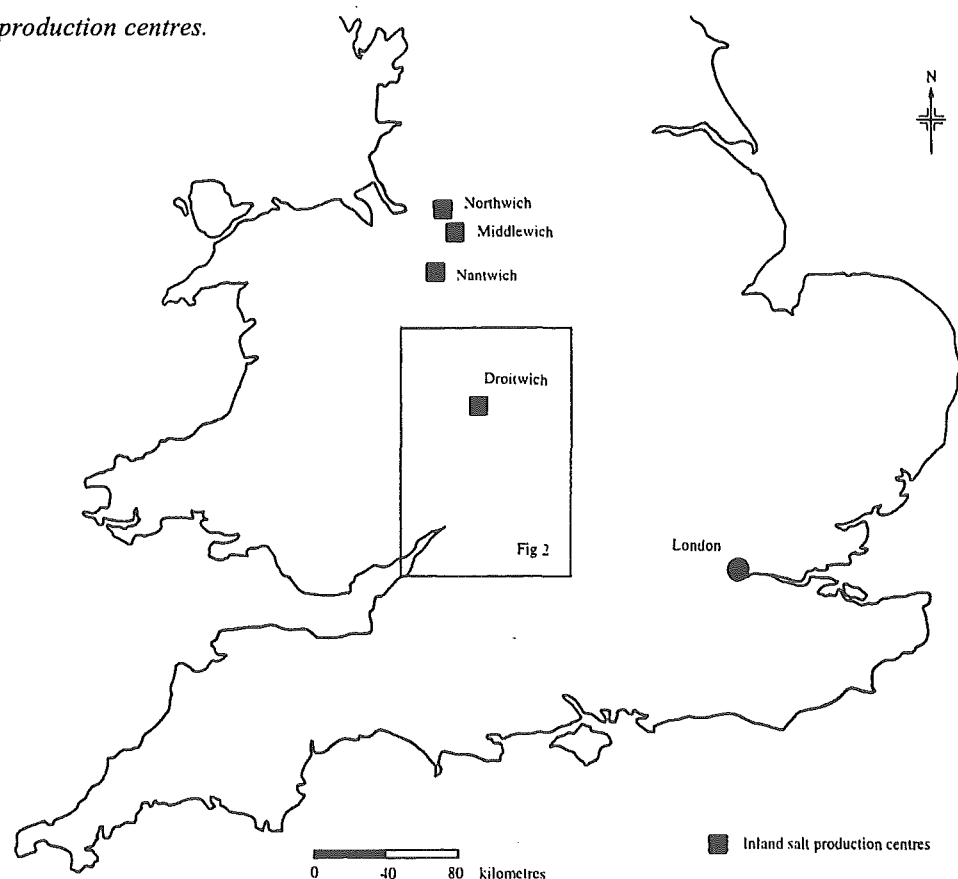
This industry was of major economic importance for north Worcestershire, and, indeed, had an impact on the economy of a wider region. It is possible to see the influence of this commodity industry, and to trace its wider economic effects, partly through docu-

mentary sources, and partly through archaeological evidence.

Introduction

Droitwich is located in the County of Worcestershire in the English Midlands (Fig. 1), and on the River Salwarpe which is a tributary of the River Severn. Up to the mid 1970s, little was known about early Droitwich, except for the presence of a substantial Roman villa and a Roman fort. Excavations in the 1970s and 1980s have revealed extensive remains of early Droitwich and disclosed much about the development of the salt making industry. In many cases the remains are in exceptionally good condition

Fig. 1. - Inland medieval salt production centres.



because of waterlogging, which helps the preservation process. This new archaeological evidence (Morris 1985; Woodiwiss 1991; Hurst 1992a) can be combined with a wealth of historical evidence surviving for the Droitwich salt making industry from the Saxon period onwards (eg Berry 1957; Finberg 1972).

Salt, being a basic commodity, was always in demand and until the 1920s Droitwich was an important source. Here, the industry has probably been in continuous production from the beginning of the Iron Age, providing an unusual example of industrial continuity. Droitwich, therefore, provides a rare opportunity to develop a detailed understanding of a major industry of the English Midlands over an extremely long period.

As well as greatly expanding our knowledge of the town's past, the archaeological work has shown the extent of Droitwich's involvement in the regional economy through the salt trade. Even in the prehistoric period Droitwich salt was being traded over a large area (Morris 1985). By the 10th-11th century this significance was reflected in the existence of a network of saltways extending from Droitwich into neighbouring counties (Hooke 1985).

This paper covers aspects of the medieval salt industry, a period during which the industry had considerable economic significance, as testified in documentary sources, and is based on the latter largely as made available through the research of Berry (1957) and Hooke (1981, 1985). The paper combines the published historical evidence with the results of archaeological excavation, and seeks to show that the Droitwich salt industry may form the basis for a useful study of some aspects of medieval trade. This is particularly the case because of its commodity basis and large scale, in addition to the unusual range and detail of the surviving evidence.

Background

Brine springs

The story of Droitwich brine began about 200 million years ago, when the area was being periodically flooded with seawater. In the prevailing hot climate, the seawater evaporated, leaving behind the salt. As this process was repeated, the salt became concentrated into thick deposits. In the course of time, rock salt was buried under the deep bed of clay (Mercian Mudstone) which lies beneath large parts of the Midlands today. As ground water permeated into the rock salt beds, salt was dissolved and a stream of underground brine created, which is present under

Droitwich. As a result of natural pressure, the brine was forced back to the surface through fissures in the clay, to emerge at the surface as brine springs (Poole & Williams 1981).

Since the brine appeared on the surface in springs, it was easily available, no doubt an important factor leading to the early development of salt making at Droitwich.

Composition of Droitwich brine

Droitwich brine is a particularly pure source of sodium chloride (commonly known as salt), as it contains few other 'salts' compared with brine from elsewhere, and so requires relatively little processing to make edible salt. Much of the brine is very concentrated, 4.5 litres (1 gallon) of brine producing about 1.32 kilograms (2.9lbs) of salt, making it very economical to use for salt making. This ratio of brine to salt is approximate as it varied according to several factors, and so many commentators measuring the salt content from the 16th century onwards (eg Nash 1781, 301) have generally produced slightly different results.

Salt making methods

Salt making started by extracting brine from the springs. This was made easier if the brine had already been collected in a well. However, in the earlier period it may simply have been collected from a hole over the springs.

Salt was produced by evaporating the brine. Natural evaporation would lead to salt being produced, but in the British climate this is unlikely to have been of much practical use for large-scale production. A typical method, usually referred to as the 'open pan' method, was to place the brine in a container and heat it in order to evaporate the water. Wet salt crystals deposited from the brine were then removed and placed in another container, which allowed the salt to drain, forming a solid block.

Early uses of salt

Many uses of salt in the past were the same as today. A primary use then, as now, was for flavouring food. Until the recent advent of refrigeration, however, salt was of crucial importance for food preservation. This was especially the case when most animals were slaughtered before the onset of winter and the meat salted down for keeping through to the next spring.

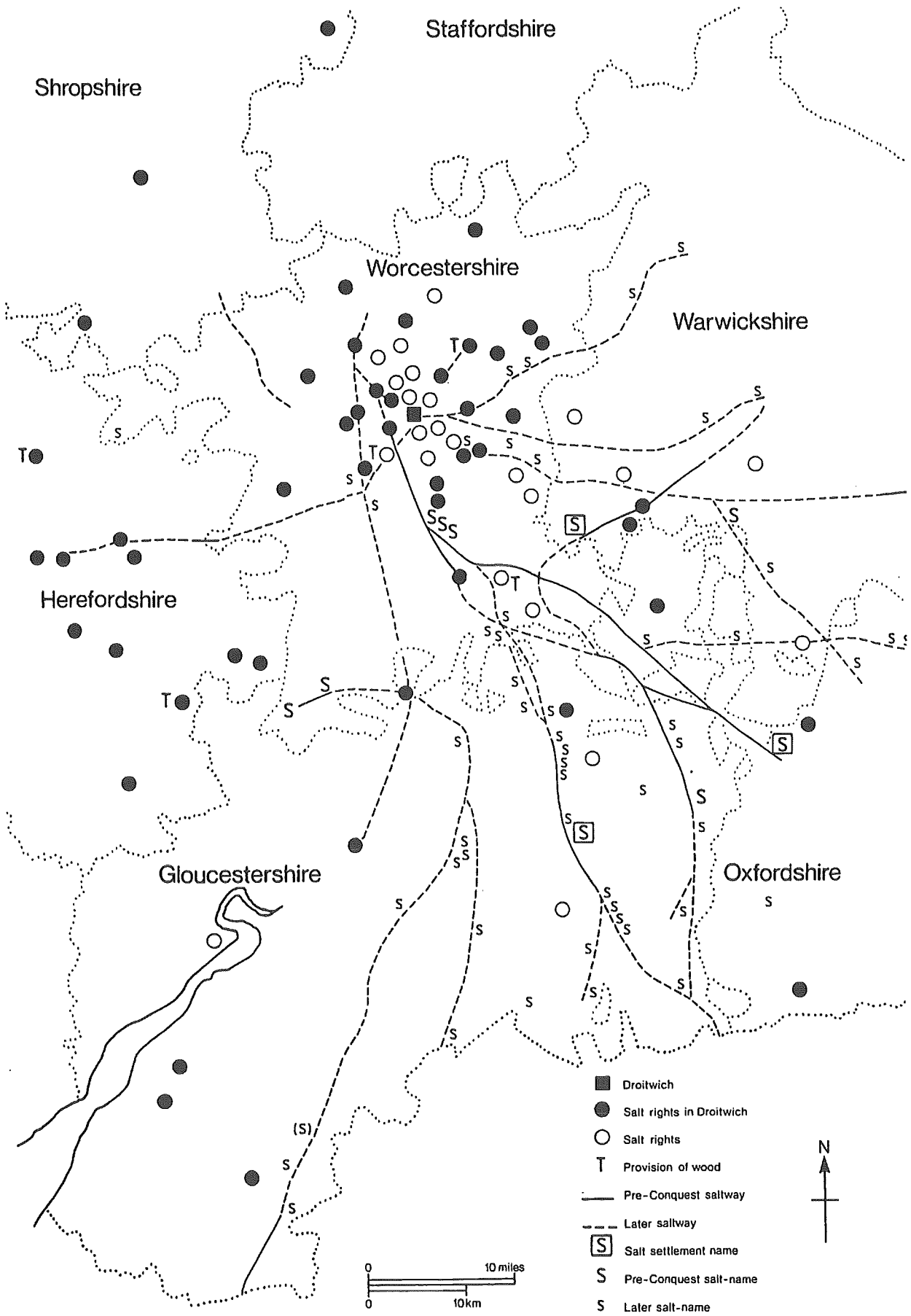


Fig. 2. - Saltways (from Hooke 1985, 125, fig 31).

Medieval salt production in Droitwich

Early medieval salt makers

Archaeological excavation has shown that in about the 5th century to early 7th century lead pans were used by the salt makers for heating the brine, and the size of the hearths indicated that salt was not just being manufactured for local consumption (Hurst in press). The discovery of pottery, much of which was not made locally, also confirmed a strong impression of trade and contact with other regions.

However, the Droitwich salt makers had problems in the 7th or 8th century, when the earlier salt making area was devastated by flooding. Flooding was so bad that a thick layer of silt and clay was spread across the valley floor where the salt production had been located. The cause of this disaster is unclear, but it may have been connected with the salt industry itself. The clearing of trees for fuel or the expansion of agriculture may have led to soil erosion, especially if this was accompanied by a wetter climate. The brine springs were, however, so important economically that they were brought back into production.

By the 8th century, Droitwich was known as *Saltwic* (Finberg 1972, 90), the *wic* element in this period meaning an important trading centre. Certainly trade in such large quantities of a valuable commodity as salt would have been important, as well as a source of considerable wealth.

The King of Mercia controlled the industry, but from an early date there were cases of salt rights being granted. Many of the more powerful institutions of the day were favoured in this way, including the early abbeys at Pershore and Worcester (Finberg 1972). By this time the brine springs were being celebrated by Nennius, who, writing in c 800, listed them as one of the wonders of Britain (Morris 1980).

Salt making was now on a very large scale and many places, in particular throughout Worcestershire, Herefordshire and Gloucestershire, acquired salt rights in the town. Trade over long distances was reflected in the pottery supply, with the bulk of the ceramic vessels used in Droitwich coming from the Cotswolds region, Stamford in Lincolnshire, Bedfordshire or Oxfordshire and, probably, Staffordshire (Hurst 1992b, 138-142). The saltways referred to in Saxon charters, and place-name evidence (Fig. 2), reveal a complicated network of routes radiating from the town (Houghton 1929-30; Hooke 1985, 125, fig. 31). The references to salt are so frequent that it must have been regarded as an exceptionally essential commodity and transported in considerable quantity. Such was the scale of salt production that

Droitwich was second only to London in the amount of revenue that it produced for the Crown (Palliser 1987, 66).

Domesday Wich

Domesday Book mentions that there were five brine wells in *Wich* (as Droitwich was then known) being operated in 1086 (Thorn & Thorn 1982). These were controlled by the King, and the ownership of salt rights and salt production levels are described in some detail. William the Conqueror held the largest share, approximately half the total brine used for salt production. This had been worth £76 before 1066, a rather large sum. The industry was already producing on a large scale, with over 1,000 tons of salt per year being manufactured (Berry 1957, 51), which would be enough salt to fully load several thousand pack-horses, a packhorse load being in the region of 90kg (Clutton-Brock 1992, 158). As well as large amounts of salt leaving the town, great quantities of wood fuel were brought in to supply the brine boiling hearths. In some cases, wood supply formed part of the salt production arrangement with individual places. For instance, 300 cartloads of wood were sent yearly from Bromsgrove to Droitwich before 1066, in exchange for 300 loads of salt. This scale of provision was probably based on a managed area of woodland, where coppicing was practised (Gelling 1992, 170).

Medieval period

In 1215 King John granted the town new privileges, including the right to its own council, and handed over his Droitwich salt interests in return for an annual payment of £100 (Berry 1957, 39). As the county towns of Worcester and Hereford were worth £30 and £40 respectively to the King (Berry 1957, 40), Droitwich was obviously of great economic importance.

Subsequently, salt rights, representing the amount of brine that could be extracted each year, were shared amongst the townspeople. Town officials collected salt dues in order to raise the £100 per year owed to the King, the dues being calculated according to the amount of brine used by each person. Throughout the medieval period salt rights could only be passed on by inheritance, and were jealously guarded. Salt production and marketing were highly regulated as a town monopoly and, by setting prices, the salt makers maintained their profits.

The Upwich brine well

Three areas of Droitwich (Upwich, Middlewich and Netherwich) were all involved in the medieval salt industry, Upwich being by far the most important. In each of these areas there were brine wells, some of which were probably old by the 13th century. By 1264 the Upwich brine well, the main source of brine in Droitwich, had deteriorated, and the County Sheriff was called to investigate. He reported to King Henry III that the brine well would have to be rebuilt, or the town would default on its annual payment of £100 (Willis Bund 1894, 8).

Archaeological excavations in 1983-4 revealed the Upwich brine well, and clearly showed the scale of the rebuilding which had taken place. Some of the salt making houses (known as *seals*) had first been dismantled, and a deep hole then dug out, within which the new well was built. Working directly over the brine springs the medieval construction workers must have found conditions very difficult.

The new well was a timber structure 3.05 metres (10 feet) square and 9.14 metres (30 feet) deep, made from large beams overlapped at the corners (Hurst in press). Gaps were packed with moss. A ladder was attached to the inside for inspection and cleaning. Near the top, a platform projected over the interior, but the well does not appear to have had a cover.

In the 14th century the town's name became *Dryghtwych* (later spelt Droitwich). Two suggestions have been made about the possible meaning of the *dryght* element, literally either 'dirty' or 'royal' (Mawer & Stenton 1927, 286). By around 1400 annual salt production had been raised to at least 1500 tons (Berry 1957). A further increase was made possible in the 15th century when a pump was built at the Upwich brine well (Hurst in press). This replaced the bucket method of brine extraction. Elm trunks were hollowed out for use as pipes in the pump system. Town accounts record maintenance of the pump in some detail, and many parts seem to have needed frequent renewal.

The local roads must have been full of carts and packhorses carrying fuel and salt to and fro. A visitor to the town in the 1530s reckoned that 6,000 cartloads of wood were being consumed by the brine boiling hearths each year. The result was terrible pollution. A local cleric complained to the Bishop of Worcester about this, asking for a transfer to a cleaner place (Haines 1965, 210).

Economic importance of Droitwich

It is clear that the Droitwich salt industry will have played a major part in the economy of those

places that are known to have had connections with it. The transport of salt is also recalled in the many references in place-names and other topographical names, and so even the movement of salt was endowed with some special significance.

Woodland and supply of fuel

In some cases the salt consumers were also suppliers of fuel for the industry, so that a particularly close association developed. The provision of wood for fuel was an important consideration and several places with woodland contributed to Droitwich in exchange for salt. For instance, there are indications that, before 1066, Bromsgrove acted as a centre for the provision of wood, as it was linked to 18 bere-wicks (Hooke 1981, 129). Other places supplying wood were sometimes a considerable distance away from Droitwich such as Leominster in Herefordshire, though here by the 11th century the direct supply of wood had been changed to sending money to buy wood nearer to the centre of production. The frequency that places with salt rights were associated with woodland shows that, from at least the early medieval period, there was a deliberate policy to sustain the industry by using woodland resources on a well organised basis. Though much of the fuel would have been available more locally, it is clear that even at this early period, other, more distant, woods were also expected to contribute.

The demand for firewood must have expanded throughout the medieval period as salt production tended to increase. The procurement of firewood on the open market was a matter of constant concern to the salt maker. Even though medieval roads were poor, records indicate that the wood could be brought from some distance away. For instance in 1294 a cartload of brushwood bound for Droitwich was stolen at Romsley, 19 kilometres (11.8 miles) north of the town (West 1962, 35). Coal was available in Droitwich from the 14th century (C Dyer pers comm), but wood continued to be the main fuel throughout the medieval period.

The influence of the salt industry on the local landscape must have been considerable as a result of supplying wood for fuel. It is likely that a great deal of wood fuel was being used each year, which would have been equivalent to a large area of managed woodland being available to the industry, based on a typical medieval cycle for the cutting of coppice wood (Rackham 1976, 90). It is likely that the provision of such a large quantity of fuel combined with a gradually increasing output of salt and, therefore, demand for more fuel, will have favoured those salt producers who also had easy access to their own fuel supply.

Much of north and central Worcestershire was under forest jurisdiction until the 14th century (West 1964), which was some indication of the wide availability of woodland in this region. The steady demand for wood as fuel for the Droitwich salt industry may have been an important factor in the maintenance of some of these woodlands, and so may have prevented their clearance for other uses, and in particular for arable farming. The value of woodland was nearly as high as for meadow, and was more than for arable (Rackham 1986, 89). Part of the impact of the Droitwich salt industry may, therefore, have been to increase the value of land in the surrounding woodland parishes. Contrary, therefore, to causing the destruction of woodland, the industry may have afforded some level of protection, where woodland was being managed for the provision of fuel.

Trade in salt

In the 14th century, the annual salt fairs took place in late October and late December (VCH III, 78). The salt fairs were where wholesalers and retailers could buy large supplies of salt. Both fairs were arranged at the times when there would have been plenty of fresh salt available for sale as the production period was from June to December (Berry 1957, 48). There was also a regular weekly market (Berry 1957). A customary payment called *consuetudo* also seems to list others trading in Droitwich salt, including at places in Warwickshire, Northamptonshire, Somerset and Berkshire (Berry 1957, 56).

The system of saltways clearly indicates the directions and distances that the salt was being carried. Much of this salt was presumably destined for the manors that had salt rights, but many of these routes pass some distance from places with salt rights (Fig. 2), and seem, rather, to be the routes along which quantities of salt were generally carried for commercial purposes. Gelling (1992, 170) has suggested that surplus salt could have been sold along the road, while being carried to the manors with salt rights. The pattern of saltways shows a distinct bias to the south and east, with the longest saltway stretching over 100km from Droitwich to the south. The lack of saltways to the north may be the result of competition from Cheshire salt.

The pattern of Droitwich saltways suggests a distinct trade zone in salt, with the carriage of salt over long distances in certain directions being a characteristic. This pattern of salt movement bears some resemblance to that seen in the later prehistoric period (Morris 1985), suggesting that it may well have been established before the medieval period. It is

possible to suggest that trade in such an essential commodity as salt may preserve very ancient patterns of trade, and Woodiwiss (1992, 5, and fig. 4) presents a predictive model that indicates that a south easterly and easterly bias might indeed be expected in the distribution of Droitwich salt.

Archaeological evidence also allows the distribution of other goods to be examined. Comparison between the pattern of saltways and trade in pottery for the late Saxon period certainly indicates that the geographical bias in the saltways is likewise reflected in the supply of pottery to Droitwich. Correlation is hampered because the provenance of much of the pottery is not precisely known, though the fabric types are such that their origins can be roughly indicated on geological grounds. Cotswolds ware, St Neots-type ware, and Stamford ware all fit well within a trading zone for Droitwich which has a southern and easterly bias (Hurst 1992b; Fig. 3).

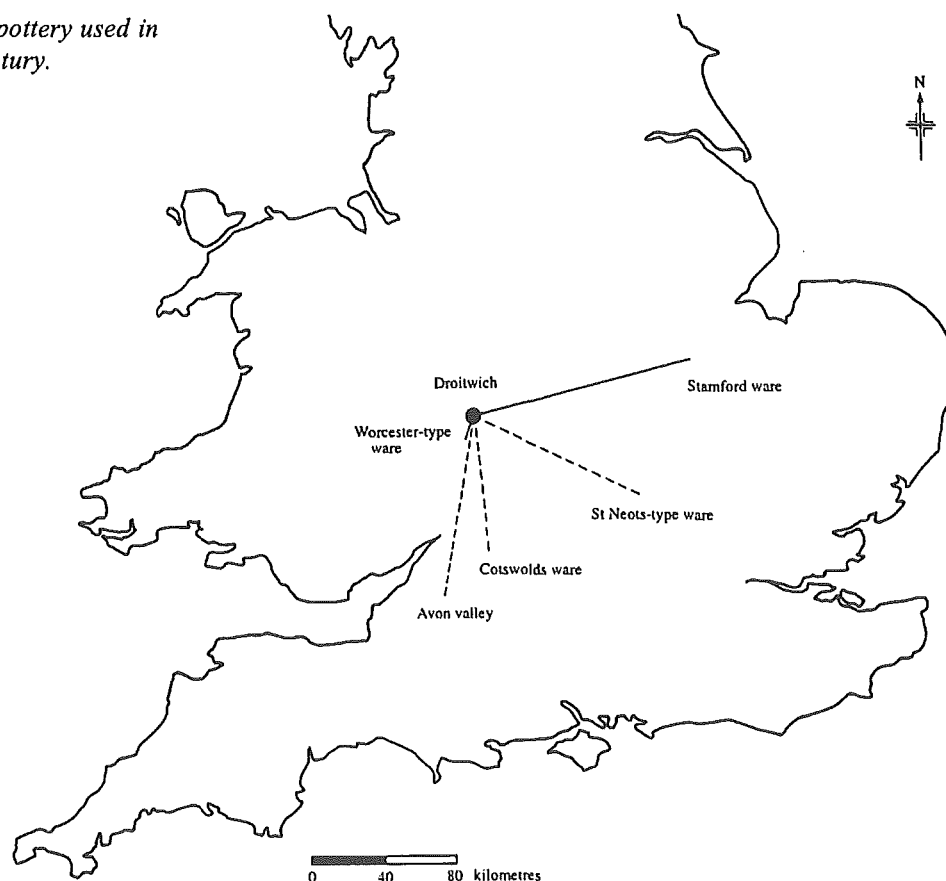
Having established that other goods reflect the bias in the extent and directions of the salt trade in the early medieval period, it may be asked how far the salt trade may be instrumental in shaping this pattern of trade. As a specialised centre of industrial production, Droitwich was in a unique position in the Midlands in the early medieval period. The scale of production, and the commodity status of the product both combined to ensure that Droitwich had considerable economic impact in this period, which is reflected in the profit associated with the industry. The local effect is less easy to gauge, as much of the wealth created from the salt was not retained in Worcestershire. However, the result of the movement of so much salt may have ensured that trade in other goods reflected this at the practical level that carriers returning from delivery/selling salt bought goods on the return trip. It seems likely, therefore, that the salt industry had some effect on the general movement of other goods over a wide region.

Conclusion

The specialised character of the industry in Droitwich meant that the ancillary processes such as the distribution of salt and the acquisition of fuel, also had to be on a large scale. The monopolistic character and economic importance of this medieval industry also gave rise to detailed records being kept, which now provide an unusual insight into its operation.

Droitwich has also been fortunate in its archaeological legacy, as this includes the survival of the main medieval brine well (now reburied following its excavation and recording), as well as other struc-

Fig. 3. - Principal sources of pottery used in Droitwich in the 10th-12th century.



tures, and a wealth of artefacts of the same period, all illustrating the life of the Droitwich salt maker.

The documentary and archaeological data now available makes it possible to begin to examine the impact of the salt industry on the surrounding countryside in north Worcestershire, especially in terms of fuel supply. The latest archaeological analysis of pottery from medieval deposits in the town has also revealed a good correlation between pottery supply and the salt trade, suggesting that both these are indicators of a trading zone in the late Saxon period. The origins of such a zone are presently unexplained, though the similarity of salt distribution in the later prehistoric period, suggests that at least the pattern of salt distribution, as evidenced in the medieval period, may be of considerable antiquity.

It is realised that aspects of this paper are likely to be contentious, especially as, in the nature of the types of evidence being used, there are many *lacunae*, and difficulties of interpretation. However, it is hoped that the combination of documentary and archaeological evidence that serves to illumine the development of medieval Droitwich, and in particular its salt production, can also be applied to understanding the impact that this specialised industrial town had on the wider landscape and economy.

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Bibliography

- BERRY E.K. 1957: The borough of Droitwich and its salt industry, 1215-1700, *University of Birmingham Historical Journal*, 6, 39-61.
- CLUTTON-BROCK J. 1992: *Horse power: a history of the horse and the donkey in human societies*.
- FINBERG H.P.R. 1972: *The early charters of the west Midlands*.
- GELLING M. 1992: *The west Midlands in the early Middle Ages*, Leicester.
- HAINES R.M. 1965: *The administration of the Diocese of Worcester in the first half of the fourteenth century*.
- HOOKE D. 1981: The Droitwich salt industry: an examination of the west Midlands charter evidence, in: D. BROWN, J. CAMPBELL & S.C. HAWKES (eds), *Anglo-Saxon studies in archaeology and history* 2, British Archaeological Reports 92, 123-169.

- HOOKE D. 1985: *The Anglo-Saxon landscape: the kingdom of the Hwicce*.
- HOUGHTON F.T.S. 1929-30: Salt-ways, *Birmingham Archaeological Society Transactions Proceedings* 54, 1-17.
- HURST J.D., 1992a: *Savouring the past: the Droitwich salt industry*, Hereford and Worcester County Council.
- HURST J.D. 1992b: Friar Street: pottery, in: S. WOODIWISS (ed), *Iron Age and Roman salt production and the medieval town of Droitwich*, Council for British Archaeology Research Report 81, 132-154.
- HURST J.D. in press: *A multi-period salt production site at Droitwich: excavations at Upwich*, Council for British Archaeology Research Report.
- MAWER A. & Stenton F.M. 1927: *The place-names of Worcestershire*.
- MORRIS E.L. 1985: Salt and ceramic exchange in western Britain during the first millennium BC, *Bulletin of the Board of Celtic Studies* 32, 336-79.
- MORRIS J. (ed) 1980: *Nennius, British history and Welsh annals*.
- NASH T.R. 1781: *Collections for the history of Worcestershire*.
- PALLISER D. 1987: The medieval period, in: J SCHOFFIELD & R LEECH (eds), *Urban archaeology in Britain*, Council for British Archaeology Research Report 61.
- POOLE E.G. & WILLIAMS B.J. 1981: *The Keuper saliferous beds of the Droitwich area*, Institute of Geology Scientific Report 81/2.
- RACKHAM O. 1976: *Trees and woodland in the British Landscape*.
- RACKHAM O. 1986: *The history of the countryside*.
- THORN F. & THORN C. (eds) 1982: *Domesday Book: Worcestershire*, 16.
- VCH III 1913: *The Victoria History of the Counties of England. A history of Worcestershire*, 3.
- WEST J. 1962: *Village records*.
- WEST J. 1964: The forest offenders of medieval Worcestershire, *Folk Life* 2, 80-115.
- WILLIS BUND J.W. (ed), 1894 *The inquisitiones post mortem for the County of Worcester. From their commencement in 1242 to the end of the 13th century*.
- WOODIWISS S.G. (ed) 1992: *Iron Age and Roman salt production and the medieval town of Droitwich*, Council for British Archaeology Research Report 81.

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Means of Payment and the Use of Coins in the Viking-Age Settlement of Birka in Sweden. Preliminary Results

Barter, exchange and means of payment in the Viking Age

When Viking Age trading places are excavated, several types of objects are retrieved, which might be used to interpret how trade and exchange of goods functioned in a society not yet dominated by a modern market economy. The Scandinavian Viking Age world seems to have consisted of a society where different and contrasting economies and systems of exchange (gift-exchange – plunder, primitive economy – proto-market economy) existed side by side. In this society, the exchange of goods could be carried out in different ways; through barter, credit or by means of payment. In contrast to modern society, means of payment were not standardised and completely based on coinage. Finds from Birka show that fragmented silver objects, Islamic coins, and pieces of bronze objects might have been used as means of payment as well as beads of glass and rock-crystal. From historical sources we also know that cloth and furs were used by the Vikings as means of payment (Sawyer 1985, 162; Jansson 1983, 232).

There are many questions which can be raised in order to come closer to the character of Viking Age trade and exchange. In the following paragraphs I will focus on how the material culture, through weights and coins, minted silver, as well as other silver objects, *i.e.* unminted silver, can be used to comment on different types of economic transactions

Two scholars with different opinions about whether barter, credit or the exchange of goods as means of payment were representative for the Viking Age, are Peter Sawyer and Heiko Steuer. According to Steuer barter might have been used during the Viking Age, but it was not the rule. Instead, the exchange of goods was based on goods for weighed silver, in the form of fragmented silver objects or coins of first Islamic and then later of English or German origin. Especially after 880 when the import of dirhams started to increase, silver can be considered to be a standard of value as well as an article of exchange that was used everywhere. One of Steuer's main points is also

that two different economic zones developed in Europe during the Viking Age: a western one where exchange and means of payment were based on coins (*Münzgeldwirtschaft*) and an eastern one, with means of payment in the form of weighed silver (*Gewichtsgeldwirtschaft*) (Steuer 1987a, 122; Steuer 1987b, 490).

Peter Sawyer, on the other hand, is of the opinion that trade even in a place like Hedeby, the most important trading place in the Baltic area, must have depended mainly on barter or credit. According to Sawyer, the amount of coins found during the excavations in Hedeby and at other places in Scandinavia, is so small that coins can not have been the main medium of exchange during the 9th century. Sawyer too points out that large quantities of silver reached Scandinavia during the 10th and 11th century and that the inflow of silver seems to have stimulated the economy. This is shown by the changing character of the hoards where the proportion of the coins and of small fragments of unminted silver increases. Sawyer maintains that silver, in the form of both minted and unminted silver, was now more commonly used in local trade, but that much of the local trade in Scandinavia still was done by barter (Sawyer 1990, 285-286).

The question of whether barter and credit, or exchange based on means of payment, predominated during the Viking Age is of course almost philosophical. A specific proportion between different ways of exchange can hardly be established since it is impossible to say whether the artefacts found on archaeological sites have been used for barter and credit or not. The analysis must therefore be restricted to the existence and changing amount of objects, such as minted and unminted silver, which can be categorised as means of payment. Furthermore I consider it to be problematic to comment on the economic situation in general for such a vast and differentiated area as Scandinavia. Recent studies have shown that Scandinavia and the Baltic area can be divided into several regions each of which had a different economic character and chronology (Hårdh 1996, 166).

I will therefore focus on the artefacts from one just one place, Birka. The archaeological material that will be used comes from the recent excavations in the Black Earth which took place in Birka from 1990 to 1995.

Birka: a trading place in the Baltic region

Birka is situated on the island of Björkö, an island with a central position in lake Mälaren, Sweden. Foreign ships could reach the trading place in Mälaren through a long strait from the Baltic. From Björkö the waterway could be followed either north to the old central region of Uppland, or west to the inner regions of the Mälaren valley.

Hedeby and Birka, and maybe also Wolin are considered to have been the main trading places around the Baltic during the Viking Age. Hedeby probably was the leading trading place. The occupied area in Hedeby is 30 hectares and it has been estimated that there are between 3000 and 7000 graves around the trading place (Sawyer 1993, 147; Ambrosiani & Clarke 1993, 138). The area of the Black Earth of Birka, *i.e.* the stratified deposits from the occupation, covers about 7 hectares and the number of graves have been estimated to *c.* 3000 (Ambrosiani 1992, 11). Hedeby as well as Birka can be dated back to the 8th century.

Even today there are visible remains of the trading place of Birka. The hillfort and its surrounding rampart is a landmark recognizable from afar. The surviving parts of the town rampart mark the extent of the Black Earth. Several terraces of stone indicate foundations for jetties (Ambrosiani & Erikson 1991, 16). The grave mounds are spread out over the landscape forming cemeteries. During the summer when the water of Mälaren sinks to low levels, wooden piles can be seen in the water immediately outside the former harbour. The piles were once a part of a defensive system which blocked the entrance to the harbour, protecting it against invaders. And finally there is one more monument which should be mentioned in connection with Birka. On Adelsö, the island next to Björkö, archaeological remains indicate that a royal manor was established on the island in the middle of the 8th century. The manor was situated on a plateau overlooking the strait leading to Björkö and Birka.

Birka has been of interest to historians and scientific researchers since the 17th century. At the end of the 19th century *c.* 1000 graves were excavated and trenches were dug through the Black Earth. In 1990-1995 new excavations were undertaken in the Black Earth. About 300 to 350 m² of the central part of the occupation area was excavated. During the excavation, the layers were dug stratigraphically

using single context planning. Each deposit was machine- and water-sieved, a process which recovered all finds of 2 mm and over. More than 70,000 find records were registered from the site, even though parts of the trench had already been submitted to excavation in the 1870s.

The excavation showed that Birka existed as trading place as early as the 8th century. During the first 100 years the main part of the excavated area was used for activities connected with metalworking and bronze-casting. In the middle of the 9th century the central plot was left open for a while. The excavated houses which at that time were located on adjacent plots, do not show the same concentration of artefacts connected with handicrafts as seen in the case of the bronze casting.

Minted and unminted silver from the 1990-1995 excavation in Birka

A large number of the objects retrieved from the site bear witness to the different handicrafts that were practised on the excavated plot, as well as on adjacent plots. Bronze-casting dominated the production for a long time. Semi-manufactured combs and rods of glass indicate a minor production of beads and combs at different times. Other types of objects bear witness to the trade and exchange that took place on the site. Minted and unminted silver, different types of weights and fragments of balances indicate economic transactions. In the following I will use the amount of weights, minted silver and unminted silver as well as the weight of the silver objects, to analyse how transactions were carried out in Birka.

From the excavated area of 1990-1995, 66 objects of unminted silver were retrieved. The objects were mainly fragmented and weighed from 0.05 g to 17.33 g. Much of the material found at a low level in the trench, was damaged by corrosion, and the objects from these earliest phases may have lost a great deal of weight during the conservation process. The silver objects found consisted of 30 objects and fragments of jewellery, 17 pieces of undefined scrap, 12 semi-manufactured pieces (rods, wire), and 7 pieces of ingots. The total weight of these objects amounted to 136,61 g.

The minted objects have been analyzed by Gert Rispling of the Numismatic Department of the Archaeological Institute at the Stockholm University. The material consists of 106 prehistoric coins or fragments of coins or coin-like objects. Of these, 89 are made of silver and 18 of copper. Seven of the copper coins have been silver- or gold-plated. Ninety coins were of Islamic origin, 5 were Byzantine, 1

Nordic, 1 Roman and 9 were blanks. Two hoards with coins were retrieved. The first hoard consisted of 5 Islamic coins, the second of 19 Islamic coins and several other objects related to economic transactions. The stratigraphic position of the smaller hoard is uncertain. The larger hoard is placed in sequence B8, *i.e.* the first half of the 10th century.

Fourteen coins belonging to the two hoards are unfragmented. Of the remaining material only 11 coins are unfragmented. Most coins are highly fragmented and pieces of 1/10 of a coin or even 1/20 are not uncommon. The total weight of the minted silver and silver-plated copper amounts to 84.79 g.

The proportion between complete and fragmented objects in hoards as well as the proportion between minted and unminted silver has been used in discussions about the economic situation and intensity of the trade in different regions in the Viking Age and the early medieval period (see Lundström 1973:9 and the cited literature as well as Hårdh 1996). Most of the objects found at Birka are fragmented. Of course it will be of interest to analyse different degrees of fragmentation, but the most striking change in the Birka material seems to be the proportion of minted and unminted silver. Therefore I have chosen to start with this aspect.

The proportion of minted and unminted silver during different phases of the site

The stratigraphy from the site excavated in Birka 1990-1995 has been divided into 8 phases. Furthermore, the objects found in the plough soil have also been retrieved and these finds from the latest stratigraphic unit – S1 – can be considered as constituting a final phase.

Since the post-excavation work is far from finished the grouping as well as the dating of the phases must be regarded as preliminary. The first two sequences B1-B2 seem to contain material which represents the 8th century. B3, B4, B5 belong to the first half of the 9th century. B6 seems to be the only sequence from the second half of the 9th century. B7-B8 represent the first half of the 10th century and the material from the plough soil, S1, seems to represent the last 20 years of the existence of Birka, *i.e.* c. 950-970.

The table below presents the amount of minted and unminted silver objects for each sequence. The earliest sequence is put at the bottom of the table. The hoard, consisting of 18 dirhams and 1 blank as well as of other objects, is placed separately since this find might represent an act or phenomenon different from that represented by of minted and unminted silver

lost unintentionally pieces and deposited in the occupation layers.

phases	minted silver or silver-, plated coins number	unminted silver, number
S1	23	10
B8	3	3
the hoard	19	-
B7	7	5
B6	-	1
B5	-	2
B4	1	5
B3	-	1
B2	1	5
B1	-	6

As can be seen from the table it has not yet been possible to place all retrieved silver objects in a specific phase. This is due either to the fact that some objects had lost their original stratigraphic context before they were recovered (for example in the 19th-century trench) or to the fact that the post-excavation-work with the stratigraphy is not altogether completed at the time when the present paper was drafted.

The extent of the stratified deposits varied between the phases. Therefore it is hard to compare the amount of fragments and objects from one sequence to another. The focus will instead be set on the calculated percentage between the weight of minted and unminted silver for the different time periods.

phases	minted silver/plated silver, weight	unminted silver, weight
S1	13.33 g	2.39 g
B8	1.75 g	18.61 g
the hoard	29.47 g	-
B7	5.08 g	3.36 g
B6	-	0.31 g
B5	-	3.23 g
B4	0.08 g	5.04 g
B3	-	5.91 g
B2	2.48 g	11.64 g
B1	-	13.61 g

The material is very small and a single object might sometimes change the result considerably. Therefore I shall restrict myself to comment on major changes.

To allow us later on to compare the material from Birka to that from other regions, the time-span will be divided into the periods 790-849, 850-899, 900-

949, 950-970. The periods and the Birka-phases might not correspond exactly to one another, but they may still give an idea about a general development. B2-B5 correspond to the first period 790-849.

time span	percentage minted silver/silver-plated coins	percentage unminted silver
950-970	85 %	15 %
900-949	24 %	76 %
850-899	0 %	100 %
790-849	9 %	91 %

The three tables show that unminted and minted silver have circulated in Birka from the very beginning. The degree of unminted silver is as high as 91-100 % of all retrieved silver objects belonging in the 9th century. Different studies have shown that silver objects from the 10th and 11th centuries were produced out of Islamic coins (Arrhenius *et al.* 1973; Hårdh 1976, 110-119). The dirham from phase B2 indicates the possibility of a small import of Islamic coins as early as in the 8th century. If this was the case, most of the imported coins seem to have been used for the production of different objects such as rods, ingots, wire and jewellery. The demand for these objects must have been great from the beginning. It is also of interest to note that there has been a need for silver as means of payment from very early on in Birka, even if the circumstances of the finds show a high correspondence between silver objects and layers related to metalworking and bronze-casting.

During the first half of the 10th century the unminted silver objects were of the same type as during previous sequences. Instead a change in the relation between minted and unminted silver appears and the predomination of unminted silver is not as strong as before.

The greatest change in the proportion between minted and unminted silver occurred during the last part of the existence of Birka. At this time 85 % of the silver is minted. The total weight of the minted silver is relatively high considering that only a small part of the plough soil was sieved and that the plough soil just represents about 20 years. So what are the reasons behind the change in the proportion of minted and unminted silver?

The inflow of dirhams

The silver hoards found in Sweden and the Baltic region give a general idea about the arrival of Islamic coins during different periods. The hoards are gene-

rally dated by the most recent coin, and thus a *terminus post quem* for the time of hoarding is achieved. According to T.S. Noonan, there is a continual increase in the number of hoarded coins in mainland Sweden from the 780s to the 860s. The number of hoarded coins during the 860s to the 890s is among the highest for the period from the late 8th to the early 11th century. During the first decades of the 10th century, the numbers appear to lie on the same level as during the first half of the 9th century. A great increase occurs again during the 950s-970s (Noonan 1994, 223.).

Time span	number of hoarded dirhams in the Baltic area	number of hoarded dirhams in mainland Sweden
950-969	34662	5265
900-949	29545	3263
850-899	13175	4307
770-849	5146	470

The table shows that the largest number of dirhams seem to have been present in mainland Sweden, as well as in the whole of the Baltic area, during the first decades of the second half of the 10th century. The period 950-969 can be regarded as equivalent to phase S1 in Birka. It is also during this period that dirhams and fragments of dirhams seem to have been deposited most frequently in Birka.

We have now been able to establish that there must have been a general and considerable increase in the number of dirhams in mainland Sweden in the middle of the 10th century as well as in Birka. The increased amount of lost coins in Birka in the 950s and 960s seems to be due to the fact that more coins circulated in the trading centre than was the case in earlier phases.

Still, the greater inflow of Islamic coins does not altogether explain the changing relationship between minted and unminted silver. During previous periods, dirhams seem to have been remelted and used for autochthonous metalwork, *i.e.* rods, ingots and wire as well as jewellery. The question now is if the demand for these objects was satisfied in the 10th century and if therefore the increase in the inflow of silver no longer needed to result in a consequent remelting of coins. This suggestion seems, however, less probable. Unminted silver is found in all sequences, including S1 where the amount of unminted silver still accounts for 15 % of the total weight. That the weight of the objects is as little as 2.39 g, might be due to that the S1 phase is based on a small area compared to other sequences.

Instead, it remains probable that the need for silver as a means of payment increased and that the inflow of silver made it possible to use silver to a greater extent than ever before.

To be able to investigate the extent of the use of silver as means of payment, we have to look into the question of whether or not the increase in the amount of minted silver during the last 20 years in Birka was due to a drop in the value of the silver. It has already been established that dirhams were present in large numbers in the Baltic area in the middle of the 10th century. An increase in the inflow of silver might have led to an abundance of material, which made the loss of a piece of a coin less important. If the abundance of silver had led to inflation, the fragments of silver correspondingly ought to have grown heavier during the final phase (S1) in Birka.

To examine the last suggestion, it is therefore necessary to analyse the degree of fragmentation for different periods to see whether the fragmentation of silver objects actually increases.

Fragmentation of the minted/unminted silver in Birka.

The table shows the number of minted and unminted silver objects in different classes according to their weight.

time span	> 4 g	4-3 g	3-2 g	2-1 g	< 1 g
950-970	-	-	1	1	31
900-949	1	-	-	3	14
850-899	-	-	-	-	1
770-849	3	-	3	4	10

The fact that many objects were severely damaged by corrosion might lead to problems when comparing different periods with each other. Especially the objects from the early sequences might have lost a lot of their original weight. Another problem is related to the period 950-970 and phase S1. This phase represents the plough soil and larger artefacts of silver might have been found and removed during the centuries when the soil was cultivated. Therefore, it is of great importance to use the table in a very broad sense. Nevertheless, it can help to establish that the number of fragments of less than 1 g increases and that nearly all of the deposited fragments in S1 (period 950-970) weighed less than 1 g. Therefore, it seems less probable that silver lost its value when the inflow of dirhams increased in the Baltic area. The increasing degree of fragmentation must, however, have made it easier to lose silver, and therefore fragmentation

might have been a factor that contributed to the increase in number of silver objects deposited during the last phase of Birka.

To come closer to how the increasing amount of silver fragments were handled, it is necessary to compare the amount of deposited fragments to the amount of deposited weights.

Means of payment and weights

The proportions of weights and minted and unminted silver are shown diagrammatically below. Here, I will concentrate on the sequences from the second half of the 9th century and later, since the material from previous sequences might be heavily influenced by weighing in connection with bronze-casting. In B6, the amount of weights is 87.5 % of the total sum of weights, minted and unminted silver together. During phase B7, the amount of weights decreases to about 66 %. In B8, the trend continues and the weights constitute about 65 % of the material. In S1, the weights represent no more than 30 % of the total sum of weights, minted and unminted silver.

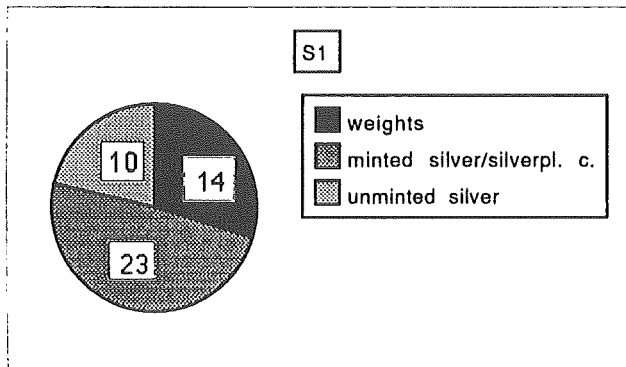
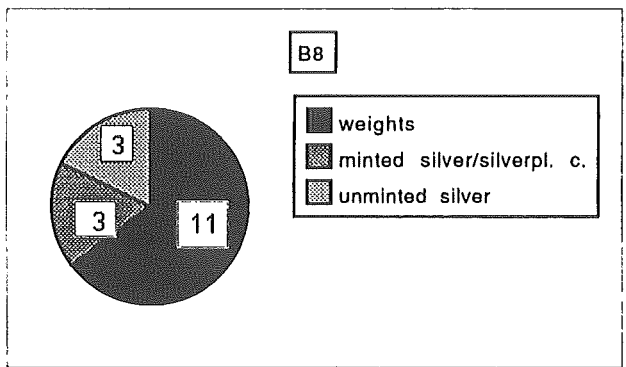
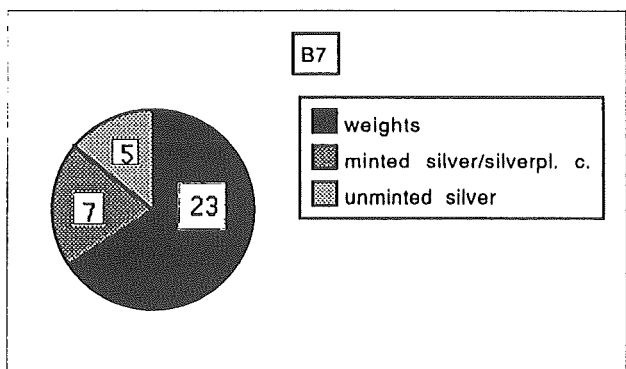
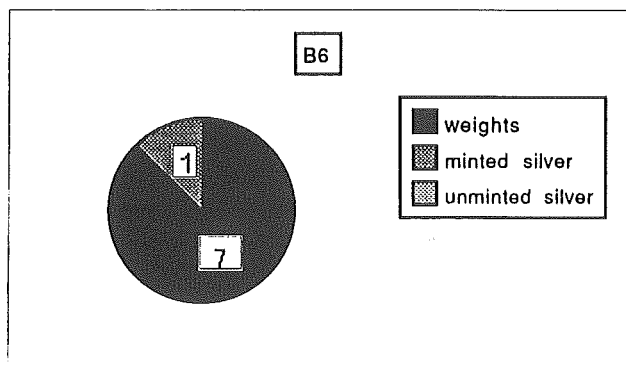
If we assume that weights were lost with the same frequency during the late 9th and the 10th century, then the result indicates that the number of weighing transactions did not increase at same rate as the amount of deposited silver objects. This can be due to different circumstances. Of course there is the possibility that weights grew scarce during the second half of the 10th century and that therefore they were not any longer dropped and/or so frequently. The number of weights in each sequence does not, however, indicate any decrease. Instead the number of weights seems to increase from the second half of the 9th century to the second half of the 10th century. This suggests that weights were handled more frequently and probably that the number of transactions increased over time. Still the proportionally larger increase in numbers of lost silver objects remains to be explained.

Conclusion

As has been shown, means of payment in the form of silver were present in Birka from the early phases onwards. During the 8th and 9th centuries, the silver that was used as a means of payment took the form of fragmented silver objects such as jewellery, ingots and rods. The fact that the objects had first been remelted from dirhams, were converted into autochthonous silver objects and were then, in a second stage, cut into pieces for use as a means of payment, can be

interpreted as an indication that silver was used primarily for other purposes than small-scale transactions during the 8th and 9th centuries.

The weight of the objects from this period was relatively high, which also indicates that silver was used for larger transactions. Therefore, it seems reasonable to assume that other mediums were used for the local trade/exchange and minor transactions or that there was another system for providing the occupants with subsistence goods.



During the first half of the 10th century, the situation seems to have been changing. The importation of dirhams to the Baltic started to increase. The relation between minted and unminted silver in Birka also started to change. The dirhams do not seem to have been remelted to the same extent as before. The need for silver as a means of payment even for smaller transactions must have increased and therefore dirhams were used primarily as such, without their being remelted. The silver from the 10th century is highly fragmented and has probably been used for exchange and trade with local products. The proportion of weights to silver also started to change. The number of weights does not increase at the same rate as the silver.

During the last 20 years of Birka, the inflow of coins seems to have been even higher than before. As many as 23 fragments of dirhams were retrieved from 50 m². The fragments were probably deposited over a period of 20 years. During the same period only 14 weights were lost. The proportion between weights and silver thus changed. Weights seem to have been used proportionally less frequently than before. This could indicate that whole and fragmented coins now were so common that they were accepted without weighing. This conclusion is also supported by the fact that the balances that were made and used during the second half of the 10th century, were less precise than before (Steuer 1987b, 463). This leads to the conclusion that weighing was primarily used for larger transactions. The possibility that fragments of coins were used without weighing has also been discussed by Sucholdski and Hårdh (Hårdh 1996, 25).

If fragments of coins were used without weighing, people who otherwise would not have had the possibility to own and use balances could be involved in transactions based on silver as a means of payment. Therefore, there is a possibility that new or extended groups in Birka and the surrounding region now came in contact and used silver coins as a medium in exchange situations. At that time it might also have been easier for a large group of people to use silver instead of barter. Barter must at times have been a complicated form of exchange involving several people in order to get the object one really needed or wanted.

The analysis work carried out on the archaeological material from Birka thus can be used to commenting on the economic situation in the trading place during different periods. The initial debate on whether barter or silver as a means of payment can be said to have predominated, can therefore be re-opened. The results from the analyses indicate that Peter Sawyer might be right in his conclusion that the increased import of dirhams that started in the 880s in the Baltic area also

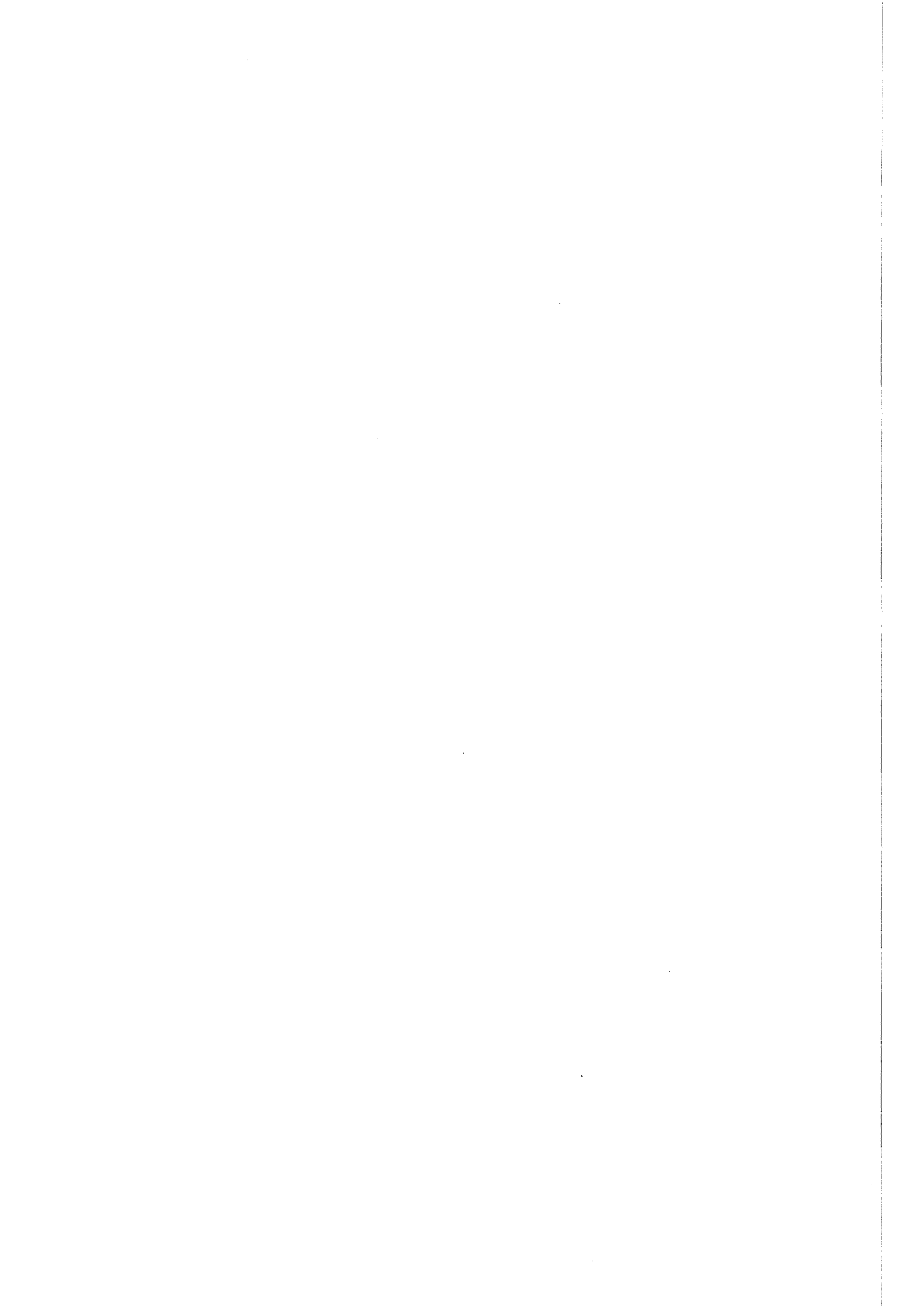
stimulated the economy. The increased fragmentation of silver in Birka indicates that some sort of economic change started. To me, this change seems to have included a wider use of fragmented silver than stated by Sawyer when he writes that barter and credit dominated in trading places during the Viking Age. Heiko Steuer may also be right when he points out that silver was the dominant medium of exchange. But in contrast to Steuer's opinion, the results from Birka indicate that fragmented silver did not become increasingly available until the middle of the 10th century. At that time, a changed attitude to coins as a means of exchange can be deduced from the fact that fragments of coins may not have been weighed as frequently or regularly as before.

Finally, it can be concluded in part a new process had started with the use of the coins and fragments of coins in Birka which were not weighed. This process is dependent on a general acceptance of the value of certain silver coins. The next step of the process would be autochthonous minting. There are no traces of this in Birka. But about 30 years after the abandonment of Birka, around A.D. 1000, the first autochthonous minting can be found in a new town, Sigtuna, which was established along an inlet of Mälaren, north of Birka.

References

- AMBROSIANI B. & ERIKSON B. 1991: *Birka vikingastaden* vol. 1, Höganäs.
- AMBROSIANI B. 1992: What is Birka?, in: AMBROSIANI B. & CLARKE H. (eds.), *Investigations in the Black Earth*, volume 1, Birka Studies, Stockholm.
- AMBROSIANI B. & CLARKE H. 1993: *Vikingastäder*, Höganäs.
- ARRHENIUS B., LINDER-WELIN U.S. & TAPPER L. 1973: *Arabiskt silver och nordiska vikingatidsmycken*, Tor XV, 1972-1973.
- HÄRDH B. 1976: *Wikingzeitliche Depotfunde aus Südschweden. Probleme und Analysen*, Lund.
- HÄRDH B. 1996: *Silver in the Viking Age*, Acta Archaeologica Lundensia, Series in 8°, No. 25, Lund.
- JANSSON I. 1983: Gotland och omvärlden under vikingatid – en översikt, in: JANSSON I. (ed.), *Gutar och vikingar*, Stockholm.
- LUNDSTRÖM L. 1973: *Bitsilver och betalningsringar. Studier i svenska depåfynd från vikingatiden påträffade mellan 1900 och 1970*, Stockholm.
- NOONAN T. S. 1994: The Vikings in the East. Coins and commerce, in: AMBROSIANI B. & CLARKE H. (eds.), *The twelfth Viking Congress*, Volume 3, Birka Studies, Höganäs.
- SAWYER P. 1985: *Kungar och vikingar*, Stockholm.
- SAWYER P. 1990: Coins and commerce, in: JONSSON K. & MALMER B. (eds.), *Sigtuna papers, Commentationes de nummis saeculorum IX-XI*, Stockholm.
- SAWYER B. & SAWYER P. 1993: *Medieval Scandinavia from Conversion to Reformation circa 800-1500*, Minneapolis.
- STEUER H. 1987a: Der Handel der Wikingerzeit zwischen Nord- und Westeuropa aufgrund archäologischer Zeugnisse, in: DÜWEL K.J. et al. (eds.), *Untersuchungen zu Handel und Verkehr der vor- und frühgeschichtlichen Zeit in Mittel- und Nordeuropa. Teil IV, Der Handel der Karolinger- und Wikingerzeit*, Göttingen.
- STEUER H. 1987b: Gewichtsgeldwirtschaft im Frühgeschichtlichen Europa, in: DÜWEL K.J. et al. (eds.), *Untersuchungen zu Handel und Verkehr der vor- und frühgeschichtlichen Zeit in Mittel- und Nordeuropa. Teil IV, Der Handel der Karolinger- und Wikingerzeit*, Göttingen.

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Urban transformation in early-Byzantine Epirus: the example of Butrint

“The happiness of an hundred millions depended on the personal merit of one or two men, perhaps children, whose minds were corrupted by education, luxury and despotic power..(..)....they abandoned the church to the bishops, the state to the eunuchs and the provinces to the barbarians” (Gibbon 1776: IV, 177)

This was the Edward Gibbon’s view of the later Roman Empire, one which profoundly influenced his successors for the following two centuries. It is only within the last thirty years that scholars have begun to seriously reassess the later Empire or the period now known as late antiquity, and significant advances have been made towards a view which challenges that of Gibbon and his successors. Much of the recent study, both historical and archaeological, has focused on the urban centres of the Roman world, as the apparent abandonment of the cities was fundamental to concepts of “decline and fall”, and the search for urban continuity or discontinuity became a central issue (see Roskams 1996).

This recent study has established that the towns and cities of the late Roman and early Byzantine world were fundamentally different to those of the early Empire (Durliat 1990; Rich 1992; Christie & Loseby 1996). In essence this is hardly surprising. We are, after all, dealing with a period of several hundred years and, even allowing for the conservatism of the Roman world, which despite a relatively high degree of social mobility was essentially backward-looking (Jones 1964, 714-715; Brown 1971, 28-32), it is unlikely that the framework of urban life would remain static over such a long period. Prior to examining the archaeology of the towns of Epirus, and more specifically Butrint, it seems opportune to provide a brief overview of current opinions on the more general changes which occurred following the so called ‘crisis’ of the third century.

Several important factors affected the character of the late Roman urban centre. The increased centrali-

zation of administration which commenced under Diocletian began changes which eventually altered radically the face of the city. Diocletian’s rapid expansion of the imperial administrative hierarchy, meant that the government was obliged to recruit extensively from the curial classes. Although it insisted that decurions hold the regular series of offices in their native cities before applying for an imperial post, repeated legislation against abuses demonstrates that the government was incapable of controlling the practice, as the curial orders sought to avoid the expense of local civic office by advancing directly to imperial posts (Jones 1964, 741). The confiscation of civic lands and their revenues by Constantine I and Constantius dealt a severe blow to economic independence and despite the concessions of the late fourth century in which one third of civic lands and civic taxes were returned to local administration, the towns became increasingly unable to provide for their own maintenance (Haldon 1990, 96; Jones 1964, 732). The decline of the curial order and local administration as the means by which Imperial authority was expressed and fiscal revenues collected (and more importantly redistributed), had a markedly detrimental effect on the classical urban fabric. The decline in the power of local government meant that those who had previously expressed their status and munificence through means of grandiose public building in their home towns found little reason to continue the practice (cf. Liebeschuetz 1992a), and the large scale construction of public utilities and monuments which had marked the first and second centuries AD, became increasingly an imperial activity, with maintenance of the urban infrastructure carried out by representatives appointed by the provincial governor. Private wealth which had previously effectively subsidised municipal life in terms of construction and upkeep of civic amenities was expressed in other ways, such as the construction of opulent country residences (Brown 1971, 40). The sudden decline in the construction of public buildings, or at least in the number of dedicatory inscriptions which accompanied them, is readily apparent in the archaeological

record and in some ways appears to substantiate theories of a more generalised urban decline, although the graphic nature of the decline of the epigraphic evidence itself, may in fact have exaggerated its significance. Equally, it is likely that different parts of the Empire were affected in different ways. It is suggested that, on the basis of the epigraphic evidence, North African cities, for example, apparently maintained a vigorous municipal life throughout the fourth century (Lepelley 1992). A similarly dynamic urban life has been argued for Antioch and other cities in Syria, which flourished in the fourth and fifth centuries prior to an apparently dramatic decline in the sixth century (Kennedy 1985). The growing importance of Christianity and the rise in episcopal power also caused significant changes in the physical appearance of cities. From the fourth century onwards local bishops played an increasingly central role in local civic administration and civil defense as the state became increasingly unwilling or unable to fulfill these needs, (Dagron 1977, 19-23; Liebeschuetz 1992b, 228-235 for the example of Synesius of Cyrenaica). The increasing status of the bishop is reflected in the changing urban topography of the later Roman Empire in which large ecclesiastical buildings appear to dominate the shrinking areas of the fortified cities. This view has been reinforced by excavations in recent decades which have demonstrated that within towns in all parts of the Roman world, Christian "quarters" were established, and churches assumed a degree of architectural prominence within (and without) the city walls (Sodini 1993, 157-161). These factors, combined with the growing insecurity of the frontiers, meant that the urban centres of the late-antique and early-Byzantine world, in many ways bore little physical resemblance to their early-Imperial predecessors.

In essence then, the towns and cities of the Roman world were faced with an increasingly centralized imperial bureaucracy and administration coupled with an increasingly demanding imperial exchequer. In the words of Haldon, "the cities lost their role as crucial fiscal intermediaries in the extraction by the state of its revenues" (1990, 96) These factors led to significant changes in local government structure, with many of the tasks and powers of local civil administration devolving to local landowners and to the church, the hierarchy of which became to some extent a replacement for the curial hierarchy of the early Empire, although this was never formally established in the eastern Empire, as it was in the west (Haldon 1990, 97). This paper intends to examine the changing fortunes of the towns and cities of Epirus against this background and also in the light of the factors which affected Epirus specifically, including the nature of the barbarian incursions which occurred

from the late fourth century onwards, with specific reference to the emerging archaeological evidence.

Butrint and Epirus

The administrative reforms of Diocletian at the end of the third and start of the fourth centuries AD created the province of Epirus Nova from part of the former province of Macedonia. From this point onwards the original province of Epirus was known as Epirus Vetus. The two provinces were part of the diocese of Eastern Illyricum under control of the *praefectus praetorio Illyrici*. While the precise geographical borders of the provinces are not known, broadly speaking, Epirus Nova occupied most of modern Albania with its provincial capital at Dyrrachium, while Epirus Vetus comprised the southern-most part of Albania and north-western Greece, as far south as the Ambracian Gulf, with its provincial capital at Augustus's victory city, Nikopolis (fig. 1). It was an area with a long history of urbanism. According to Pliny, there were 150 cities in Macedonia, in contrast to their apparent paucity in northern Illyricum and Thrace. However, by the time Hierocles compiled the *Synekdemos* in the fifth century, there were less than 50 in the same area (Jones 1964, 716).

Butrint (fig. 2) lies on the coast on the north-west of the province of Epirus Vetus. Founded in the eighth century BC, it seems to have escaped the destructive actions of L. Aemilius Paullus following the Roman conquest of 167 BC. Cicero wrote of Caesar's intention to establish a colony of veterans at Butrint, but it was a later plan, to settle Italians displaced by the veteran settlements in Italy, which led to the eventual establishment of the Roman colony (Purcell 1987, 75). The colony was fully established under Augustus and during the early Empire it developed into a prosperous maritime town. Historically, little is known of Butrint's fortunes during the later Roman period, although its bishops are mentioned twice in connection with ecclesiastical disputes of the fifth and sixth centuries (Ugolini 1936, 319-322). It appears, in common with many of the towns of Epirus, to have had a brief revival around the reign of Justinian before falling victim to the vicissitudes of the late sixth and early seventh centuries which caused the apparent eclipse of many of the towns of Greece and the Balkans. It re-emerged in the high Byzantine period, appearing sporadically in later medieval sources, prior to its eventual capture by the Turks in the seventeenth century (Ugolini 1937, 102). By the time it was visited by Colonel William Leake at the start of the nineteenth century (Leake 1835, 95-101) it had dwindled to a few fisherman's huts

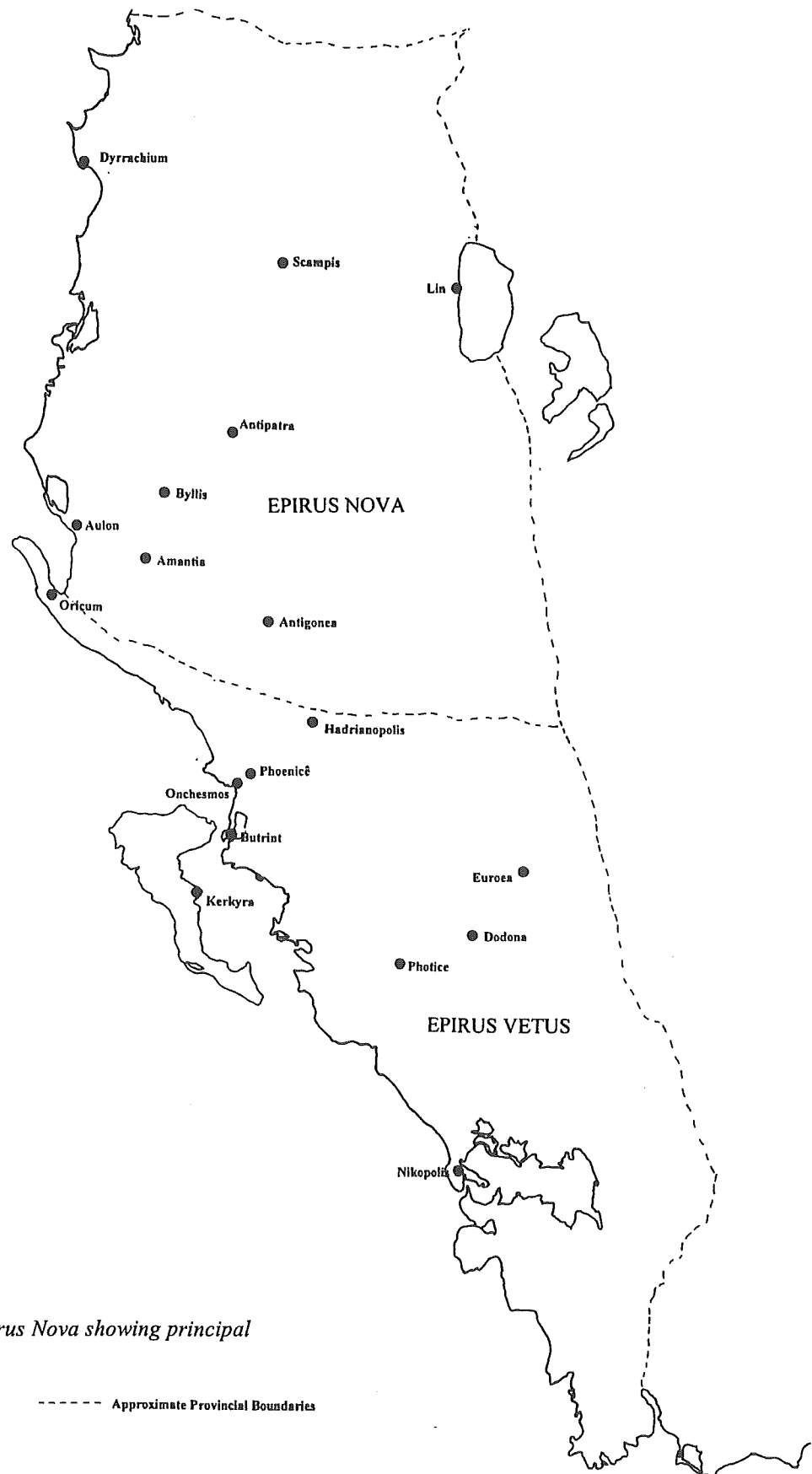


Fig. 1 - Epirus Vetus and Epirus Nova showing principal late-Roman centres

----- Approximate Provincial Boundaries

grouped around the channel-side Venetian castle. Archaeological excavations were carried out on a large scale by an Italian mission in the 1930's under Count Luigi Maria Ugolini, and have been continued

since the 1950s by the Albanian Institute of Archaeology and Institute of Monuments. In 1991, a joint Greek-Albanian mission was launched to investigate the foundation phases of the city, and this

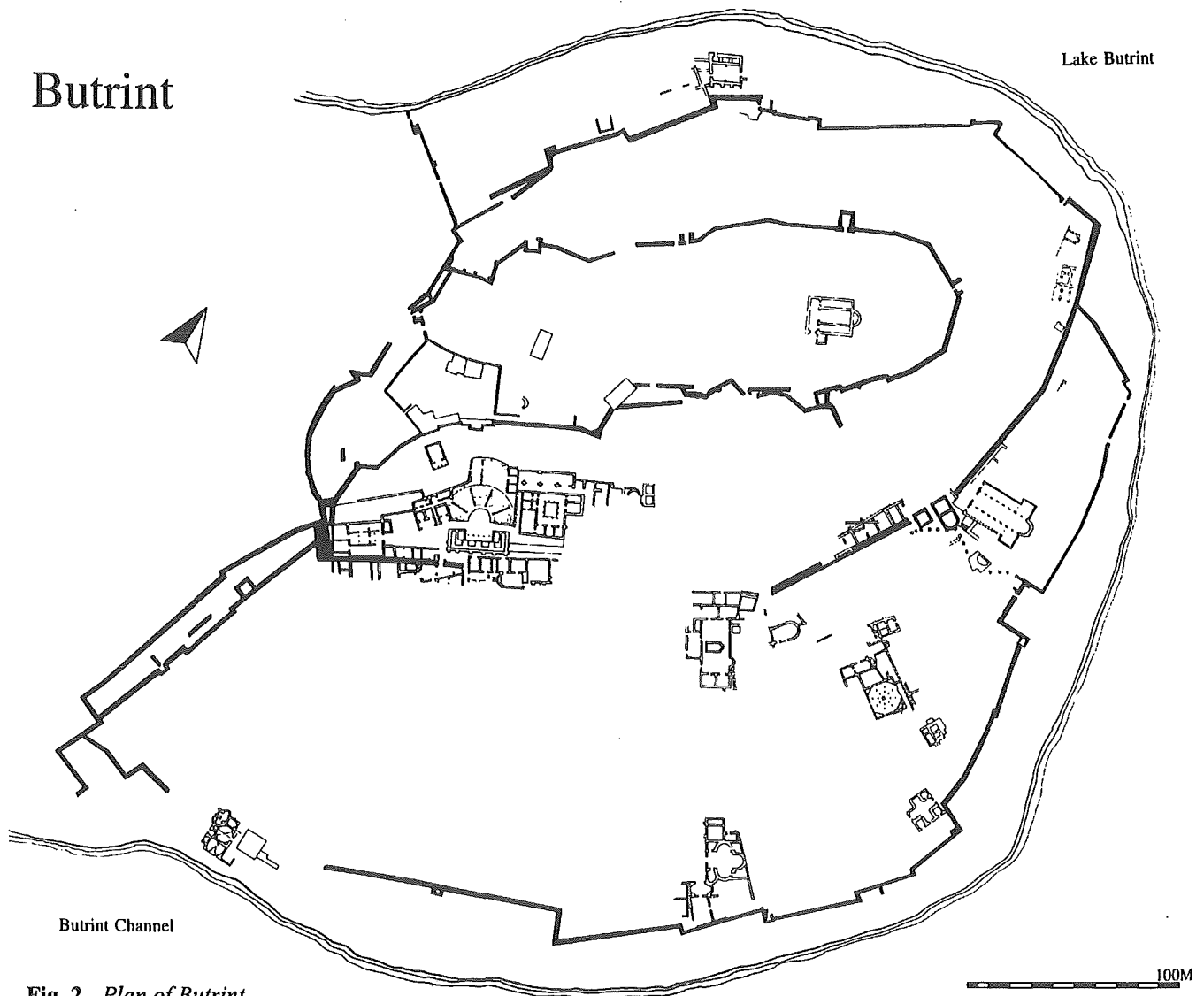


Fig. 2 - Plan of Butrint.

was followed, in 1994, by a joint Anglo-Albanian mission to investigate the late-antique and Byzantine phases of Butrint and also the changing relationship of Butrint with its hinterland and surrounding environment. The purpose of this paper is to examine the archaeology of Butrint within the wider context of late-Roman urbanism in Epirus.

An overall examination of the remains visible at Butrint provides little evidence of new construction work being carried out during the late third and fourth centuries, and no epigraphic evidence has been discovered relating to this period. It is likely that the town suffered fairly catastrophic damage in an earthquake, perhaps one of those recorded during the 360s such as the so-called "Universal earthquake" of 365 (Di Vita 1995), or possibly that which is recorded by Cedrenus as devastating the coast of Epirus during the reign of Gratian (375-382) (Guidoboni 1994, 259-274). Precise dating is lacking for these events, but it seems likely that the statues discovered by Ugolini in the theatre and in the city fountain may have toppled

during an earthquake and were left lying where they fell. Similarly, it is possible that the crude reinforcing of the third-century extension of the town's aqueduct which can be seen near the fountain also dates to this period. This reinforcement was executed with earth-bonded masonry, a building technique that becomes familiar throughout Butrint's later Roman history.

There is little to suggest any renewed activity until the end of the fifth century although it is possible that a bath building underlying the sixth-century baptistry may date to the fourth or fifth centuries, as may the baths near the present entrance (Delaine 1988, 19). The theatre appears to have gradually disappeared under accumulated hill wash as the system of terraces, which probably revetted the steeply sloping acropolis, collapsed. The relatively intact nature of the theatre suggests that this happened at an early date as only the upper levels of the *cavea* were spoliated for use in the later medieval walls. A post-roman collapse of the hillside would also account for the rise in ground level which occurred prior to the construction

of the later medieval church to the east of the theatre, which was largely demolished by Ugolini. It is likely that further buildings in the city may have been abandoned in the same way as the theatre, although this is difficult to determine in the absence of detailed records of Ugolini's excavations.

As mentioned previously, it was during the late-fifth and early-sixth centuries that the town, in common with many other towns in Epirus and the Balkans, underwent an apparent revival prior to the decline of the seventh century, in terms of both public and private building. During the late fifth century a large palace was constructed, similar to other examples elsewhere in the Mediterranean (Ellis 1985), with a huge central tri-conch dining room. The excavations have revealed, however, no sign of the rich marble or mosaic decoration which might be expected in a building of this character, and it seems that this grandiose structure was never fully completed. Construction was apparently halted prior to the construction of the new city fortifications at the end of the fifth or beginning of the sixth century, and it is possible that work on the palace was halted by the building of the wall, which blocked the palace's access to the channel side (Gilkes pers. comm; Hodges & Saraçi *et al* 1997: forthcoming). The new fortifications (Karaiskaj 1983) enclosed a greater area than the original Hellenistic wall, although they excluded the extensive suburb which had developed on the southern side of the channel during the early Imperial period (Hodges & Saraçi *et al* 1997: forthcoming). Further construction included at least two grandiose public buildings in the form of the great basilica and the baptistry which probably date to the second quarter of the sixth century (Meksi 1983; Hodges & Saraçi *et al* 1997: forthcoming). The baptistry is a remarkable circular structure, paved with a spectacular paradisiacal mosaic, with a central font supplied with heated water. The great basilica with its polygonal apse and tri-partite transept was built on an equally grand scale. The fragmentary remains of its mosaic pavement suggest a date contemporary with the baptistry. A second smaller basilica, probably late antique in date and featuring a geometric mosaic, has been found on the acropolis (Ugolini 1937, 175).

The less grandiose late-antique phases at Butrint are characterised by the construction of earth-bonded structures which subdivide the earlier Roman buildings. These crudely constructed walls have appeared in every area of the town which has been excavated, although secure dating for them is lacking in most areas. It is likely that, in common with other Roman towns, this sort of expedient construction, which has been recognised in late phases of building throughout the Roman world (cf. Potter 1995, pp), came into use

from the fourth century onwards if not before and this seems to have been the case at Butrint (see above).

The nature and chronology of the early-Byzantine "revival" at Butrint

Although the excavations at Butrint are still at an early stage, it is clear that the apparent revival in the city's fortunes around the end of the fifth and beginning of the sixth century is more complex than it might first appear. The archaeology of Butrint during the fourth to early seventh centuries demonstrates a number of characteristics which can be summarised under the following headings.

1. Major building projects; the tri-conch palace, the fortifications, the two basilicas and the baptistry.
2. The presence of large quantities of imported ceramics, in particular bulk transport amphora.
3. The abandonment of former public spaces such as the theatre.
4. Poorly built, ephemeral buildings utilising earth-bonded masonry and spolia.

1 and 2 could be construed as signifying growth and urban vitality, while 3 and 4 could be seen as signs of decline. When expressed chronologically the picture becomes more complex (fig. 3).

It is clear that elements that could arguably be construed as signs of vitality or decline were occurring contemporaneously. Furthermore, although the excavations have so far been on a limited scale, it appears that these elements interact spatially as well as chronologically. Therefore it seems that a spectacular building such as the baptistry existed literally surrounded by ramshackle huts and piles of household rubbish. Contemporaneously, the tri-conch palace, construction of which had been abandoned for at least two decades prior to the building of the baptistry and basilica, was occupied in an equally haphazard fashion, and the rooms which had been designed to house elegant mosaics were used alternately for middens and burials (Gilkes pers. comm). It appears that various apparently disparate elements are emerging, although without further excavations and quantification of the ceramic evidence it is only possible to draw inferences rather than definite conclusions. However, preliminary indications are that:

1. The appearance of poorly built structures and the abandonment of public buildings are not indicative of economic decline *per se*.
2. Construction of new fortifications and grandiose ecclesiastical monuments, equally, are not necessarily indicative of an overall "revival" of civic fortunes.

It is clear that the situation is too complex to be categorised by simple terms such as revival, urban continuity or decline, all of which are, to some extent, products of the academic ideologies which first coined them. Prior to attempting any analysis of these factors it seems opportune to examine some of these aspects in the wider context of the provinces of Epirus Vetus and Epirus Nova as a whole.

1 Major building works

Fortifications

Fortifications are a common feature of the towns of Epirus in the fourth, fifth and early sixth centuries (Gregory 1982; 1987; Baçe 1979), although few have been dated with complete satisfaction. Until recently, many have been dated on the basis of their appearance or otherwise in Procopius's *The Buildings*, which records Justinian's attempts to defend the southern Balkans through the construction of a network of defenses (*Buildings*, IV). Possibly a disproportionate amount of importance is attached to whether or not a town appears in Procopius' list which itself may have been gleaned from official sources rather than personal knowledge (Cameron 1985, 86, 94). *The Buildings* is a work of panegyric, which is not a genre of late-antique literature noted for its devotion to accuracy (Cameron 1985). There is little reason to suppose that Procopius ever visited Epirus or was familiar with many of the towns on the list, which has been shown to be generally unreliable as a means of dating fortifications in Epirus. The town of Byllis, for example, is absent from the list, but has fortifications which are dated by an inscription to the reign of Justinian (Anamali 1993, 453). The fortifications of Dyrrachium also, which are recorded by Procopius as a construction of Justinian, appear to date largely to the reign of Anastasius (Anamali 1993, 451). However, Procopius's description of Phoenicê, which is one of the most detailed from the section referring to Epirus, appears, in the light of environmental work carried out as part of the Butrint project, to be largely accurate. Procopius describes Phoenicê as standing on low lying ground, surrounded by stagnant water, which caused Justinian to construct its new fortifications on a nearby hill (*Buildings* IV. I. 37, 38). The late Roman settlement of Phoenicê appears to have occupied the same site as the modern village, lying at the foot of the hill which was occupied by the ancient capital of the Epirot League (Ugolini 1932). However, the late-Roman fortifications defend the hilltop rather than the late Roman settlement. The preliminary results of environmental work suggest that Lake Butrint originally extended as far as Phoenicê, but was in the pro-

cess of silting up and retreating which would have created the stagnant environment described by Procopius (Hodges & Saraçi *et al.*: forthcoming).

The fortifications of the towns of Epirus in many cases, such as that of the town of Onchesmos, did not enclose the entire inhabited area, and in some instances such as that of Nikopolis (Gregory 1987, 255) and Byllis (Muçaj 1990; Anamali 1993, 452), substantially reduced the size of previously defended areas. The fortifications of Butrint in fact enclose a large area, around sixteen hectares, although this may be due to the convenience of utilising the naturally defensive characteristics of the terrain. It does not necessarily follow that the size of the defended area reflects the size of the occupied area, or even that the main occupied area lay with the wall circuit. Excavations throughout the Balkans have continually demonstrated that the walled areas of towns were often sparsely populated, apparently occupied mainly by churches and administrative buildings as appears to have been the case at Tsarichin Grad (Bavant 1984; Poulter 1992, 125) and Nicopolis *ad Istrum* in Bulgaria (Poulter 1995). At both these sites, the Justinianic settlements were built on virgin ground and thus a picture of sparse intramural occupation is much easier to define than it is at sites such as Butrint where the early Byzantine settlement is a continuation of an earlier Roman site. Although the excavation of many of the fortified sites of Epirus has been limited, it does not seem unlikely that towns such as Byllis were relatively sparsely occupied, the fortified area containing mainly churches. Furthermore, it is clear that, whatever their role, the tiny fortified sites such as Zaradishte and Qafa (Anamali 1993) cannot be said to be populated urban centres in any traditional sense, although it is possible that the populations may have been dispersed within the hinterland (see below).

Public buildings

During the late fifth and early sixth centuries some of the most spectacular buildings ever to grace the southern Balkans were constructed. The ecclesiastical architecture of Epirus combined elements of the architecture of Italy and the west with the sumptuous decorations of the Aegean coastlands and North Africa (Krautheimer 1986, 131, 266). The churches of Epirus display a number of characteristics which can be individually distinguished in other locations, demonstrating the extent of a relatively well defined sphere of architectural interaction, which included Greece, in particular Thessalonika, Dalmatia, and northern and southern Italy, in particular Puglia, which contains some of the closest surviving parallels to the Epirot churches, such as Madonna dell'Alto near

Campi (Jularo 1974, 121), which features external buttresses on the apse and a probable tri-partite transept (see below), and Santa Maria della Croce at Casaranello (Trinci-Cecchelli 1979) which was decorated with mosaics which display strikingly similar characteristics to those of Butrint and Nikopolis. Similarly, the tri-partite transept, which appears in the fourth century in Rome and Milan, reappears later in sixth century Epirus at Nikopolis (cf. Krautheimer 1986, 131), Byllis (Muçaj 1987; 1993), Butrint (Meksi 1983; Hodges & Saraçi *et al* 1997), and Arapaj (Hidri 1986). Other features common to the churches of Epirus include external buttresses on the apse, which can be seen most notably at Nikopolis (Pallas 1977, 134-136), and are also common in Dalmatia (Chevalier 1995, 53). Tri-conch churches also appear in a variety of forms ranging from the isolated tri-conch such as that at Antigonea (Budina 1977, 225-228) to the "false" tri-conches such as Arapaj (Hidri 1986) and Dodona and Paramythia (Pallas 1971, 236-238) in which the transept arms are extended with lateral apses (Krautheimer 1986, 266). Perhaps the finest of these buildings is the extraordinary circular baptistry of Butrint, which rivals, or even surpasses, the great baptistries of Rome, Ravenna and Milan and, like many of the Epirot churches, was decorated with lavish mosaics of a fluid and elegant style.

These buildings form an integral part of the urban landscape of late-antique Epirus and more than anything else, lead to the perhaps misleading impression of the opulence and vitality of the early-Byzantine towns of the province. While study of the architectural elements of these buildings is useful and can, in the case of features such as the transept (Krautheimer 1969) and the ambo (Matthews 1962; Sodini 1975) raise intriguing questions of ecclesiastical jurisdiction and the nature of the liturgy practiced, it is important that isolated examination of the Christian monuments does not lead to general judgements regarding the overall vitality or otherwise of the town. Well-appointed churches were but one aspect of the topography of the early-Byzantine town, albeit a highly visible one, and their presence needs to be examined within the framework of urban life as a whole. It should be noted that the known public buildings in Epirus, with the exception of the circular forum at Dyrrachium (usually credited to Anastasius (491-518) who is recorded as adorning the city of his birth with lavish monuments (Anamali 1993, 449), are all Christian and may therefore reflect a vitality which did not extend beyond ecclesiastical life.

Date AD	300 - 350	350 - 400	400 - 450	450 - 500	500 - 550	550 - 600	600 - 650
Tri-conch				Tri-conch built			
City walls				Walls built			
Baptistry					Baptistry built		
Basilica					Basilica built		
Earlier public areas		Theatre/Fountain abandoned					
Earth-bonded walls	Appearance of earth-bonded structures						
Imported ceramics	Amphora and finewares						

Fig. 3 - Chronological relationships of archaeological remains at Butrint

2 Ceramics

Preliminary examination of the pottery finds from Butrint, in particular those from the tri-conch palace, has produced a sequence which extends into the seventh century AD, prior to a hiatus which lasts until the ninth century. The tri-conch excavations produced a sherd of Hayes 91D (600-650AD) which was overlain by deposits containing eastern Mediterranean amphora (Oliver Gilkes, pers. comm). It therefore appears that Butrint was participating to some extent in international trade networks into the early seventh century (Panella 1993). At nearby Onchesmos (the modern Saranda), excavations have produced a sequence comprising largely similar material, although activity at Onchesmos was terminated by a disastrous fire, associated by its excavator, Kosta Lako, with the Slavic raiding of c.587, on the basis of numismatic evidence. Lako's excavations also produced quantities of a type of globular coarseware vase, the handles of which are applied directly to the rim and coarsewares featuring incised decoration of undulating horizontal lines (Lako 1984, 196; 1991, 186). These coarsewares have proved ubiquitous within Old and New Epirus on both coastal and inland sites including Berat, Butrint, Symizë, Pogradec, Lin, Blace, Kaninë, and Burrel (Komata 1986, 256), and also Arapaj (Hidri 1991, 220-221). Other ceramic finds include oval or round jugs painted with broad red stripes (Komata 1986: 258), similar to examples found in southern Italy (Whitehouse 1966). Substantial work of quantification and petrological analysis of fabrics is required in the field of ceramics in Albania. However, in general the situation appears similar to that of Italy, in which the imported ceramics were largely confined to the coastal regions (where they are found in substantial quantities used in conjunction with vessels of local manufacture) and failed to penetrate much beyond the coastal plain (see Marazzi, forthcoming, for a summary of recent work on ceramics in Italy). In Old and New Epirus, coastal sites such as Butrint (Lako 1981), Onchesmos (Lako 1984; 1991) and Dyrrachium (Tartari 1982) have produced large quantities of imported ceramics particularly amphora, whereas at sites further inland such as Paleokastrá (near Gjirokastra) imported ceramics are in the minority (Baçe 1981, 217) and at the fortified hilltop settlement of Symizë (of the type discussed below) there was no imported *terra sigillata*, only a few fragments of amphora and very little red stripe pottery, although there were substantial amounts of the coarseware mentioned previously (Karaiskaj 1979, 188-189). It is therefore probable that on the coast at least, the towns participated actively in Mediterranean-wide trading networks to a significant extent

prior to a sudden halt around the late sixth, and early to mid seventh century, respectively in the case of Onchesmos and Butrint. (Dyrrachium remained in Byzantine hands and has an unbroken sequence of amphora finds which lasts until the twelfth century).

3 Changing use of public spaces

The encroachment on, or change in use of, former public spaces has been noted in many parts of the Roman empire (cf. Potter 1995) and is readily apparent within Greece and Illyricum. At Stobi in Macedonia Secunda, the theatre was closed under orders of Theodosius and rapidly began to fill with rubbish and alluvial hill wash, and was then used as residential building space while the cavea was spoliated for building material (Wiseman 1984, 295). At Sirmium also, monuments such as the hippodrome were surrounded by poor quality dwellings and burials appeared within the urban area (Bavant 1984, 261). Similar processes were occurring the provinces of Epirus. As previously noted, the theatre at Butrint was abandoned during the late Roman period. At Byllis also the theatre was apparently robbed for wall-building materials and a large lime kiln was constructed in the forum presumably for the reutilisation of monumental marble (N. Ceka, pers. comm.). The vast amphitheatre at Dyrrachium was abandoned, its seating was robbed, and burials began to be inserted in the accumulating rubbish. A small funerary chapel was built in the amphitheatre's substructure, protruding through the seating banks (Miraj 1986; Gega 1993, 527). At Nikopolis, large areas of the city were left outside the early Byzantine wall circuit (Gregory 1987) and similar contractions are noted at Byllis and Saranda (see above). It seems likely that, as elsewhere in Greece (Gregory 1982), important former public areas were excluded from the new defenses.

At the same time upkeep and maintenance of the urban infrastructure seems to have declined. Much of the areas excavated at Butrint were choked with the detritus of everyday life such as broken amphora and midden deposits which appear to have existed in close proximity to the more grandiose structures of the late antique town. It therefore appears that, as has been suggested for other areas of the Empire, we are witnessing a change in priorities among the urban population and its governing bodies, reflected in the abandonment of the monuments which had played such an important role in the civic life of the early Empire, in response to the institutional changes described earlier (Liebeschütz 1992a).

4 *Simplification of secular building*

The towns of Epirus, or at least their ordinary inhabitants both within and without their walls, in common with many other Roman towns, adopted more makeshift and expedient approaches to building in the late-Roman and early Byzantine period. This phenomenon has been observed at numerous sites throughout the Mediterranean and the Balkans, where the monumental buildings which so dominated the towns of the early Empire were subdivided and replaced with haphazard constructions of spolia, wood, mudbrick and earth-bonded masonry, which often encroached on the areas of former public buildings (see in particular Brogiolo 1995 and Marazzi, forthcoming for recent studies in Italy). There are many examples of this within Greece; for example at Argos and Thessalonika, normally one or two roomed structures characterised by the presence of frequent cisterns and storage jars (*pithoi*) (Sodini 1984, 371-373). Butrint also, is no exception to this and late earth-bonded walls can be seen all over the city, within the earlier Roman structures. As at other sites around the Mediterranean it seems that this technique was certainly utilised from the fourth century onwards (Potter 1995; Poulter 1995). Similar earth-bonded structures can be seen abutting the interior side of the fortification wall at Nikopolis (Hellenkemper 1987, 248) and were also found during Muçaj's excavations of the sixth-century basilicas at Byllis (Muçaj 1993). Byllis has similarities with the example of the Lechaion basilica at Corinth, which had poor quality buildings clustered around its flanks and intruding into the north arm of the atrium (Sodini 1984, 374). The appearance of these makeshift structures in Roman towns has been attributed to a number of causes such as an influx of refugees from the countryside displaced by barbarian incursions, although this explanation, advanced by Sinclair Hood, who uncovered a substantial settlement of these poorly-built structures dating from the latter half of the sixth century at Emporio on the Aegean island of Chios (Hood 1970; 1989, 3) has been challenged, not altogether convincingly, by Gregory (1986, 170-171; see also Rosser 1996). On the mainland these rather ephemeral structures could also be seen as a symptom of the late-Roman polarisation of wealth (Brown 1971, 34), evidence of a general unwillingness on the part of the populace to invest their wealth in something as immovable as bricks and mortar in the face of the generalised political instability, a decline in disposable wealth itself, or a lack of available materials or craftsmen to work them. Whatever the cause or combination of causes, it is clear that the face of domestic architecture and public monuments changed radical-

ly in Butrint and the towns of Epirus in the late Roman period.

Population

The question of urban and rural depopulation has been much debated. A depopulation of the countryside, as seems to have occurred, for example, in Noricum and Pannonia, would have rendered it impossible to sustain large urban populations (Poulter 1992, 121), at least away from the coastal plain. The historical sources maintain that by the middle of the sixth century, rural life was becoming increasingly difficult to sustain in the face of barbarian raiding, increasing fiscal demands and other factors such as the plague which intermittently ravaged the Byzantine world from the 540s onwards. The crushing burdens of taxation which fell most heavily on the small peasant freeholders, probably meant that they lacked the surplus to recover from sudden misfortune such as barbarian raiding or a series of bad harvests (Jones 1964, 774). For many the only solution was to abandon their land and find employment with a neighbour, or to leave the area entirely. It is, however, also worth considering that Justinian's legislation to protect smallholders from the activities of moneylenders in Thrace and Illyricum suggests that there was still a relatively large number of peasant farmers to be exploited in the Balkans (Jones 1964, 779). Survey work around Butrint and in Greece appears to bear out this suggestion. In the region of Boetia in southern Greece, the countryside appears to have been thriving from the fourth until possibly the mid-seventh century with an apparently dramatic recovery in rural population (Bintliff 1991, 126). The existing survey material from central Greece gives a "remarkably coherent pattern" in which numbers of sites remain constant from around 200BC-300AD prior to a sharp rise in numbers in the late antique period (Alcock 1993, 48). The initial results of the Butrint survey appear to conform to this pattern and indicate a high level of extra-mural occupation within the city's hinterland (Hodges & Saraçi *et al* 1997 forthcoming). In the late Roman period the small site of Diaporit, on the eastern shore of Lake Butrint, also gained a substantial basilica and what may be a bath house, and many of the sites on the south side of the Vivari channel may also have continued in use in this period. Elsewhere in the Balkans, at Nicopolis *ad Istrum* (Poulter 1995, 46), the main settlement area was in fact, external to the wall circuit and at Tsarichin Grad (Bavant 1984, 284-285; cf. Poulter 1992) the surrounding countryside also appears to have been densely populated. In Greece also, for example at

Corinth, it appears that populations were not confined to the walled areas (Gregory 1982, 52). The populations of the fortified areas are difficult to evaluate, and attempts to calculate population on a basis of the size of the area enclosed by the wall space seem obviously hazardous (Davis 1996, 461). At Butrint, the rather poorly built structures discussed above are present in all areas of the town which have been excavated, indicating a possibly substantial inter-mural population, although it is likely that some of the visible buildings may date to the late medieval and post-medieval periods. A large inter-mural population would be at odds with the situation observed by Poulter at Nicopolis *ad Istrum* (Poulter 1992, 45) and elsewhere and it seems likely that the answer to this question can only be provided by large-scale stratigraphic excavation

The end of the Greco-Roman town

It is probable that the Slavic invasions of the southern Balkans and their subsequent settlement in the late sixth and early seventh centuries had a serious effect on urban life. That it was sometimes a violent process has been graphically illustrated by Kosta Lako's excavations at Saranda, where much of the intramural area is covered by a layer of burnt material dated by late sixth-century material including a coin of Justin II (Lako 1984, 157-159). Evidence of contemporary destruction has also been found at nearby Phoenicê (Ugolini 1932, 108), and at Mesa-palik near Vlorë (Komata 1984, 196) among many other examples.

The historical sources indicate that the presence of the Slavic invaders instigated a large scale abandonment of many of the urban centres of Greece and the southern Balkans. The Chronicle of Monemvasia describes how refugees from the Slavic invasions fled to the mountains, or escaped to Italy, or the Aegean islands. It is supported by other sources such as Arethas of Caesarea, who describes how in the tenth century, the town of Patras was returned to its original site after occupying an alternative site in Calabria for three centuries:

"Here in the fourth year of his (Nicephorus's) reign, took place the transfer of Patras of the Peloponnesus, our country, from the Calabrian city of Rhegium to the ancient city of Patras. For it had been driven away or rather forced to migrate by the nation of the Slavs when they invaded the First and Second Thessaly and in addition the country of the Aeniantes and that of the Locrians, both the Epiknemidian and Ozolians, and also ancient Epirus, Attica and Euboea

and the Peloponnesus, driving away and destroying the noble Hellenic nations.....They (the Slavs) dwelt there from the sixth year of the Emperor Maurice." (trans, Charanis 1950, 152)

This picture of abandonment is reinforced by sporadic ecclesiastical sources. In the early seventh century Pope Honorius wrote to the four remaining bishops of Epirus (beside that of Nikopolis). Three of the four bishops appear to have been refugees who were guests of the fourth, who was the bishop of Kerkyra (cf. Wozniak 1987, 267), (the island of Corfu, which lies off the coast of Albania within a few kilometres of Butrint). A similar story is told by a letter from Pope Gregory to Bishop John of Lezha at the end of the sixth century, in which the Pope informed Bishop John, who was residing at Squillace in southern Italy, that his bishopric (Lezha in northern Albania) was in the hands of the barbarians (cf. Meksi 1985, 14).

The idea that many of the towns of Epirus were largely abandoned in this period is strongly supported by the archaeological evidence, or rather the lack of it. With the exception of Dyrrachium which remained a Byzantine stronghold, there is little evidence for continued occupation of the Roman urban centres. The excavations at Butrint have produced no evidence of occupation of the city between the early seventh and late ninth centuries and in many cases the high Byzantine occupation levels rest directly upon those of late antiquity. As Roskams wrote, the idea that urban continuity is inherently more likely than discontinuity, if only archaeological techniques were advanced enough to find it, can no longer be accepted (Roskams 1996, 264), and it seems therefore reasonable to allow some credence to suggestions of abandonment of many urban areas (see below).

Alongside the older Roman towns with their imposing fortifications and ecclesiastical monuments, and as well as fortresses such as Paleokastra on the Drina river (Baçe 1981) which appear to be typical Justinianic frontier defenses, another type of settlement was also developing in Epirus and the Balkans during the late Roman and early Byzantine period. These were small forts or *kastra* placed in highly defensive locations which bore little resemblance to the classical cities which occupied the lowland valleys and coastal plains. Large numbers of these fortresses have been excavated in Epirus Nova and southern Prevalitain. While a certain amount of material has been found within the fortresses, most datable material has been found within associated cemeteries which, according to the excavators, demonstrate that the sites were occupied between the sixth and eighth centuries (Komata 1976). These settlements are there-

fore cited as evidence of the continuation of urban life within the boundaries of the modern Albania (Komata 1976, 184; Anamali 1979, 14). Unfortunately, until recently the investigation of these settlements was bound up with the ideological requirements of post war Albania, which sought the to establish origins of modern Albanians in the pre-Roman Illyrian population (Miraj & Zeqo 1993). Despite these problems, these excavations have quite conclusively demonstrated the existence of post-Roman settlements within the southern Balkans, although who the occupants of these sites were is open to question. An interesting parallel can be drawn between these settlements and that of Golemanovo Kale near Sadowetz in Bulgaria, which was a small settlement of earth-bonded buildings with wood and clay superstructures built on a fortified spur and occupied around the late sixth and early seventh centuries. Its excavator identified it as a settlement of German *foederati*, on the basis of Germanic items found in association with Byzantine items, although he emphasised that it was essentially a fortified village occupied by peasants (Bersu 1938; Hood 1989, 5). Both Hood and Bersu were of the opinion that these fortified settlements were not the result of an autonomous initiative on the part of the local indigenous population, but were deliberately established as a matter of imperial policy as the Danubian *limes* collapsed. Both explanations remain fraught with problems of modern Balkan political ideology. It is clear, however, that this type of settlement cannot be said to be "urban" in any traditional sense, and represents a radical departure from the Greco-Roman city, in which urban life seems to be all but extinguished by the mid-seventh century.

Discussion

We are left then with towns of apparently rather curious appearance during the fifth and sixth centuries in Epirus, the more densely occupied of which, such as Butrint, to our minds, might resemble somewhat ramshackle villages placed within imposing fortifications and dominated by sumptuous ecclesiastical buildings, surrounded by the crumbling fabric of the earlier Roman centre. Within these towns occupation apparently ceased around the middle of the seventh century.

Recent thought on the "city" in late antiquity has in general departed from the urban collapse model popular in the 1960s, in which the Roman cities were overwhelmed by barbarian invaders. Instead, a process of general transition is envisaged (albeit with substantial regional variation), starting from the third century, in which the changes in administrative struc-

ture outlined at the start of this paper, instigated a process of change or "decline" (at least in terms of the classical city) which culminated in a general eclipse of urban life in the sixth and seventh centuries. It is suggested that while the barbarian incursions were certainly a factor in this process, they did not instigate it, but rather exacerbated changes which had begun much earlier (see in general Rich 1992, in particular Liebeschütz 1992a).

Butrint suggests a situation which differs from both these models, although one which contains elements of both. The chronology defined above (fig) indicates that at Butrint there was:

1. A radical redefinition of urban topography and infrastructure between the fourth and sixth centuries, which included the abandonment of former public spaces (including the theatre), the appearance of poorly constructed one or two room dwellings or workshops, and the construction of large Christian monuments.
2. The contemporaneous consumption of imported "luxury" products with its underlying implications of a relative economic vitality. This continued with no noticeable decline, prior to the sudden disappearance of these products from the archaeological record towards the mid seventh century, after which there is no discernible sign of occupation until the ninth century (cf. Lako 1981).

In a critical assessment of the study of the early to middle Byzantine city in the Balkans, Archibald Dunn identified a series of approaches which have thus far been adopted. Dunn summarised these approaches as: "the Jonesian institutionalist approach (a concentration on the textual evidence of public institutional change within essentially civic urban communities); unidirectionally model driven approaches; an approach which seeks to link urban archaeological phenomena with historical narratives; Christian Archaeology, *de facto* the study of late antique Christian monuments; and the incipient economic approach derived from intensive surveys" (Dunn 1994, 72-73). He further argued that a synthesis of these approaches would produce new definitions of transition in the Balkans, enabling the elements of the process (long-term economic and cultural "de-urbanisation", the abandonment of the Greco-Roman urban heritage, and the effects of war, invasion and natural disasters), to be disentangled from one another and reassessed on a new basis (Dunn 1994, 79).

At Butrint, the separation of individual archaeological phenomena into a relative chronology allows us to examine the different aspects in isolation and to suggest that, while the various elements are to some extent interrelated, ostensibly similar characteristics shared by these elements may mean entirely different

things at different times. In other words, the vitality indicated by grandiose public buildings and the vitality indicated by quantities of imported ceramics may represent different things, and not necessarily two sides of the same coin of "urban vitality". Equally the presence of poor quality ephemeral structures, their encroachment on former public spaces and the breakdown of infrastructure cannot be seen as aspects of one overall decline.

Conclusion

The archaeology of Butrint and the cities of Epirus allows us a valuable insight into the processes occurring within urban and rural life between the fourth to seventh centuries. The classical city of the early Empire changed radically, along with the agricultural economy which supported it. Smaller and more numerous farmsteads appear in field surveys as an apparent boom in the countryside between the fourth and sixth centuries. In turn the fortified areas of the towns shrunk, and became perhaps less densely occupied, with the urban landscape increasingly dominated by ecclesiastical buildings which reflected the effective replacement of the *curia* by the church in the role of secular civic administration. The coastal cities, certainly in the case of Butrint, continued to participate in the world of Mediterranean trade, as illustrated by the copious quantities of late Roman amphorae recovered from the excavations. In short, urban life continued throughout late antiquity, albeit in a way which might have been scarcely recognisable to a Roman of the second century AD. If we therefore accept the idea of a changed town, which by the sixth century had achieved some degree of equilibrium with its socio-political and economic environment, as opposed to one which was necessarily declining, we must look therefore for the possible reasons for its abandonment in the early seventh century. An interpretation of the archaeological evidence which argues for a relatively vigorous urban life until the early seventh century must equally suggest a sudden, if not catastrophic, decline. This implication is reinforced by the remarkable uniformity of the archaeological evidence from the cities of late-antique Epirus, which, with the exception of Dyrrachium, show a clear cessation of occupation from the early to mid-seventh century which continues until the ninth century. The causes of this collapse are still open to discussion. It could have been partly due to environmental reasons such as those favoured by Wiseman for the decline of Stobi (Wiseman 1984). Butrint is certainly extremely vulnerable to environmental change, for example the rise in sea level which

appears to have occurred in late antiquity (Hodges & Saraçi *et al* 1997) the effects of which are still apparent in the lower city. Alternatively we could return to the barbarian invasions discussed earlier, which have fallen from academic favour in recent years. The answer to this question will probably only be found by sustained excavation, in conjunction with a research framework for early Byzantine urbanism in the southern Balkans, which allows for all the diverse elements which form the topography of the late antique town to be assessed individually on their own merits, prior to attempting an interpretation of the whole.

References

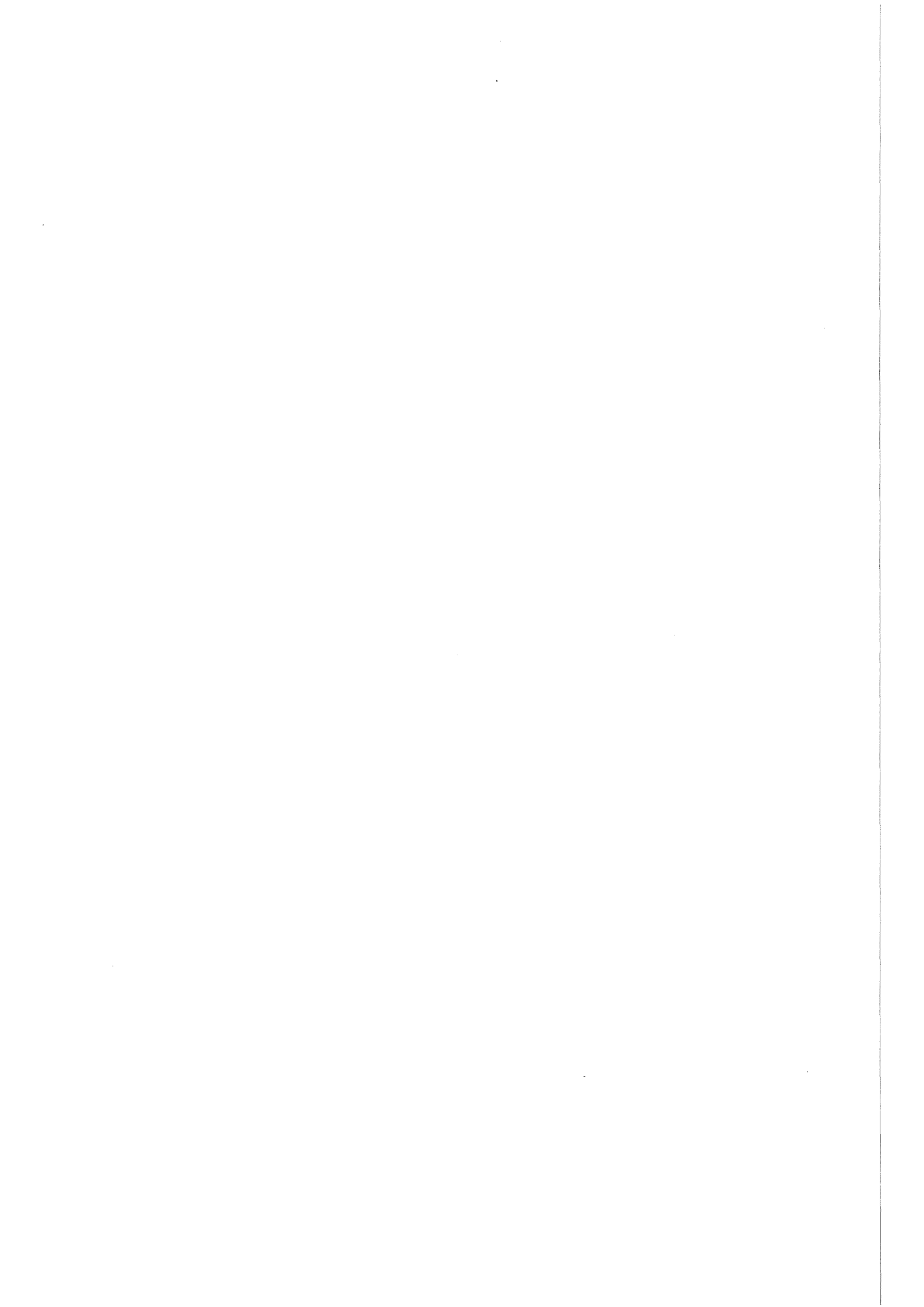
- ANAMALI S. 1979: Basse Antiquité et Haut Moyen Age dans les recherches albanaises, *Iliria* IX-X, 13-21.
- ANAMALI S. 1993: Architettura e decorazione tardoantica in Albania, in: *XL Corso di Cultura sull'Arte Ravennate e Bizantina: Colloquio dell'Associazione Italiana per lo Studio e la Conservazione del Mosaico e Seminario Internazionale di Studi su: L'Albania dal Tardoantico al Medioevo, aspetti e problemi di Archeologia e Storia dell'Arte*, Ravenna, 447-475.
- ALCOCK S. 1993: *Graecia Capta. The Landscapes of Roman Greece*, Cambridge.
- BAÇE A. 1979: Vështrim mbi arkitekturën e fortifikimeve e Antiketitet në vendin tonë, *Monumentet* 17, 5-45.
- BAÇE A. 1981: Kështjella e Paleokastrës, *Iliria* 1981/2, 165-235.
- BAVANT B. 1984: La ville dans le nord de l'Illyricum (Pannonie, Mesie I, Dacie et Dardanie), in: POPOVIC V., *Villes et Peuplement dans l'Illyricum Protobyzantin. Actes du colloque organisé par l'Ecole française de Rome, Rome 12-14 mai 1982*, 1984, 245-288.
- BERSU G. 1938: A 6th century settlement of *foederati*: Golemanovo Kale, near Sadowetz in Bulgaria, *Antiquity* XII, 31-43.
- BINTLIFF J. 1991: The Roman Countryside in Central Greece: Observations and Theories from the Boeotia survey 1978-1987, in: BARKER G. & LLOYD J. (eds), *Roman Landscapes. Archaeological Survey in the Mediterranean Region*, London, 122-132.
- BROGIOLO G-P. (ed) 1995: *Edilizia residenziale tra V e VIII secolo*, Seminari sul tardoantico e l'altomedioevo in Italia centrosettentrionale IV, Mantova.
- BROWN P. 1971: *The World of Late Antiquity*, London.
- BUDINA D. 1977: Mozaiku I trikonkes paleokristiane

- të Antigonesë, *Iliria* VII-VIII, 225-235.
- CAMERON A. 1985: *Procopius and the sixth century*, London.
- CHARANIS P. 1950: The Chronicle of Monemvasia and the Question of Slavonic Settlements in Greece, *Dumbarton Oaks Papers* 5, 139-166.
- CHEVALLIER P. 1995: *Ecclesiae Dalmatiae. L'Architecture Paleochrétienne de la Province Romaine en Dalmatie (IV^e-VII^es) Salona II*, Tome 2, Rome-Split.
- CHRISTIE N. & LOSEBY S.T. (eds) 1996: *Towns in Transition. Urban Evolution in Late Antiquity and the Early Middle Ages*, Aldershot.
- CHRYSOS E. 1987: *Nicopolis I. Proceedings of the first international symposium on Nicopolis (23-29 September 1984)*, Preveza.
- DAGRON G. 1977: Le Christianisme dans la ville byzantine, *Dumbarton Oaks Papers* 31, 1-26.
- DAVIS J.L. 1996: A page turns in the history of Greek regional studies, *Journal of Roman Archaeology* 9, 458-465.
- DELAINE J. 1988: Recent research on Roman baths, *Journal of Roman Archaeology* 1, 11-32.
- DI VITA A. 1995: Archaeologists and earthquakes: the case of 365 AD, *Annali di Geofisica* XXXVIII, N. 5-6.
- DUNN A. 1994: The transition from *polis* to *kastron* in the Balkans (III-VII cc.): general and regional perspectives, *Byzantine and Modern Greek Studies* 18, 60-80.
- DURLIAT J. 1990: *De la ville antique à la ville byzantine. Les problèmes des subsistances*, Rome.
- ELLIS S.P. 1985: The 'palace of the Dux' at Apollonia and related houses, in: BARKER G., LLOYD J. & REYNOLDS J. (eds), *Cyrenaica in Antiquity*, Oxford, 1985, 16-25.
- GEGA R. 1993: La Chapelle de l'ampithéâtre de Durres, in: *XL Corso di Cultura sull'Arte Ravennate e Bizantina*, Ravenna, 527-536.
- GIBBON E. 1776: *The Decline and Fall of the Roman Empire*, (ed. J.B. BURY 1925), London.
- GREGORY T. 1982: Fortification and Urban design in Early Byzantine Greece, in: HOHLFELDER R.L. (ed), *City, Town and Countryside in the Early Byzantine Era*, Boulder, 1982, 43-64.
- GREGORY T. 1986: Intensive Survey and its place in Byzantine Archaeology, *Byzantine Studies/Etudes Byzantines* 13, 155-175.
- GREGORY T. 1987: The early Byzantine fortifications of Nicopolis in comparative perspective, in: CHRYSOS E., *Nicopolis I. Proceedings of the first international symposium on Nicopolis (23-29 September 1987)*, Preveza, 1987, 253-261.
- GUIDOBONI E. 1994: *Catalogue of ancient earthquakes in the Mediterranean area up to the 10th century*, Rome.
- HALDON J. 1990: *Byzantium in the seventh century*, Cambridge.
- HARRIES J. 1992: Christianity and the city in Gaul, in: RICH J., *The City in Late Antiquity*, London, 1992, 77-98.
- HELLENKEMPER H. 1987: Die byzantinische Stadtmauer von Nikopolis in Epeiros. Ein kaiserlicher Bauauftrag des 5. oder 6. Jahrhunderts?, in: CHRYSOS E., *Nicopolis I. Proceedings of the first international symposium on Nicopolis (23-29 September 1987)*, Preveza, 1987, 243-251.
- HIDRI S. 1986: Basilika paleokristiane në Arapaj dhe zbulimet e reja në të, *Iliria* 1986/1, 329-340.
- HIDRI S. 1991: Materiale arkeologjike nga bazilika e Arapajt, *Iliria* XXI, 203-230.
- HODGES R., SARAÇI G., BOWDEN W., CHILES P., GILKES O., LAKO K., LANE A., MARTIN S., MITCHELL J., MORELAND J., O'HARA S., PLUCIENNIK M. & WATSON W. 1997 (forthcoming): Byzantine Butrint: An interim report on the 1994-95 investigations of the port and its hinterland, *Journal of Roman Archaeology* 10.
- HOOD S. 1970: Isles of refuge in the Early Byzantine period, *Annals of the British School at Athens* 65, 37-45.
- HOOD S. 1989: *Excavations in Chios 1952-1955 Byzantine Emporio*, Athens.
- JONES A.H.M. 1964: *The Later Roman Empire 284-602. A Social, Economic and Administrative Survey*, 2 vols, Oxford.
- JULARO R. 1974: Nota sull'architettura paleocristiana del Salento: la Madonna dell'Alto presso Campi Salentina, *Puglia Paleocristiana* II, 111-122.
- KARAIKAI G. 1979: Gradishtae Symizë në periudhën e vonë antike dhe mesjetë, *Iliria* IX-X, 171-187.
- KARAIKAI G. 1983: *Butrinti dhe fortifikimet e tji*, Tirana.
- KEAY S. 1996: Tarraco in Late Antiquity, in: CHRISTIE N. & LOSEBY S.T. (eds), *Towns in Transition. Urban Evolution in Late Antiquity and the Early Middle Ages*, Aldershot, 1996, 45-70.
- KENNEDY H. 1985: The last century of Byzantine Syria: A reinterpretation, *Byzantinische Forschungen* 10, 141-183.
- KOMATA D. 1976: Forteresses hautes-medievales albanaises, *Iliria* V, 181-203.
- KOMATA D. 1984: Basilika paleokristiane e Mesaplikut, *Iliria* 1984/1, 183-198.
- KOMATA D. 1986: Mbi disa dukuri të traditës në qeramikën shtëpiake të mesjetës së hershme Shqiptare, *Iliria* 1986/1, 253-262.
- KRAUTHEIMER R. 1969: The Transept in Early Christian Basilicas, in: KRAUTHEIMER R. (ed), *Studies of Late Antique, Medieval and Renaissance Art*,

- New York, 59-68.
- KRAUTHEIMER R. 1986: *Early Christian and Byzantine Architecture*, Harmondsworth.
- LAKO K. 1981: Resultatet e gërmimeve arkeologjike në Butrint në vitet 1975-76, *Iliria* 1981/1, 93-154.
- LAKO K. 1984: Kështjella e Onhezmit, *Iliria* 1984/2, 153-205.
- LAKO K. 1990: Gërmimet arkeologjike të vitet 1990: Butrint, *Iliria* 1990/2, 269-270.
- LAKO K. 1991: Bazilika Paleokristiane e Onhezmit, *Iliria* 1991, 123-186.
- LA ROCCA C. 1992: Public buildings and urban change in northern Italy in the early mediaeval period, in: RICH J. (ed), *The City in Late Antiquity*, London, 1992, 161-180.
- LEAKE W.M. 1835: *Travels in Northern Greece*, London.
- LEPELLEY C. 1992: The survival and fall of the classical city in Late Roman Africa, in: RICH J. (ed), *The City in Late Antiquity*, London, 1992, 50-76.
- LIEBESCHÜTZ W. 1992a: The end of the ancient city, in: RICH J. (ed), *The City in Late Antiquity*, London, 1992, 1-49.
- LIEBESCHÜTZ W. 1992b: *Barbarians and Bishops. Army, Church and State in the Age of Arcadius and Chrysostom*, Oxford.
- MARAZZI F. 1997 (forthcoming): The destiny of the late-antique Italies, in: HODGES R. (ed), *Henri Pirenne and the Question of Demand in the Sixth Century*, (in preparation).
- MATTHEWS T. 1962: An Early Roman chancel arrangement and its liturgical functions, *Rivista di Archeologia Cristiana* XXXVIII, 73-95.
- MEKSI A. 1983: Bazilika e madhe dhe baptisteri i Butrintit, *Monumentet* 27, 47-75.
- MEKSI A. 1985: Arkitektura paleokristiane në Shqipëri, *Monumentet* 30, 14-44.
- MIRAJ L. 1986: Amfiteatri I Durrësit, *Iliria* 1986/2, 151-169.
- MIRAJ L. & ZEKO M. 1993: Conceptual changes in Albanian Archaeology, *Antiquity* 67, 123-125.
- MUÇAJ S. 1987: Bazilika A e Bylisit, *Iliria* 1987/1, 167-202.
- MUÇAJ S. 1990: Sistemi fortifikues I qytetit të Bylisit në antikitetin e vone, *Iliria* 1990/1, 169-190
- MUÇAJ S. 1993: Les Basiliques paléocretiennes de Bylis et leur architecture, in: *XL Corso di Cultura sull'Arte Ravennate e Bizantina*, Ravenna, 569-584.
- PALLAS D. 1971: Epiros, in: RESTLE M. & WESSEL K. (eds), *Real Lexikon zur Byzantinischen Kunst* II, Stuttgart, 207-334.
- PALLAS D. 1977: *Les Monuments Paléochrétiens de Grèce découverts de 1959 à 1973*, Vatican City.
- PANELLA C. 1993: Merci e Scambi nel Mediterraneo antica, in: CARANDINI A., CRACCO RUGGINI L. & GIARDINA A. (eds), *Storia di Roma 3. L'Eta Tardoantica, II Luoghi e le Culture*, Roma, 613-673.
- POPOVIČ V. (ed) 1984: *Villes et Peuplement dans l'Illyricum Protobyzantin. Actes du colloque organisé par l'École Française de Rome. Rome, 12-14 mai 1982*, Rome.
- POTTER T.W. 1995: *Towns in Late Antiquity: Iol Caesarea and its Context*, Sheffield.
- POULTER A. 1992: The use and abuse of urbanism in the Danubian provinces during the Later Roman Empire, in: RICH J. (ed), *The City in Late Antiquity*, London, 1992, 99-135.
- POULTER A. 1995: *Nicopolis Ad Istrum: A Roman, Late Roman and Early Byzantine City*, London.
- Procopius, *Buildings*, trans. H.B. DEWING, 1940, London.
- PURCEL N. 1987: The Nicopolitan Synoecism and Roman urban policy, in: CHRYSOS E., *Nicopolis I. Proceedings of the first international symposium on Nicopolis (23-29 September 1984)*, Preveza, 1987, 71-90.
- RICH J. (ed) 1992: *The City in Late Antiquity*, London.
- ROSKAMS S. 1996: Urban Transition in Early Medieval Britain: The Case of York, in: CHRISTIE N. & LOSEBY S.T. (eds), *Towns in Transition. Urban Evolution in Late Antiquity and the Early Middle Ages*, Aldershot, 1996, 262-287.
- ROSSER J. 1996: Byzantine 'Isles of Refuge' in the *Chronicle of Galaxeidi*, in: LOCK P. & SANDERS G.D.R. (eds), *The Archaeology of Medieval Greece*, Oxford, 1996.
- SODINI J-P. 1975: Note sur deux variantes régionales dans la basiliques de Grèce et des Balkans: Le tribèlon et l'emplacement de l'ambon, *Bulletin de la Correspondance Hellenique* 99, 581-588.
- SODINI J-P. 1984: L'habitat urbain en Grèce à la veille des invasions, in: POPOVIČ V. (ed), *Villes et Peuplement dans l'Illyricum Protobyzantin. Actes du colloque organisé par l'École Française de Rome. Rome, 12-14 mai 1982*, Rome, 1984, 341-397.
- SODINI J-P. 1993: La contribution de l'archéologie à la connaissance du monde byzantin (IV^e-VII^e siècles), *Dumbarton Oaks Papers* 47, 139-184.
- TARTARI F. 1982: Amforat e muzet arkeologjik të Durrësit, *Iliria* 1982/2, 240-279.
- TRINCI CECCELLI M.M. 1979: I mosaici di Santa Maria della Croce a Casaranello, *Puglia Paleocristiana* III, 413-448.
- UGOLINI L.M. 1932: *Albania Antica Volume II. L'Acropoli Di Fenice*, Roma.
- UGOLINI, L.M. 1936: Il Cristianesimo e l'Organizza-

- zione Ecclesiastica a Butrinto (Albania), *Orientalia Christiana Periodica* II, n. I-II, 309-329.
- UGOLINI L.M. 1937: *Il mito d'enea gli scavi*, Roma.
- WISEMAN J. 1984: The city in Macedonia Secunda, in: POPOVIČ V. (ed), *Villes et Peuplement dans l'Illyricum Protobyzantin. Actes du colloque organisé par l'École Française de Rome. Rome, 12-14 mai 1982*, Rome, 1984.
- WHITEHOUSE D. 1966: Medieval painted pottery in South and Central Italy, *Medieval Archaeology* 10, 30-44.
- WOZNIAK F. 1987: Nicopolis and the Roman defence of Epirus, in: CHRYSOS E., *Nicopolis I. Proceedings of the first international symposium on Nicopolis (23-29 September 1984, Preveza, 1987)*, 263-267.

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La Maison d’ Henri le Navigateur. Les maisons médiévales de la Douane et de la Monnaie, un centre de la couronne portugaise dans la ville de Porto (Portugal)

La ville de Porto dans l’Europe du bas moyen âge

A l’époque qui nous concerne, Porto était une des villes les plus importantes du Royaume du Portugal, étant bien insérée dans le réseau international de voies commerciales qui la mettait en liaison avec les ports de l’Europe atlantique aussi bien que les ports de la Méditerranée occidentale (fig. 1). En effet, après l’ouverture du Déroit de Gibraltar à la navigation chrétienne, à la fin du XIII^{ème} siècle, la côte portugaise se situait désormais à mi chemin sur la plus importante route de commerce de l’Europe qui reliait les villes italiennes à celles de l’Europe du Nord. Ainsi, les villes de la côte portugaise étaient non seulement en liaison avec la Méditerranée, mais encore cessaient d’être une périphérie dans le cadre de la navigation atlantique avec l’Europe du Nord. Depuis ce moment apparaissent des sources documentaires mentionnant la présence régulière de marchands

italiens au Portugal, en même temps que s’enregistre une soudaine augmentation des liaisons avec les ports de la France, de l’Angleterre et de la Flandre. La ville de Porto a bien réussi à s’insérer dans cette nouvelle situation. Les liaisons les plus anciennes et fréquentes semblent avoir été établies avec la France, la Flandre et l’Angleterre. C’est seulement dans la 2^{ème} moitié du XIV^{ème} siècle qu’on trouve les premières références au commerce entre la ville de Porto et la Méditerranée. Cependant, dans la charte de la Douane de Porto, daté de 1410, il n’y a encore aucune mention d’un commerce avec les ports méditerranéens, seules les relations commerciales avec la Galice, la Biscaye, la France, l’Angleterre ou la Flandre étant mentionnées (Alfandega 1990, 84-87). Tout au long de ce siècle on voit se multiplier les allusions à la présence des marchands de Porto dans les ports de Valence, d’Aragon, de la Catalogne ainsi que dans le Nord de l’Italie, à Pise et à Gênes. Cette présence c’est maintenu au moins jusqu’au milieu du XVI^{ème} siècle, quand la navigation portugaise s’est orientée vers d’autres directions (Fonseca 1980).



Fig. 1 - Localisation de la ville de Porto, située sur la côte atlantique du Nord du Portugal.

Développement urbain de Porto au bas moyen âge et construction de la “Maison d’Henri, le Navigateur”

L’existence de deux pôles urbains a joué un rôle très important dans le développement de la ville de Porto, comme d’ailleurs dans beaucoup d’autres villes et bourgs portugais: la partie haute (*Alta*), siège du pouvoir politique et militaire, et la partie basse ou *Ribeira*, endroit privilégié pour l’expansion des activités productives et commerciales aux abords du fleuve Douro. La partie haute, fortifiée depuis au

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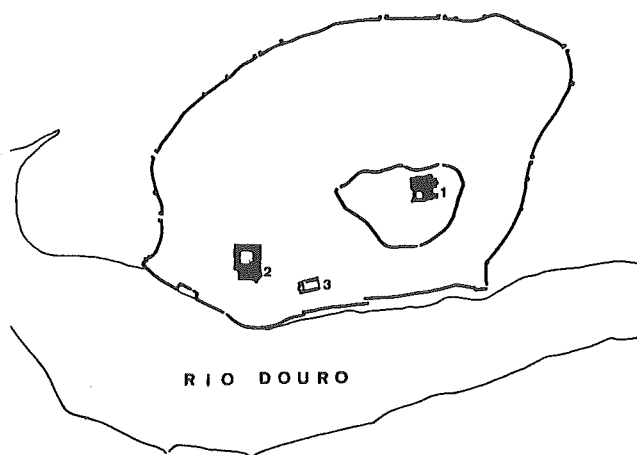


Fig. 2 - Plan de Porto bas-médiéval avec la localisation de la Maison d'Henri, le Navigateur.

L'expansion urbaine indiquée par les limites de la Cerca velha (enceinte ancienne; XIIème siècle) et de la Cerca fernandina (enceinte du Roi Ferdinand Ier; XIVème siècle). Points de référence dans la ville bas-médiévale: n° 1: Sé Catedral (Siège Épiscopal; XIIème-XIIIème siècles); n° 2: Mosteiro de S. Francisco (monastère de Saint-François; XIIIème siècle; n° 3: Casas da Alfândega e da Moeda/Casa do Infante (Douane et Hôtel de la Monnaie/Maison d'Henri, le Navigateur; XIVème siècle).

moins la crise du IIIème siècle, a connu plus tard, au XIIème, la reconstruction de ses murailles, ce qui a donné origine à la *Cerca Velha* (Enceinte Ancienne; fig. 2). En même temps, la juridiction du bourg et du territoire limitrophe était confié à l'Évêque. La Cathédrale (Sé; fig. 2, n° 1) et le Palais Épiscopal (*Paço do Bispo*), dont la construction a débuté aux XIIème et XIIIème siècles, sont dorénavant devenus des éléments dominants dans le paysage urbain de Porto.

Le développement du commerce maritime international et la perception des impôts sur ce commerce ont été à l'origine des conflits qui ont opposé le Roi à l'Évêque pendant les XIIIème et XIVème siècles. Il s'agissait du droit de chacun à l'usage du fleuve, au moment où le secteur contigu au fleuve connaissait une forte expansion urbaine. L'installation des monastères de *S. Francisco* (Saint-François; fig. 2, n° 2) et de *S. Domingos* (Saint-Dominique), initiée en 1234 et 1238, marque un moment important de cette expansion urbaine. Mais c'est surtout la construction de la Douane (*Alfândega*; fig. 2, n° 3) qui a marqué pour l'avenir l'affirmation croissante du pouvoir royal et qui a aidé à définir le cadre du développement urbain de la partie de la ville avoisinant au fleuve.

L'impôt de la *Dizima* (dîme) sur le commerce international avait apparu, depuis le siècle précédent, comme un droit inhérent au Roi qui développait un acharnement spécial pour le défendre. À Porto, la tutelle des revenus douaniers était précisément à l'origine du conflit qui opposait le monarque à l'évêque, seigneur de la ville. Le contrôle de la partie de la ville proche du fleuve, appelée *vila baixa* (le bas bourg), où les vaisseaux accostaient, était alors déterminant pour la perception des droits douaniers. En 1325, les travaux pour la construction de l'édifice de la Douane royale, à peine commencés, ont immédiatement engendré la protestation de l'Évêque et du Chapitre plaquant que l'endroit se situait dans les limites de la seigneurie épiscopale. L'édifice ayant été achevé malgré cette opposition, le différend continuait encore en 1354, obligeant le Roi à rédiger un large mémorandum justifiant la construction par la nécessité d'un espace réservé à l'enmagasinage des marchandises



Fig. 3 - Vue de l'espace médiéval de Porto.

Le bourg haut où se détachent le Siège et le Palais épiscopaux, symboles du pouvoir de l'Évêque, seigneur de la ville, domine la partie de la ville avoisinant au fleuve, en expansion depuis le XIIIème siècle. C'est ici que sont installés les monastères de *S. Francisco* (Saint-François) et de *S. Domingos* (Saint-Dominique). Au siècle suivant, le Roi Afonso IV a fait construire la Douane, puis son petit fils, le Roi Fernando Ier, a ajouté l'hôtel de la Monnaie.

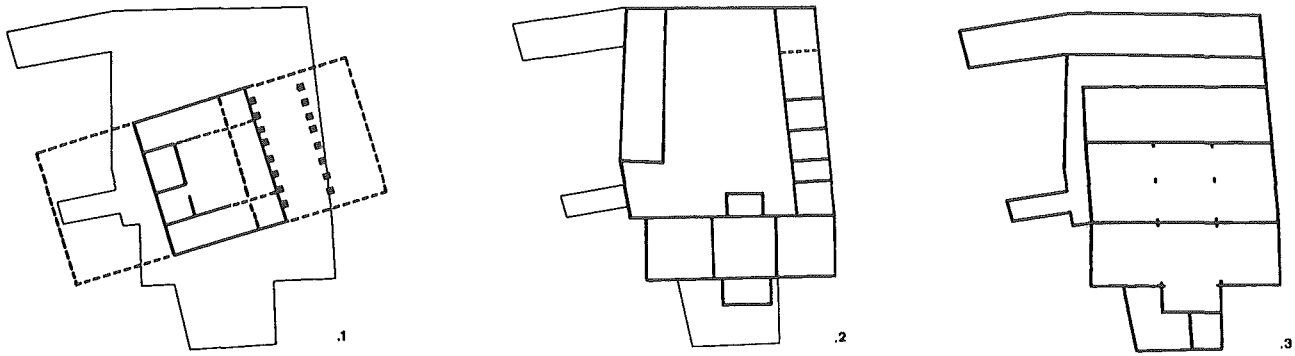


Fig. 4 - Plan schématique des trois phases de l'organisation de l'espace édifié à la Maison d' Henri, le Navigateur.
 1: Époque romaine (III/IVèmes siècles); 2: Époque médiévale (XIVème au XVIIème siècles); 3: Époque moderne (XVII/ XVIIIèmes siècles au XXème siècle).

déchargées des vaisseaux, et aussi pour le logement des officiers du Roi. Les bénéficiaires seraient mutuels, pour la Couronne et pour l'Évêque qui percevait la *redizima* (le dixième de la dîme).

En même temps, on a eu le besoin de bâtir une plus vaste enceinte comprenant les nouveaux espaces de la ville. La construction de la nouvelle muraille, la *Cerca Fernandina*, a été commencée en 1334 et conclue dans la 2ème moitié de ce siècle, sous le règne de Ferdinand Ier. Ce roi fut également responsable de la création de l'Hôtel de la Monnaie de Porto, juste à côté de la Douane.

De l'époque romaine au XXème siècle

Les anciennes maisons de la Douane et de la Monnaie de Porto font l'objet d'une intervention archéologique depuis 1991¹ (Real *et al.* 1992; Dordio *et al.* 1994; Real *et al.* 1995; Dordio *et al.* 1997). Cet ensemble connu comme *Casa do Infante* d'après la tradition qui localise ici la naissance de l'Infant Henri, le Navigateur, a permis l'identification d'une séquence d'occupation longue et bien préservée, depuis l'époque romaine jusqu'à nos jours.

La découverte dans cette zone tout près du fleuve des niveaux datés de l'antiquité tardive, avec alignement de constructions d'orientation différente de celles de l'époque médiévale, a permis la définition d'une large maison avec plusieurs pavements en mosaïque polychrome (fig. 4, n° 1), a constitué une significative contribution à la connaissance de l'origine et de l'évolution de la ville.

Se superposant aux vestiges de l'abandon des constructions de l'antiquité tardive et des réoccupations partielles datées du haut moyen âge, les niveaux de la période comprise entre les XIVème et XVIème siècles correspondent aux premières phases du développement des maisons de la Douane. Celles-ci ont leur origine dans un édifice de plan rectangulaire constitué par deux tours avec auvents orientés vers une cour centrale, qui a été construite aux alentours de 1325. Encore au XIVème siècle doit être daté le début de la Monnaie localisée dans un espace attenant à la Douane et constituant avec celle-ci une unité parfaitement individualisée dans la maille urbaine. Son organisation interne est celle d'un véritable quartier avec habitations et ateliers distribués dans deux ailes de constructions enveloppant un ample espace ouvert, désigné par la documentation contemporaine comme *pateo da Moeda* (cour de la Monnaie; fig. 4, n° 2). Ce "complexe industriel" de la Monnaie de Porto a fonctionné jusqu'à la fin du XVIème siècle, quand il a été fermé. Aux alentours de 1628, les maisons ruinées de l'ancienne Monnaie ont été adaptées pour servir comme magasins de pain et sucre, à louer.

Cette organisation des espaces a été drastiquement reformulée avec les travaux de la deuxième moitié du XVIIème siècle (1656 à 1677), en grande partie responsables pour la structure actuelle de la Maison d' Henri, le Navigateur (fig. 4, n° 3). Dans la deuxième moitié du XVIIIème siècle, de nouveaux travaux dans l'édifice, en rapport avec une phase intense de réforme dans l'administration de la Douane, ont conclu la démolition des anciennes maisons de la Monnaie. Cependant, la Monnaie avait été réactivée depuis

¹ L'intervention archéologique à la Maison d' Henri, le Navigateur, fait partie d'un projet municipal de rénovation des installations des Archives Historiques Municipales. La coordination du projet est assurée par Manuel Luis Real, Directeur du Département des Archives, et la direction des travaux archéologiques par Paulo Dordio et Ricardo Jorge Teixeira. L'équipe

archéologique est encore constituée par António Luís Pereira (fouilles et enregistrement), Isabel Alexandra Lopes (objets métalliques), Manuel Araújo (photographie et dessin), Paula Cristina Barreira (objets céramiques), Pedro Baere de Faria (dessins d'objets) et Susana Cosme (fouilles et enregistrement; verreries).

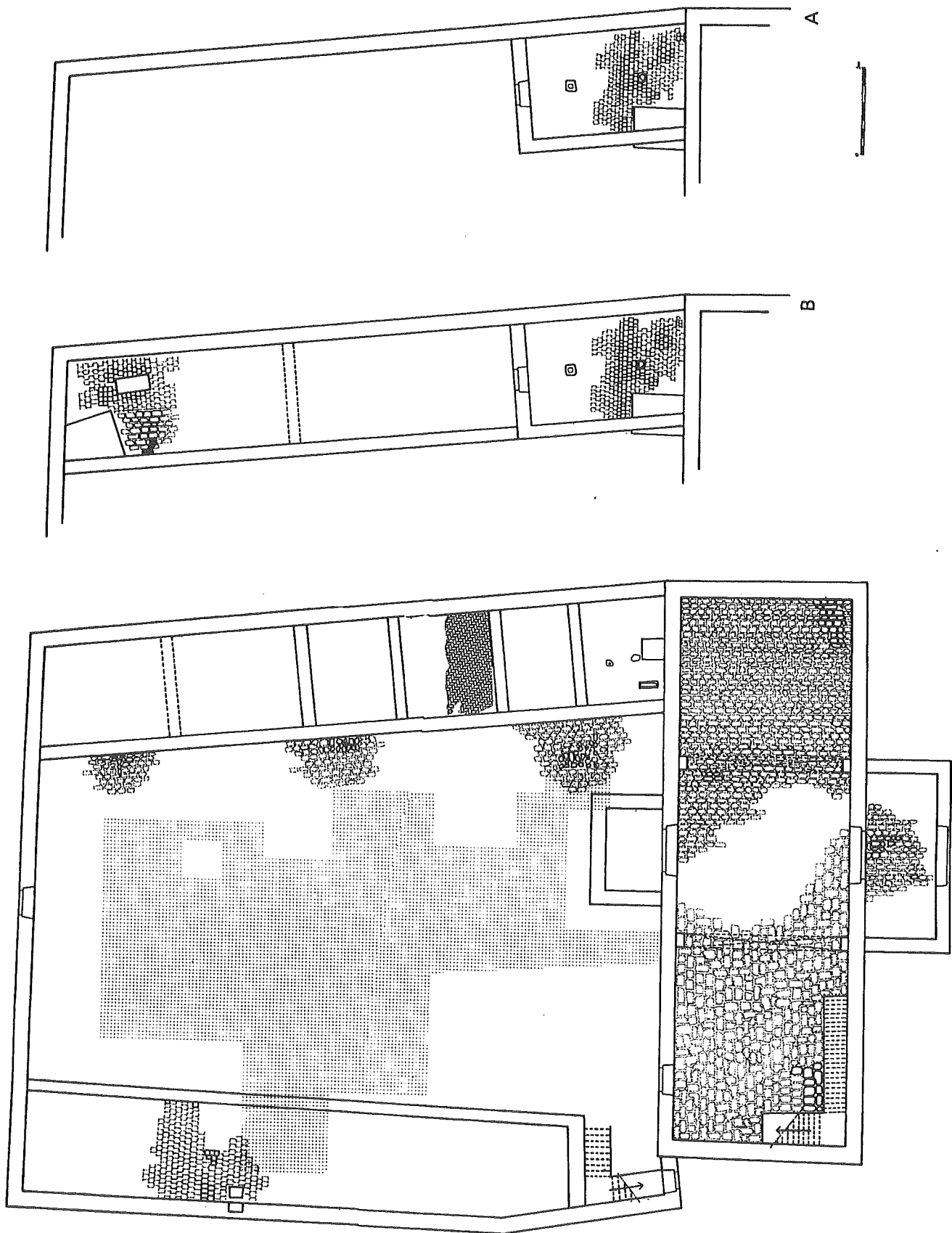


Fig. 5 - Plan des Maisons de la Douane et de la Monnaie (XIV^{ème} au XVII^{ème} siècles).
Plan général montrant l'organisation de l'espace édifié au moment de la réforme datée du 3^{ème} quart du XVII^{ème} siècle.
Plan partiel de l'aile sud des maisons de la Monnaie: A. fin du XIV^{ème} /début du XV^{ème} siècles; B. fin du XVI^{ème} siècle.

1688 et pendant le siècle suivant, se situant maintenant à l'intérieur du nouveau édifice de la Douane (fig. 8), qui aux alentours de 1860 a finalement cessé de loger cette institution.

Classé comme monument historique national en 1924, l'édifice a été l'objet d'une restauration par l'État à la fin des années 50. L'Archive Historique Municipale, installée ici par la suite, a réalisé l'étude historique documentaire et architectonique de l'édifice et de l'institution douanière. Le projet d'agrandissement et de transformation des actuelles installations de l'Archive Historique a créé les conditions pour qu'une intervention archéologique puisse développer l'investigation déjà commencée et préserver les vestiges identifiés en vue de leur valorisation et intégration dans le projet.

Les Maisons de la Douane et de la Monnaie (du XIV^{ème} au milieu du XVII^{ème} siècles)

De plan rectangulaire, la douane royale avait deux hautes tours et une cour centrale (fig. 6). Les murs des tours sont conservés à quelques endroits jusqu'au 3^{ème} étage et ses fondations se trouvent bien établies sur terrain ferme. L'implantation de l'édifice sur une pente, tout proche du fleuve, a amené les bâtisseurs de la première moitié du XIV^{ème} siècle à chercher la roche mère. L'analyse photogrammétrique, qui a rendu possible la reconstitution des baies et des hauteurs originales, et les fouilles archéologiques ont permis de reconnaître l'organisation des intérieurs des tours et son évolution. Dans sa phase initiale, les sols du rez-de-chaussée étaient en terre battue, plusieurs fois réparés. Durant la fouille de ces sols, dans la tour sud, on a repéré, le long d'un de ses murs, une concentration de clous, petits morceaux de bois et plusieurs trous de poteau, qui ont permis la localisation de l'escalier assurant l'accès aux étages supérieurs de la tour. Dans l'angle symétriquement opposé de l'autre tour, la charpente d'un escalier en bois a également laissé plusieurs trous dans les murs.

Aux XV^{ème} et XVI^{ème} siècles, les travaux d'amélioration de l'édifice ont entraîné la substitution des sols de terre par des pavements dallés (fig. 5). À cette époque, l'accès aux étages supérieurs de la tour nord a aussi été ennobli par la construction d'un escalier en pierre. Les fondements de ce nouvel escalier sont une structure en angle le long des murs ouest et nord. Reculés par rapport aux arcs donnant accès à la cour centrale, il y avait des cloisons séparant l'espace intérieur des tours d'une partie en forme de portique ouvrant sur la cour. Les trous de la charpente en bois de ces cloisonnements étaient visibles sur les murs et le sol des deux tours. L'accès de l'extérieur à la cour

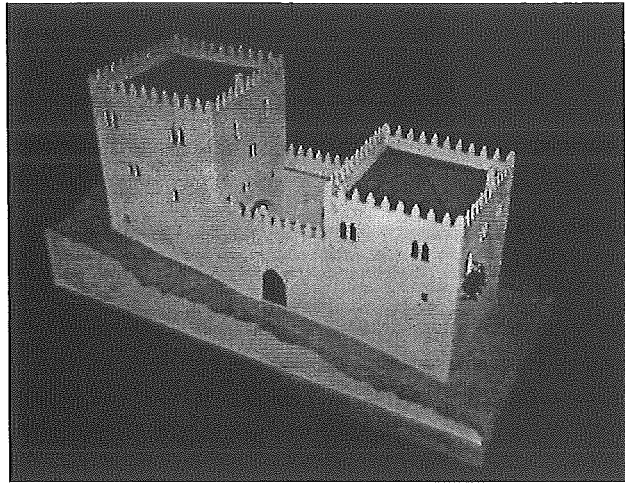


Fig. 6 - Maquette de reconstitution de l'édifice de la Douane (XIV^{ème} siècle)

s'effectuait par deux portes disposées symétriquement et ennoblies au XV^{ème} siècle par la construction de porches. La découverte d'une inscription a permis de dater de 1432 ces travaux qui ont été effectués sous la direction de Gabriel Gonçalves, nommé *almoxarife* (receveur des recettes du Roi) en 1461.

La tradition qui localise dans cet édifice la naissance de l'Infant Henri, le Navigateur, lors d'un long séjour de la famille royale dans la ville, se lie avec la discussion sur l'interprétation fonctionnelle de l'édifice. L'emmagasiner des marchandises et le service douanier étaient compatibles avec le logement des officiers du Roi dans les étages supérieurs des tours, étant attesté par des références d'archives qui semblent même y localiser l'habitation de l'*almoxarife* aux XIV^{ème} et XV^{ème} siècles (Real 1994b).

Derrière la Douane royale se situait un large espace délimité par des hauts murs, où le Roi Fernando

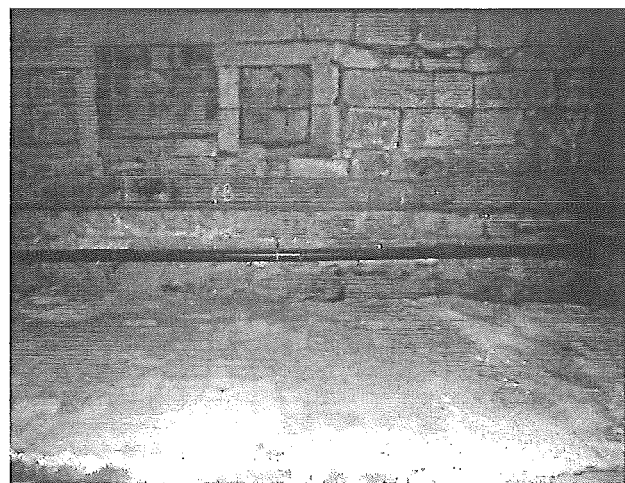


Fig. 8 - Fourneau du XVII^{ème} siècle conservé dans le mur de la nouvelle Monnaie (vers 1688).

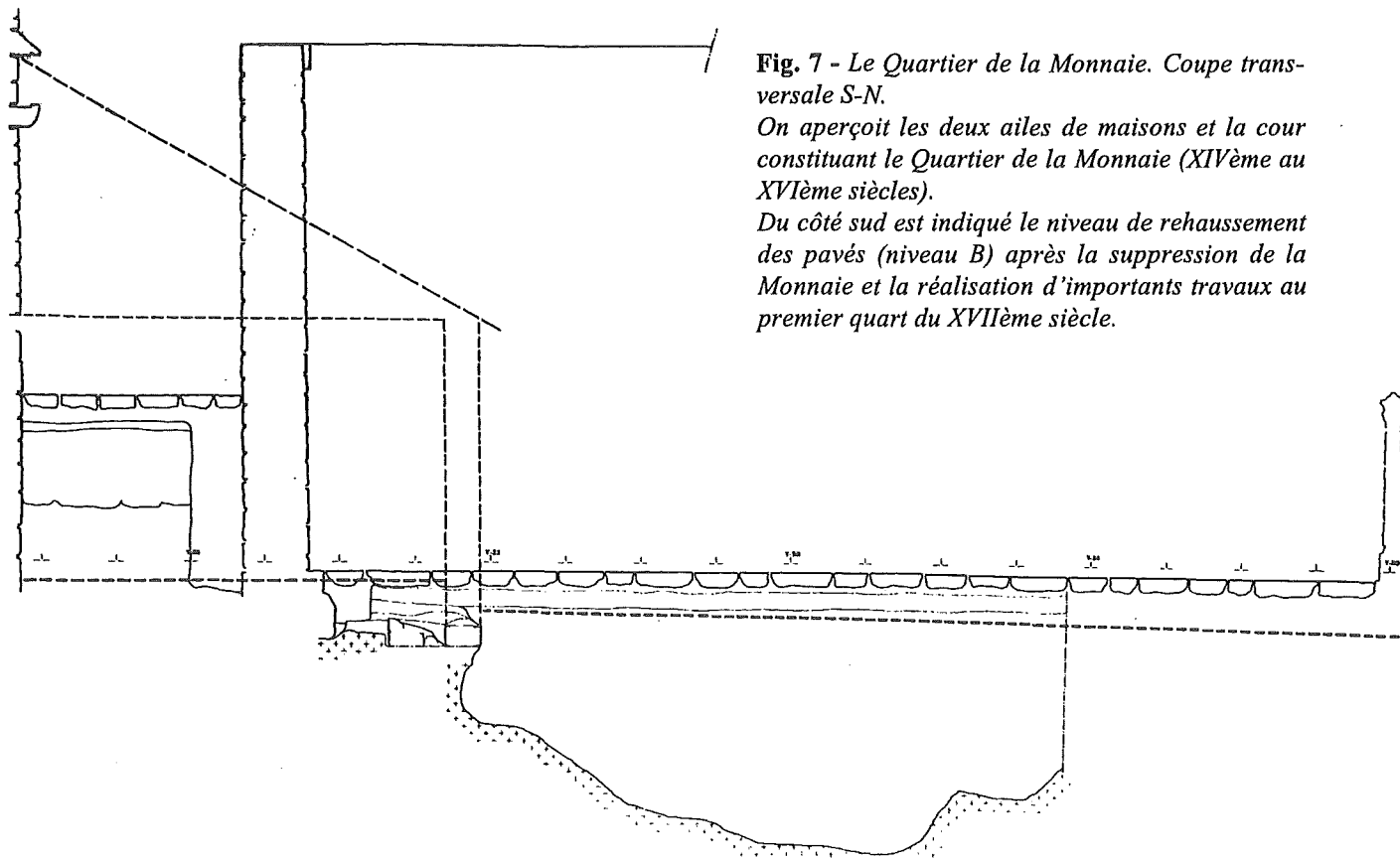


Fig. 7 - Le Quartier de la Monnaie. Coupe transversale S-N.

On aperçoit les deux ailes de maisons et la cour constituant le Quartier de la Monnaie (XIV^{ème} au XV^{ème} siècles).

Du côté sud est indiqué le niveau de rehaussement des pavés (niveau B) après la suppression de la Monnaie et la réalisation d'importants travaux au premier quart du XVII^{ème} siècle.

Ier avait fait installer la Monnaie de Porto² (fig. 5). Des références d'archive et des vestiges architectoniques encore visibles aujourd'hui, indiquaient la localisation des bâtiments appartenant à cet atelier monétaire derrière les murs des maisons de la rue *Nova*, lesquels constituaient la limite nord de la propriété royale. On reconnaît dans ces murs les trous d'appui des charpentes et les corbeaux de support de la toiture. Les fouilles ont reconnu ensuite l'autre mur opposé, délimitant l'espace intérieur des maisons pavées avec des briques (fig. 7). De l'autre côté, une rangée de maisons s'appuyait sur le mur limite sud. Ici, de meilleures conditions de préservation ont permis la fouille de plusieurs structures architectoniques (pavés de terre, de dalles et de briques; murs de cloisonnement) se superposant.

On a recensé différentes réparations pendant la période d'activité de la Monnaie de Porto, c'est à dire à peu près 200 ans, entre la fin du XIV^{ème} et le début du XVII^{ème} siècle. Cependant, des transformations plus importantes ont eu lieu au premier quart du XVII^{ème} siècle quand la Monnaie avait déjà été abandonnée et ses anciennes installations se trou-

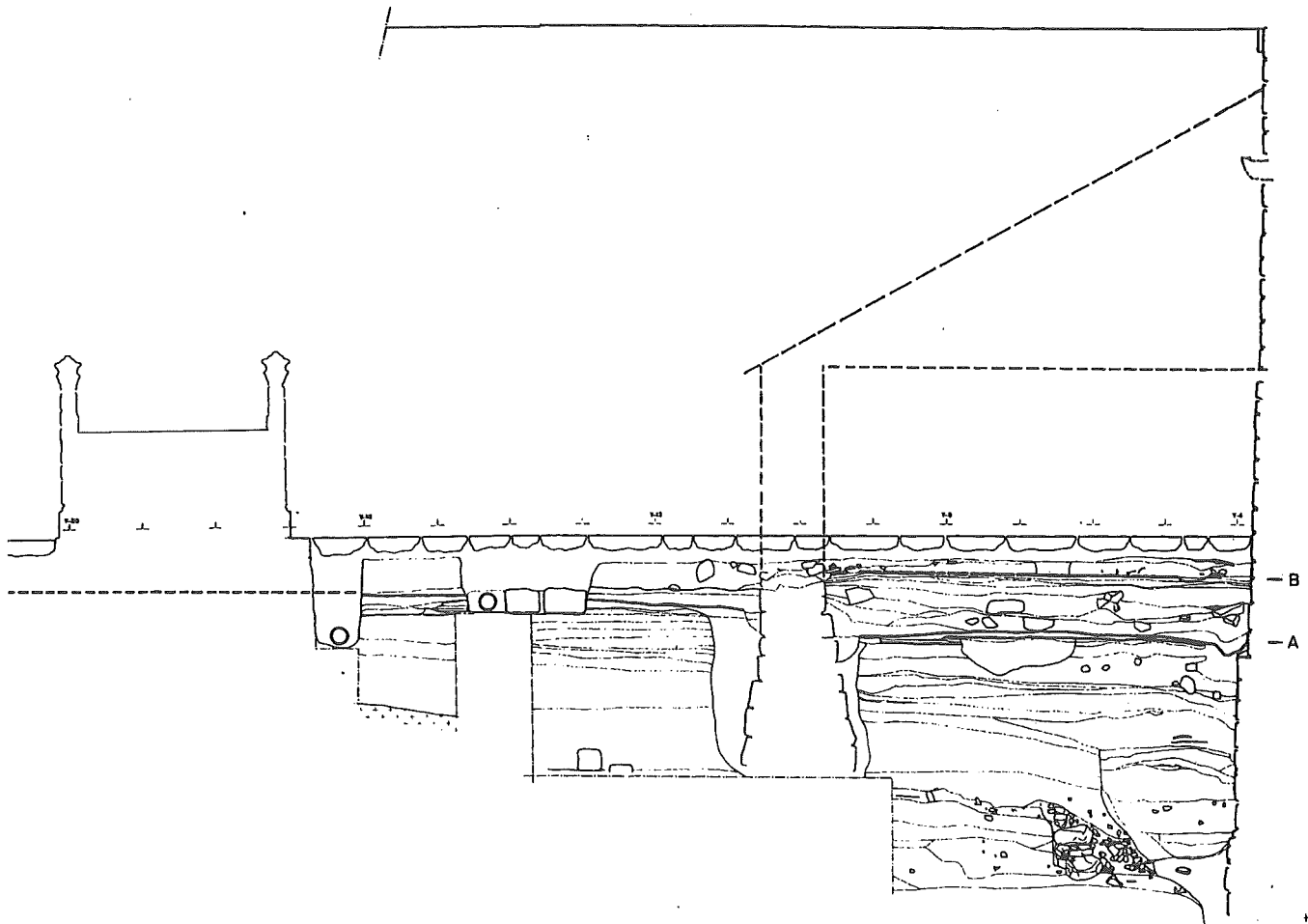
vaient en ruines. En 1608, le Roi a fait donation de ces maisons à la municipalité qui voulait y installer des greniers. Par la suite, la municipalité a fait exécuter des travaux, entre 1621 et 1628, pour mieux les adapter aux nouveaux besoins. C'est à cette occasion que les sols de terre battue ont été rehaussés (fig. 7, niveaux A et B), les murs de la façade ont été remontés avec une autre structure et probablement surélevés d'un nouvel étage. Plus tard, en 1656, lors du début des travaux de démolition et d'élargissement de l'édifice de la Douane, les magasins et les services douaniers ont été temporairement transférés dans ces maisons avant leur presque complète destruction.

Le dédouanement

L'interprétation des espaces des anciennes maisons de la Douane de Porto doit tenir compte des activités de dédouanement, dont le but principal était la fiscalisation du paiement des impôts de la *dízima* et de la *sisá*. Après l'entrée des bateaux dans l'estuaire du Douro et la visite à bord des officiers douaniers, les

² Lisboa et Porto ont été les deux hôtels de la monnaie les plus importants du royaume de Portugal pendant la période comprise entre la fin du XIV^{ème} siècle et le début du XVII^{ème}. Quelques

autres ont aussi travaillé mais toujours temporairement, comme ce fut le cas de la Monnaie d'Evora entre 1386 et 1398.



marchandises étaient déchargées et emmenées à la Maison de la Douane pour être fiscalisées. La *dízima* était l'impôt que l'on payait au roi pour toute marchandise importée ou exportée du royaume, étant de 10% de la valeur du produit en espèce ou en nature. La *sisá* était un autre impôt de 10%, à payer moitié par le vendeur, moitié par l'acquéreur.

Les toiles et autres textiles constituaient, aux XIV^{ème}, XV^{ème} et XVI^{ème} siècles, la plupart des importations, étant donc d'un intérêt spécial pour les officiers du roi. Avant d'être fiscalisés, les textiles étaient scellés pièce par pièce avec des sceaux en plomb, prouvant la légalité de leur entrée au royaume ainsi que leur fiscalisation. Ceci était fait par un scelleur devant la table de douane (*Mesa do Despacho*) présidée par le juge de la douane (*juíz da alfândega*), l'*almoxarife* et le greffier (*escrivão*). Le greffier des *sisas* – il y en avait parfois deux, selon les différents types de textiles – était aussi présent. Sur ordre du juge, un portier laissait entrer quatre marchands à la fois. Leurs produits étaient alors mesurés par le *medidor* et un assistant, ainsi que pesés. Le juge évaluait alors les produits. Tout était soigneusement enregistré et la *dízima* payée par les marchands, le juge de la douane laissait finalement entrer les acheteurs, un par un. La plupart des transactions s'effectuait ainsi

à l'intérieur de la Douane (Souza 1783; Lencastre 1891; Pereira 1983, 77-85; Ferreira 1983, 83-94). Cet ordre établi dans les règlements était, dans la pratique quotidienne remplacé par la confusion régnant dans la douane, ce qui entraînait la présence de nombreuses personnes dans les lieux de dédouanement. La documentation mentionne aussi différents espaces comme la *casa de dentro*, où l'on accumulait les impôts reçus pendant la journée et la *casa de cima*, où finalement l'argent et les marchandises étaient déposés (Pereira 1983, 31).

Une significative accumulation de sceaux en plomb et de restes de fonte de ce métal sur une superficie limitée du sol en terre dans la tour nord (fig. 9) éclaire ces opérations de contrôle des marchandises, probablement effectuées à ces mêmes endroits. Cependant, la plupart des sceaux provient des centres producteurs de textiles de l'Europe du nord, comme par exemple Augsbourg en Allemagne, Haarlem en Hollande et plusieurs villes d'Angleterre (fig. 12). Il est probable que ces sceaux étrangers, utilisés à l'origine pour le contrôle de la qualité des produits et leur taxation (Egan 1995 et 1996), étaient refondus, le plomb étant alors réutilisé par les officiers portugais pour leurs sceaux.

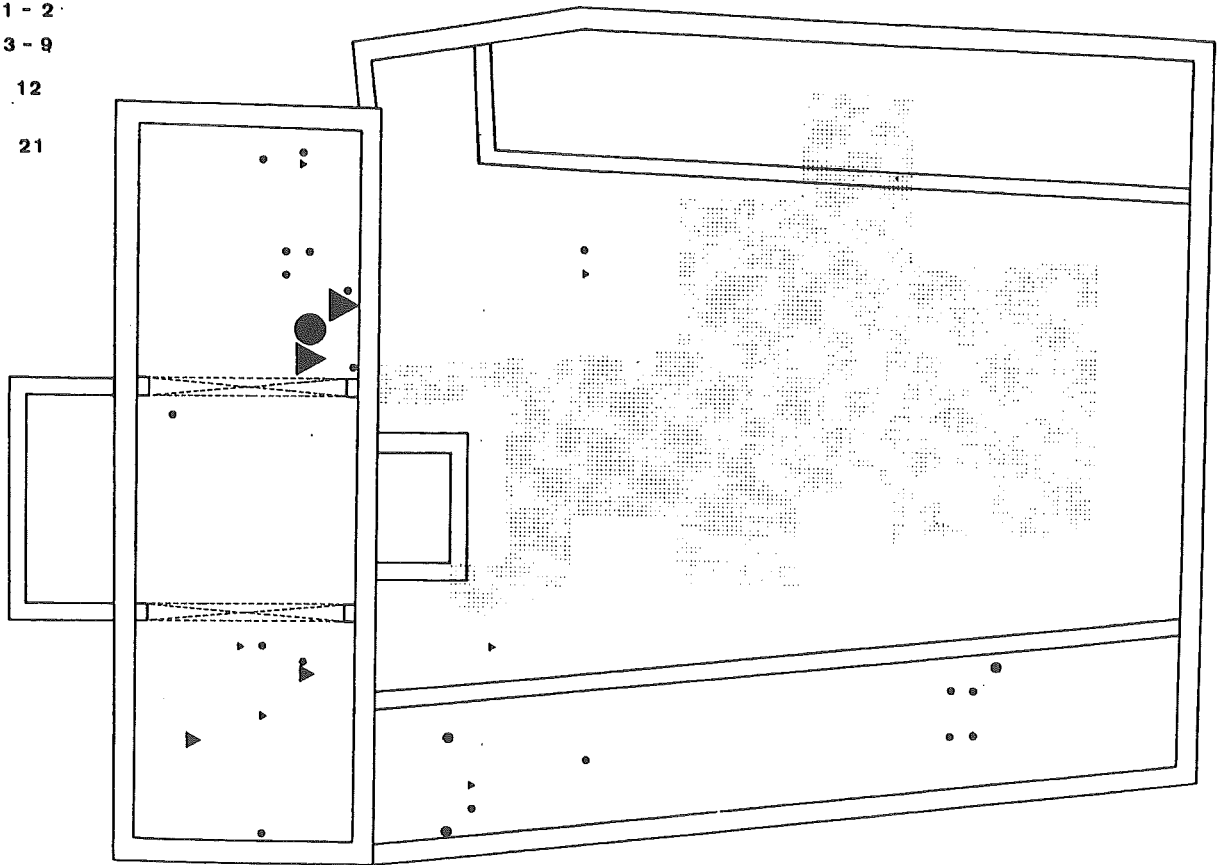
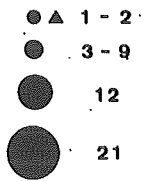
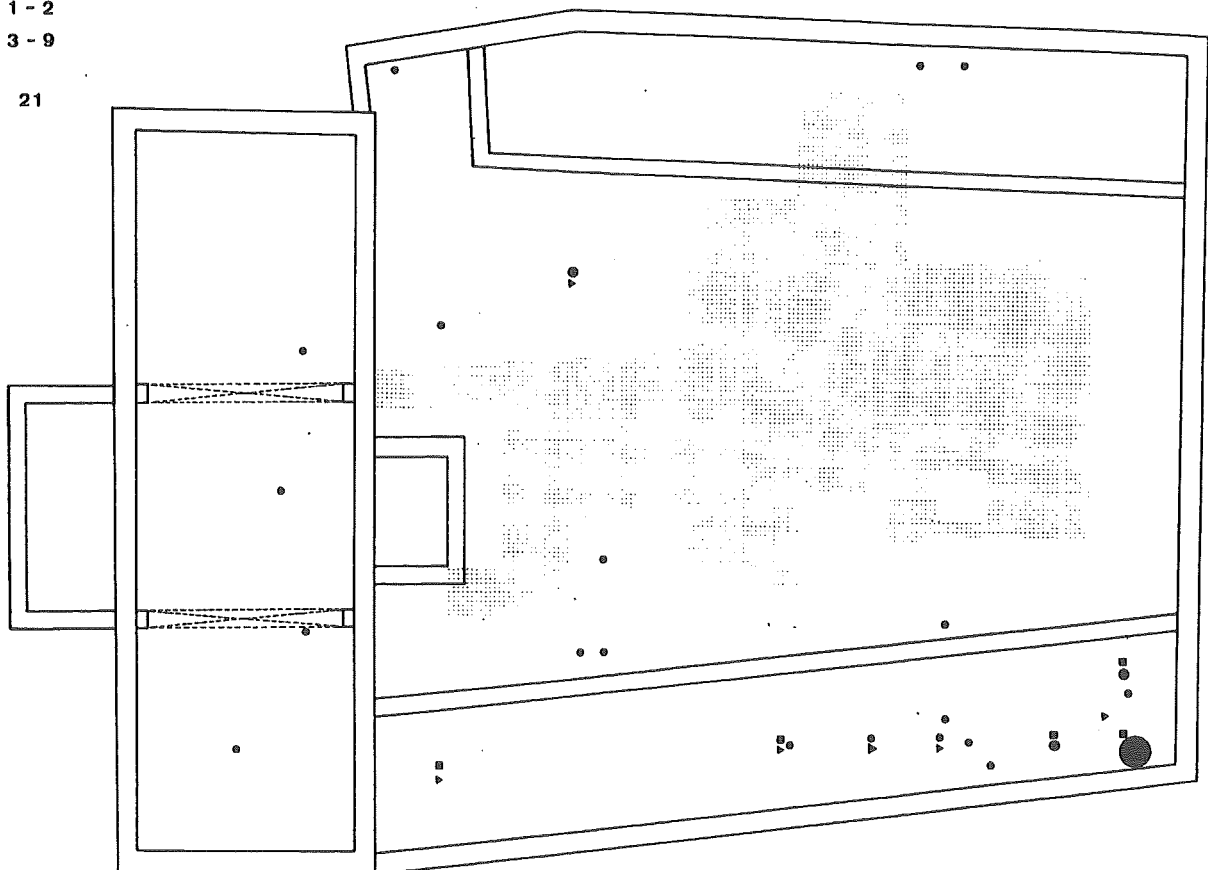
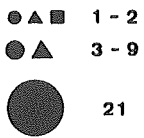


Fig. 9 - Distribution spatiale des sceaux en plomb et des déchets de fonderie. Cercles: sceaux. Triangles: déchets de fonderie. Les triangles majeurs indiquent des moyennes et grandes concentrations.

Fig. 10 - Distribution spatiale des creusets et des coupelles. Cercles: coupelles (Types 1A, 1B e 1C de la fig. 13). Triangles: creusets à bouche triangulaire (Types 3 e 4 de la fig. 13). Carrés: creusets coniques (Type 2 de la fig. 13).



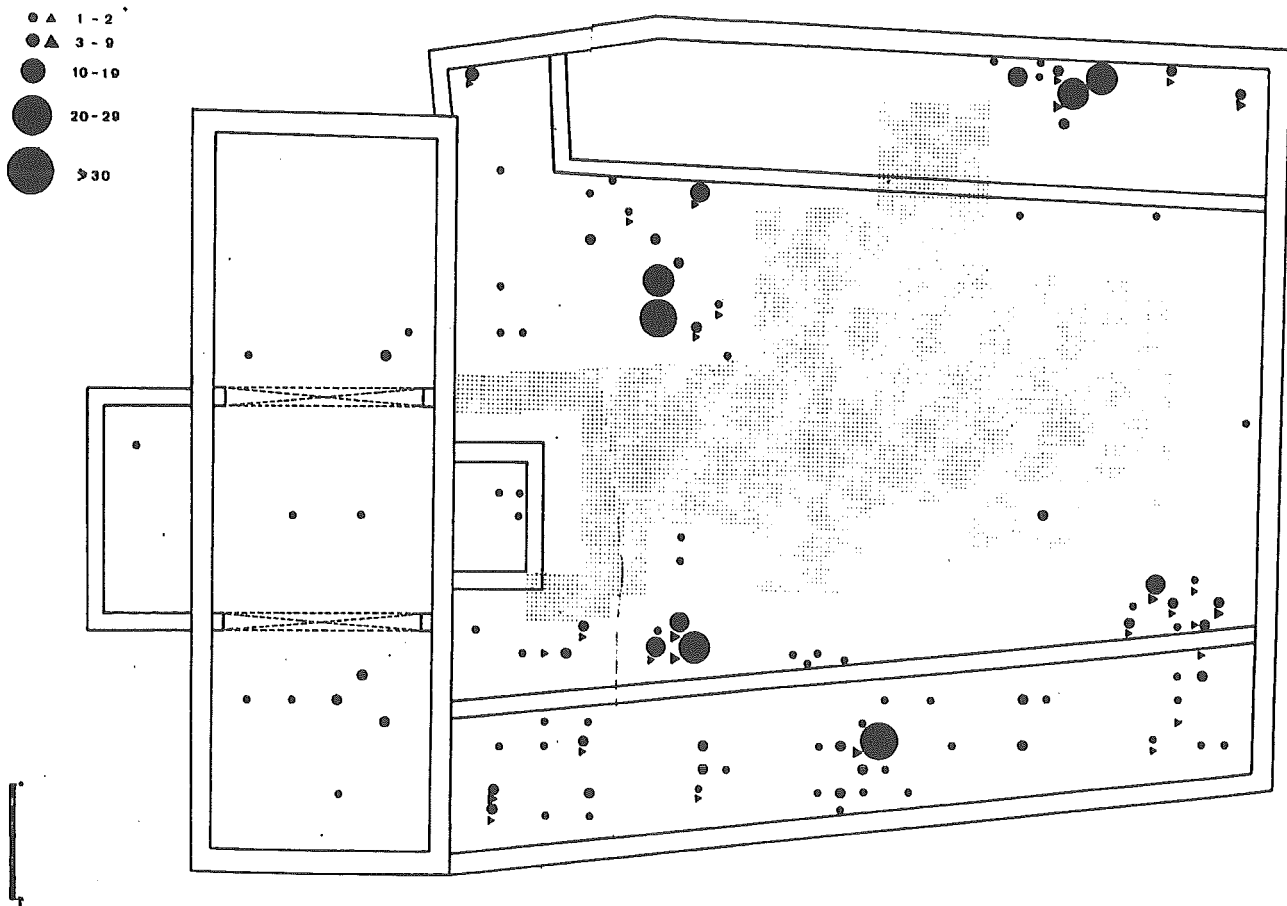


Fig. 11 - Distribution spatiale des flans. Cercles: flans. Triangles: cisailles de flans.

Le monnayage

La possibilité d'une intervention archéologique de grande surface dans un atelier de monnayage ayant servi de la fin du XIV^{ème} (première mention d'activités antérieures: 1370) à la fin du XVI^{ème} siècle (dernières références d'activité: 1587/90; extinction officielle: 1607) est certainement l'un des aspects les plus intéressants des fouilles en cours, surtout parce que les travaux archéologiques sur des ateliers de monnayage demeurent rares³. S'offre aussi la possibilité de comparaison avec la riche documentation écrite sur ce sujet. Le règlement de l'Hotel de la Monnaie de Porto octroyé en 1392 par D. João Ier laisse entrevoir les principales lignes d'organisation (Ferro 1974, 106ss., doc. n°3). Ce document mentionne une grande quantité de personnel spécialisé. Un groupe de spécialistes s'occupait de la sélection des métaux et de



Fig. 12 - Endroits de provenance des sceaux identifiés à la Douane de Porto (1) en Europe du Nord. 2: Essex (Angleterre); 3: Haarlem (Hollande/Pays-Bas); 4: Augsburg (Allemagne).

³ Nous avons connaissance des interventions effectuées dans les ateliers du Palais de l'Archevêque de Trondheim (Norvège), ayant fonctionné entre 1458/1483 et 1537 (McLees 1994) et ceux de Legge's Mount dans la Tour de Londres, désactivés entre 1530 et 1560 (Parnel 1993). Nous remercions Geoff Egan pour sa collaboration en matière de bibliographie.

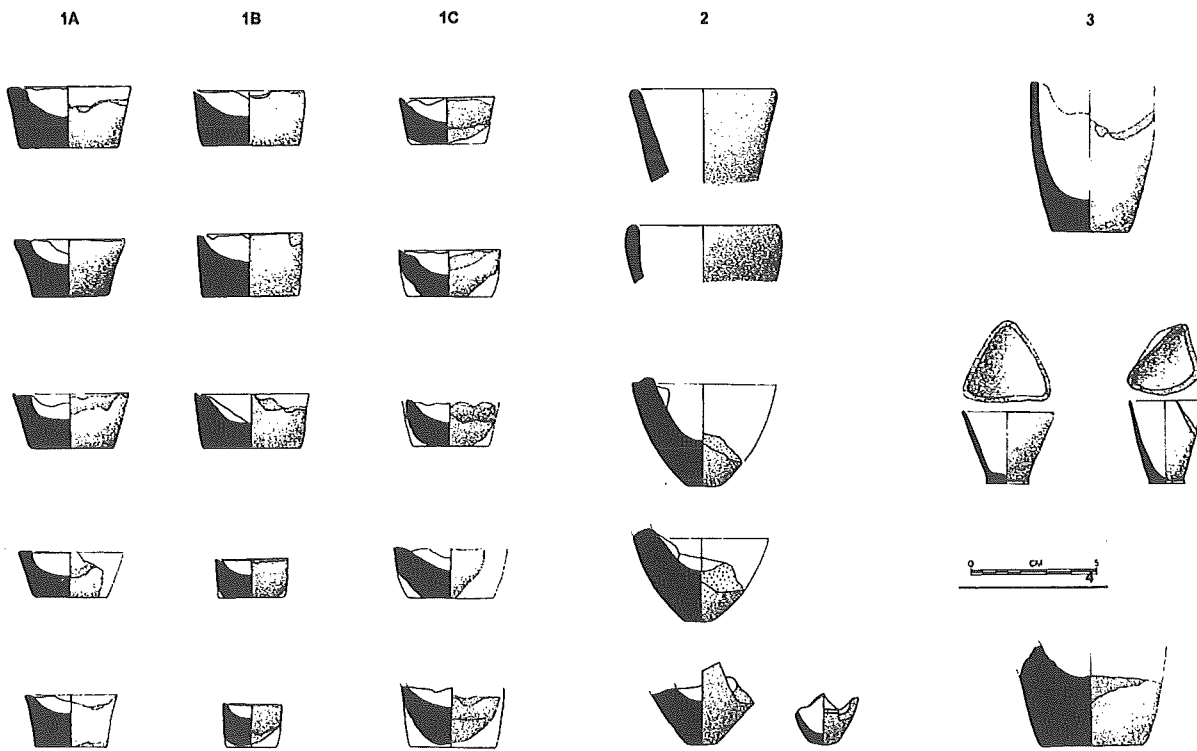
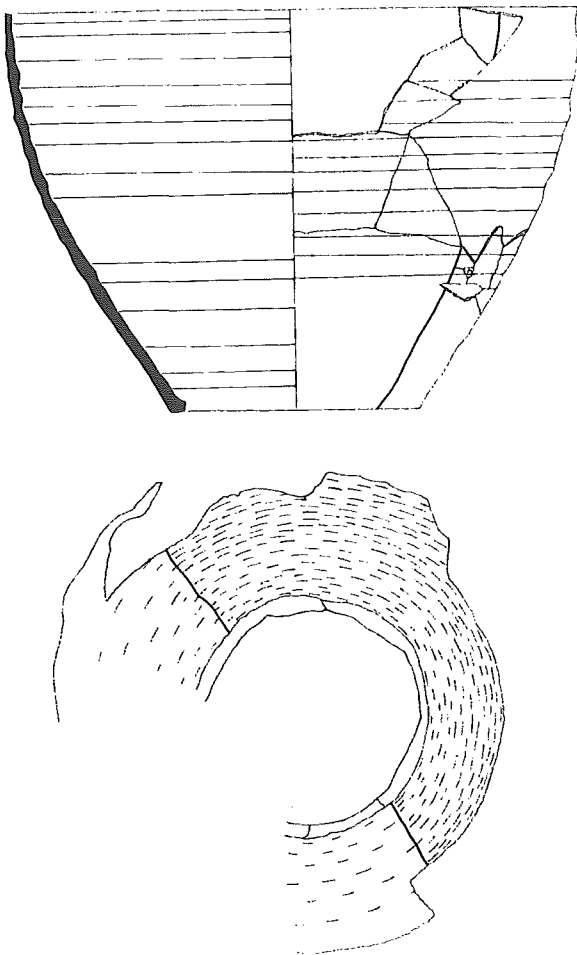


Fig. 13 - Tableau typologique des creusets et des coupelles de la Monnaie de Porto.

1: Coupelles: 1A parois obliques; 1B parois verticales; 1C avec usure d'utilisation à la base. 2: Creusets coniques; 3 e 4: creusets à bouche triangulaire.



la mise au point des alliages jusqu'au découpage des flans, dans l'espace des fours (*fornaças*). Chaque *fornaça* était contrôlée par un *capataz* dirigeant trois ouvriers. Le *Capataz* était responsable de l'atelier, des matières premières et de la monnaie qu'il gardait, devant se justifier devant le trésorier (*tesoureiro*). C'est au *tesoureiro* que le *capataz* remettait, en présence d'un ouvrier témoin et du greffier, le produit de chaque journée de travail. Les flans étaient examinés, avant d'être frappés, par l'*ensaiador*, qui confirmait leur légalité. Le frappeage constituait un autre secteur de travaux, où travaillait plusieurs *cunhadores*. La sécurité des locaux était contrôlée par des gardiens (*guardas*), les *vedores da fundição* et l'*alcaide*. Une grande variété de sources du XIV^{ème}, XV^{ème} et XVI^{ème} siècles font référence à d'autres professions spécialisées dans le cadre du monnayage, comme des graveurs, le maître de la balance, le compteur, les essay-

Fig. 14 - Pot pour faire recuire les flans.

Des pots et des cruches coupés par le milieu ont probablement été utilisés comme récipients pour recuire les flans à feu doux dans la forge, pour leur rendre l'éclat et la flexibilité originaux. Cette technique est utilisée de nos jours dans l'orfèvrerie traditionnelle de la région de Porto (Sousa 1997).

eurs, les affineurs de métaux, ainsi, que, dans le secteur des fours, les charbonniers, les souffleurs de forge et les fondeurs, mentionnés aussi comme ouvriers (*obreiros*), mais spécialisés dans leur activité de travail. Il y avait aussi des ouvriers non-spécialisés, les serviçais. Le groupe social des monnayeurs (*moedeiros*) constituait un *corpus* dans la société de l'époque, possédant de nombreux privilèges, parmi lesquels le droit privé de l'*alcaide da moeda* au jugement des affaires civiles et criminelles et donc l'autonomie par rapport à la justice royale et aux autorités locales (Ferro 1974, 101-105).

L'interprétation des espaces et de la distribution des matériaux trouvés est en cours. L'information disponible est plus complète par rapport aux constructions qui constituaient l'aile sud de la Monnaie, ce qui a permis l'identification de plusieurs phases dans son organisation interne (fig. 5, A et B). L'occupation de ces maisons par la Monnaie correspond à l'organisation présentée au plan B de la figure 5. La fouille des vestiges d'une fournaise et d'une table de travail ainsi que l'identification d'une concentration de coupelles et creusets (fig. 10) a permis la localisation d'une des forges (*fornaça*). La distribution des flans (fig. 11) montre une plus grande dispersion, cependant elle laisse voir l'existence de concentrations, à l'intérieur et à l'extérieur des maisons qui doivent être mises en rapport avec les activités des autres secteurs du monnayage.

Du vaste ensemble de monnaies trouvées au cours des travaux archéologiques de la Maison d'Henri, le Navigateur, se détache le groupe des monnaies frappées par la Monnaie de Porto (dont quelques-unes portent la marque P, indiquant sûrement le lieu de frappe). Les *Ceitis*, monnaie portugaise en cuivre et de basse valeur faciale, frappés entre les règnes de D. Afonso V (1438-1481) et de D. Sebastião (1557-1578) sont le type le plus fréquent, dont 157 pièces sont des règnes de D. Afonso V et de D. Manuel ou D. João III. Aussi, des 585 flans trouvés, une grande quantité présente des caractéristiques de *Ceitis*: 154 sont de forme sub-quadrangulaire, 153 quadrangulaire et 71 sont des cisailles, produits du procès de monnayage. Il s'avère ainsi possible que quelques-uns des groupes de *ceitis* des règnes de D. Manuel / D. João III, actuellement identifiés comme provenant de Lisbonne (Magro 1986), aient été frappés à Porto. Plusieurs *Ceitis* de ces types, n'ayant jamais circulé à cause d'anomalies, ont été conservés et identifiés lors des fouilles, venant ainsi renforcer l'hypothèse d'une fabrication à Porto.

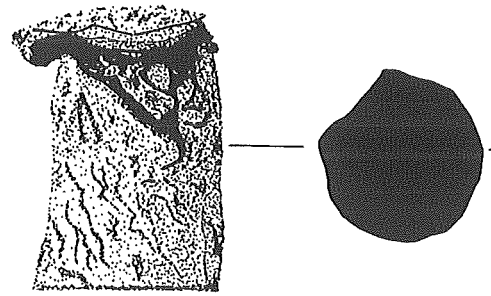


Fig. 15 - Coin mobile en fer trouvé dans la Monnaie de Porto.

Bibliographie

- ALFÂNDEGA 1990: *A Alfândega do Porto e o Despacho Aduaneiro. Catálogo da Exposição. Casa do Infante, C.M.P., Porto.*
- COOPER D.R 1988: *The Art and Craft of Coinmaking. A History of Minting Technology*, Spink & Son, 1988.
- DIAS A.C.G. 1989: *Moedas Portuguesas Cunhadas no Porto na Coleção do Gabinete de Numismática*, Casa Tait/Divisão de Museus da Câmara Municipal, Porto.
- DORDIO P., TEIXEIRA R. & MELO M. DO ROSÁRIO 1994: O Contributo da Arqueologia para o estudo da Casa do Infante, in: *Henrique, O Navegador*, Porto, 151-159.
- DORDIO P., TEIXEIRA R. & BARREIRA P. 1997: Duzentos anos de cerâmica na Casa do Infante e no Porto (XVI-XVIII), in: *Actas das II Jornadas de Cerâmica Medieval e Pós-medieval*, Tondela (sous presse).
- EGAN G. 1995: *Lead Cloth Seals and Related Items in the British Museum*, British Museum Occasional Papers 93, Londres.
- EGAN G. 1996: England's Post-Medieval Cloth Trade: A Survey of the Evidence From Cloth Seals. Trade and Discovery: The Scientific Study of Artefacts from Post-Medieval Europe and Beyond, *British Museum Occasional Papers* n° 109, Londres, 315-326.
- FERREIRA A.M.P. 1983: *A Importação e o Comércio Têxtil em Portugal no século XV (1385 a 1481)*, I.N.-C.M., Lisboa.
- FERRO M.J.P. 1974: *Estudos de História Monetária Portuguesa (1383-1438)*, Lisboa.
- FONSECA L.A. DA 1980: Porto nas rotas do Mediterrâneo Ocidental (vésperas da época moderna), *Revista de História* 3, F.L.U.P., Porto, 127-139.
- FRONTEIRA J. 1963: Uma Oficina Monetária do Século XVI, *Numus* VII (2), n° 24, Porto, 105-108.
- LEMO P.F. 1955: Contos para Contar. Ensaio para o seu conhecimento e sua classificação, *Numus* III

- (2), nº 9, Porto, 94-121.
- LENCASTRE F.S. 1891: *Estudo sobre as Portagens e as Alfândegas em Portugal. (séculos XII a XVI)*, Imprensa Nacional, Lisboa.
- MAGRO F.A.COSTA 1986: *Ceitis*, Instituto de Sintra, Sintra.
- MCLEES Chr. 1994: The late medieval mint workshops at the Archbishop's Palace, Trondheim, *Antiquity* 68, 264-274.
- MARQUES M.G. 1982: *Introdução à Numismática*, Publicações D. Quixote, Lisboa.
- PARNELL G. 1993: The Mint, in: B.T. BATSFORD, *Book of The Tower of London*, LTD/English Heritage, Londres, 59-61
- PEREIRA J.C. 1983: *Para a História das Alfândegas em Portugal no Início do Século XVI (Vila do Conde - organização e movimento)*, Universidade Nova de Lisboa, Lisboa.
- REAL M.L. 1994a: O "Centro de Serviços" da Coroa, na Cidade do Porto, in: *Henrique, O Navegador*, Porto, 1994, 137-149.
- REAL M.L. 1994b: Sobre o local de Nascimento do Infante D. Henrique, in: *Henrique, O Navegador*, Porto, 161-168.
- REAL M.L., DORDIO P. & TEIXEIRA R.J. 1992: Casa do Infante. Uma história a refazer, *Oceanos* 12, Comissão Nacional para as Comemorações dos Descobrimentos Portugueses, Lisboa, Novembro de 1992, 17-22.
- REAL M.L., DORDIO P., TEIXEIRA R.J. & MELO M. DO ROSÁRIO 1994a: A Casa do Infante (Porto): um projecto de intervenção arqueológica urbana, in: *Actas das V Jornadas da Associação dos Arqueólogos Portugueses*, Lisboa 1994, vol. 1, 135-144.
- REAL M.L., DORDIO P., TEIXEIRA R.J. & MELO M. DO ROSÁRIO 1994b: Intervenção Arqueológica na Casa do Infante (Porto). Avaliação do Projecto em Dezembro de 1994, in: *1º Congresso de Arqueologia Peninsular*, Actas VII, Trabalhos de Antropologia e Etnologia 35(3), Porto, 1995.
- REAL M.L., DORDIO P., TEIXEIRA R. & MELO R. 1995: Conjuntos cerâmicos da intervenção arqueológica da Casa do Infante, Porto: elementos para uma sequência longa (Sécs. IV-XIX), in: *Actas das I Jornadas de Cerâmica Medieval e Pós-medieval*, Tondela, 171-186.
- SOUSA J.R.M. DE CAMPOS COELHO 1783: Artigos das sizas dos pannos e da marçaria ordenados por el-rey Dom Joam II e por el-rey Dom Manoel, in: *Systema ou collecção de regimentos reaes*, Lisboa, t. I, 258-281
- SOUSA M.J. DE CARVALHO 1997: A utilização do cântaro de Barcelos na ourivesaria tradicional, *Olaria, estudos arqueológicos, históricos e etnográficos* nº 1, Barcelos, 104-106.
- VAZ J.F. & SALGADO J. 1984: *Livro das Moedas de Portugal. Book of the Coins of Portugal*, Braga, 1984.

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Birka - part of a trade network

Like earlier finds from the site (among others Arbman 1940-43; Arwidsson 1984-89), the extensive find material from the recently concluded excavations at Birka (Ambrosiani & Clarke 1992-1995) points to far-reaching contacts with other parts of Northern and Eastern Europe. A closer study of this material indicates several interesting aspects of the organization and development of trade relationships in this area.

Of course, only a limited part of the cultural layer has been investigated in the course of the most recent excavations. The area includes one complete plot and parts of a second one with a passage or lane – originally a jetty at the earliest shoreline – between the two. Different types of evidence point to the town having been established in the mid-700s. Since the earliest find material seems already to belong to what is commonly termed the Viking Age, at the transition from the Vendel Period, the general dating of the beginning of the Viking Age culture, 800 AD, requires testing. The same kind of early material is also found in other places, *e.g.* at Ribe and Staraya Ladoga. Judging from this material as a whole, it seems as though the culture usually referred to as the ‘Viking Age culture’ was in full development several decades prior to the war-like period represented by the raids in Britain and in Western Europe beginning in the 790s.

One very important factor in understanding the origins of Birka, and also the origins of other trading sites, is the shift in contacts that are evident at the end of the 800s A.D. When Birka appears in the mid-700s, its contacts seem to be primarily with areas to the south, towards the coastal area of western Slavonia in Poland and Germany, as well as with the North Sea area. This is mirrored in the presence of several kinds of finds: certain types of beads with close parallels in Danish Ribe, combs from Western Europe, fragments of 8th-century glass beakers, and early ceramics from Western Slavonia and Western Europe. Moulds showing clear influences from Frisian Dorestad were found in the bronze-casting workshop from 770-850 at Birka.

In contrast, no traces of eastern contacts are evident at this time. Only two single Arabic coins were found in the stratigraphical layers of the earliest phase (see I. Gustin in this volume).

This situation changes completely at the end of the 800s. At that time, beads of carnelian and rock crystal from India appear, as do large numbers of Arabic coins along with the specific weight and balance system which, although it partly belongs to the Scandinavian variety, is considered to have originated from the Arabic weight system (latest Sperber 1996). Influences from the area of Western Slavonia continue to appear up to the last phase at Birka in the second half of the 900s, but by then the West European contacts seem to be completely missing. Only an extremely limited number of objects of North Sea origins reached Birka and its cultural layers. No influence from the North Sea area is evident in the graves either. However, a certain degree of western Scandinavian influence seems to have existed.

To understand Viking Age trade, an important fact to take into account is the great degree of uniformity evident in many types of objects from both the graves and the cultural layers at Birka as well as from the majority of other trading sites in Northern Europe. This material belongs to a common craft tradition widely spread over an area which encompassed a third of Europe. The origins of the raw material can often be identified in local sources or as having come from a specific place.

An example of this are the comb types, which are very consistent throughout this area, presenting the same attributes of shape and ornamentation. The fact that they were made from such widely different raw materials as antler from deer, elk or reindeer, has led to the assumption that they are the products of itinerant craftsmen using local raw materials (Ambrosiani 1981, 40 ss.; Ulbricht 1978). To a certain degree, this is also valid for glass beads and bronze objects. In the latter case, however, there are certain differences in the technology used in the workshops in Ribe and Birka.

One of the most important questions which future research should address is the problem of whether the

demand for a certain product can be determined to have been so large as to create the basis for a continuous, year-round production in the towns in question, or if the craftsmen were itinerant ones. Even if a discussion concerning the requirements of individual consumers, for example in Birka, has been taken up (Ringstedt 1992), the full consumer potential of an area for a craftsman or workshop can be determined only by estimating the demands of the town together with those which may have existed in the rural hinterland of the respective towns.

The bronze workshop at Birka appears to have been run the year round, probably by a number of individuals who had different specialized functions. In some cases – and even when permanently established craftsmen were present in a town – itinerant craftsmen may have been at work there simultaneously in order to meet the demands of the whole area. Whatever the cases, the similarity in these craft products and remains indicate that contacts between the different parts of the greater northern European region must have been favourable.

Another factor seems to be the supply of different kinds of raw materials. These often had only a limited area of origin and their general distribution implies that they must have been part of a trade and exchange system. Whalebone and walrus tusks definitely originated in the area of the Arctic coast of Norway, and soapstone and Eidsborg slate for whetstones in southern Norway. Iron most certainly was linked with a more general region ranging from the mountain area in southern Norway to the central Swedish iron producing areas. At that time, the latter already had a large production which can hardly have been used exclusively for the home market. Evidence for the preparation of furs has been found at Birka, but this should also have been an important product also for the Russian areas. In all probability, amber came from Samland in the Prussian and Baltic areas in the south-eastern part of the Baltic Sea where extensive collecting and mining of this wide-spread raw material still takes place today. The western Slavonic areas seem to have been important exporters of wax, honey, and salt. Wax and honey also came from the east Baltic area.

Arabic silver coins, carnelian and rock crystal beads, along with exotic products as cowry and other shells have passed through the Russian trading places. Silks from the East and from Byzantium, bought there and transferred through the Russian trading places, are also spread throughout the whole area.

This catalogue can be completed in many ways. Especially consumer wares in organic materials, no longer preserved, are particularly difficult to identify archaeologically. Perhaps it is only the pottery in

which these wares were transported which provides some evidence for them. This may explain the large amount of foreign ceramics present in all the towns but seldom found in their hinterland. When discussing long-distance trade, wine, slaves, livestock, etc. are goods that cannot be found in the archaeological material.

It is remarkable that the majority of these raw materials seem to have had a limited place of origin, often tied to one of the many newly-established trading places or towns from the Viking Age. This suggests that towns have played a key role not only in the distribution of crafts but also in that of raw materials. To supply one or more of these materials may have been sufficient to ensure the survival of a town.

The role of a town then comes to include that of a mediator of raw materials throughout the whole area of Northern Europe and, at the same time, to function as the seat for craftsmen manufacturing large amounts of simple everyday items using foreign and local raw materials. These items were probably distributed within the town itself and within its more or less encompassing hinterland, the main source of livelihood of which was agriculture.

The important actors in these towns must, however, have been the tradesmen. They must have organized the trade in raw materials with contacts spread throughout the network of towns. Obviously, they were free to move about over large areas in spite of the war-like periods mirrored in the Viking raids and battles in the whole of Western Europe.

Identifying these individuals in settlements and graves is, however, difficult. In the case of Birka, they are probably mainly the men in the chamber and cist graves, richly equipped with weapons. The grave inventories of these burials often contain foreign objects, the dress often is foreign, or the grave-goods often show eastern influences, etc. This burial tradition is different from the domestic cremation burial tradition in that the deceased is inhumed and that the grave is not covered with a mound. The chamber graves covered with a mound and, for the most part, equipped only with weapons and horses present, however, a special problem. Another interpretation is needed here. These may be the graves of domestic merchants or warriors who established a new burial tradition, contrasting with the local eastern Scandinavian cremation burials with mounds.

Towns and trading places thus formed a network of places providing the North European area with specific raw materials and products. At the same time the town has imported products from many other places for distribution to the consumers in the town and in its hinterland. Towns could not function without contacts in this network. Therefore, they also are

important points of intersection in the communications system, notably the sea routes which seem to have grown strong during this period in spite of the prevailing threat of pirate and Viking raids.

References

- AMBROSIANI B. & CLARKE H. (Eds) 1992-95: *Birka Studies* 1-2, Stockholm.
- AMBROSIANI K. 1981: *Viking Age combs, comb making and comb makers in the light of the finds from Birka and Ribe*, Stockholm Studies in Archaeology 2, Stockholm.
- ARBMAN H. 1940-1943: *Birka I. Die Gräber*, KVHAA, Stockholm.
- ARWIDSSON G. 1984-1989: *Birka II: 1-3*, KVHAA, Stockholm.
- RINGSTEDT N. 1992: *Household Economy and Archaeology. Some aspects on theory and application*, Stockholm Studies in Archaeology 12, Stockholm.
- SPERBER E. 1996: *Balances, Weights and Weighing in Ancient and in Early Medieval Sweden*, Theses and Papers in Scientific Archaeology 2, Stockholm.
- ULBRICHT I. 1978: *Die Geweihverarbeitung in Haithabu*, Die Ausgrabungen in Haithabu 7, Neumünster.

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Artisans, Markets and Trade in Denmark AD 300-1200

Over the past decades, the debate on the question of trade and crafts in Iron Age and Viking Age has been enlivened and inspired by some new and interesting finds.

Archaeologists contributed much to this debate with their ideas of definition and meaning of trade and exchange of goods. The archaeological material from the Early and Late Middle Ages is much more plentiful than from the previous centuries, but apart from a few detailed studies this subject has been mentioned only sporadically by medieval archaeologists.

For many years, our medievalists have taken the point of view that until the High Middle Ages, society was adapted to consumption on the spot, and that trade was primarily one in luxuries for the upper classes of the agrarian society.

The view on trade in the Late Middle Ages is, however, much more varied, and some historians have a keen eye for the possibilities of archaeology.

In a small introduction, Else Roesdahl raised the question, “Why does this divergence between prehistoric and medieval research practice exist in Denmark? The possibilities of trade/exchange were hardly any different in the Early Middle Ages than in the Viking Age (apart from the influence of the church), and written sources about trade are only few until the Late Middle Ages just like in the Viking Age”. And she rebukes Niels-Knud Lieb Gott, who in 1989 concluded about commodities that archaeology can only to a limited extent offer new knowledge. This somewhat discouraging attitude stands in deep contrast to the results obtained through a co-operation between archaeology and a number of natural science disciplines over the last two decades.

A survey of the development of this theme will follow now. Since the mid 1970s, a series of sites has been excavated in Denmark. These sites provide us with a new and very elaborate view of settlement growth, trade and urbanization until 1200 AD. Today one is faced by a multiplicity of terms in the scholarly literature, e.g. trading sites, central places, market sites, storage places, *emporía* and centres of wealth

and power – to list the most frequently used examples of terms whose meanings turn out to be largely the same. The presence of small quantities of imported goods, coins, payment in gold and silver and weights is no longer in itself sufficient to identify trade as the essential basis of a site. The economic basis of central places was undoubtedly complex. Votive finds and place-names – as for instance around Gudme on south-east Funen – show the practice of religion too, and can be associated with larger central complexes where many people met.

Already in the Late Roman Iron Age, the most important central places all developed into economic centres with trade and specialized crafts. In the first millennium A.D., we can see that new centres of power also created new forms of settlement – the development of what we today indicate as towns.

These radical changes, presumably the most radical ones in the prehistory of Denmark – also led to discernible changes in the landscape. In some places, woodland expanded, in others open land and heath progressed. Changes also occurred within the defense forces as well as the artisanal organization and specialization. Tools became more effective, iron technology improved, blacksmiths’ work and other trades became more specialized. The old grinding stone was replaced by a new invention, the rotating millstone. Roads were built, ships, carts and wagons improved, and new centres evolved. Thus, Gudme-Lundeborg experienced a period of prosperity unequalled elsewhere in Northern Europe in the years up to 550-600 A.D., judging from the number of precious metal finds brought to light by the archaeologists.

Today, the settlement at Gudme stands out as something quite unique regarding both size and structure. In contrast to the general view of settlement history in Denmark during these centuries, Gudme is characterized by a degree of continuity: several houses succeeded one another on the same spot several times. In one case a farm has been identified – a house which was rebuilt at least 11 times in practically the same spot. Presumably many of these houses had no agricultural functions, but provided a base for

different crafts: goldsmiths, silversmiths, etc.. In many cases there was a continuous building activity here from the 3rd to the 8th/9th centuries. The settlement is estimated to have numbered about 100 houses/farms at its peak, which occurred somewhere in the 7th century.

A proposal to interpret the settlement as having been divided into two zones is rather interesting: the southern part is characterized by a society of artisans, the northern part by many rich – noble – gold hoards and by the lack of crafts. But in this connection, one should warn against an actual socio-topographical division as long as the extension and nature of the settlement as the whole remain unknown.

Møllegårdsmarken was the central cemetery of the Gudme society, and it is the largest one known so far in Denmark. It has 2,300 cremations and only a little more than 20 inhumation graves. Burials occurred here from about the beginning of our era until 400 A.D., when there was a change which is, however, apparently not reflected in the settlement at Gudme which had reached its peak at exactly this point in time.

Place-names, a royal hall from the 4th century found here, and a wealth of other things point out that Gudme was a cult centre, the significance of which reached far beyond the region and attracted people from near and far. We must bear this in mind when we consider the oldest trading centre known so far in Denmark at Lundeberg.

The discovery of this commercial centre at Lundeberg has given us a chance to explore these long-distance connections, thus changing our understanding of the contemporary community and of the ways in which it was organized.

The entire Lundeberg complex stretches out over 800 to 900 meters along the coastline of Store Bælt (the Great Belt). Lundeberg was a seasonal settlement, characterized by a collection of small temporary stalls and huts. The oldest and best-preserved part of the site, dated from the 3rd to the 5th centuries, is situated south of the brook. The site was c. 80 to 100 meters wide which means that it covered a total area of some 7 hectares.

In this coastal settlement there are traces of many kinds of crafts. So far, the site at Lundeberg and perhaps the locality called Dankirke south of Ribe in the southwestern part of Jutland are the only localities which testify to intensive trade in the pre-Viking Age. In the case of Lundeberg, this is inextricably bound up with its function as part of the Gudme centre. Presumably the two settlements and their activities were of a special type and had a special character, different from what we may expect to find in other sites from the Roman and Germanic Iron Age. Here,

I am thinking particularly of the cult artifacts such as the figurines and the unique *guldgubber* (gold foil figures) from the 7th century. The importance of Gudme as a cult centre of a renown which reached far beyond the region must have attracted people from far and near, and apart from the natives from Funen itself, they must have come by sea.

Some finds indicate that ships were repaired at Lundeberg, and perhaps new ships were built here as well. The leading role of shipbuilders is proved by the presence of more than 8,000 iron nails, the oldest ones known in Scandinavia. We have also found many traces of repair work – chisels for splitting riveting plates and mandrels for hammering rivets through planks.

Our knowledge of ships and shipping during this period is extremely limited and mainly derives from the large ship found in the Nydam bog and dated to c. 320 A.D. It was clinker-built like the Viking ships, with planks held together by rivets, and it was propelled by oar probably by c.30 men.

The 8,000 iron nails correspond to about 10 ships of the same size as the Nydam ship. Studies of the rivets will contribute to an understanding of Migration Period shipping, for instance by helping to determine the varying sizes of the ships. The goods, which were brought to Lundeberg by ship, were not of local origin but imports, and during the first centuries, they included more particularly Roman luxuries. The supply of gold and other metals, luxuries and exotica to the Gudme centre may partly have consisted of gifts for the shrine and its protectors – the local kings; another part may have arrived as a direct result of the initiative of the Gudme kings. One of the most common imports in Lundeberg and Gudme consisted of Roman glass beads, especially during the first 200 years of the existence of the settlement. Late in the 4th century, the number of glass beads declined, and it seems that at this time the beads were manufactured locally at Lundeberg. This is suggested by large quantities of beads, broken glass from glass bowls and glass vessels, scrap material resulting from bead manufacturing, fragments of crucibles and iron bead drifts. From the items left behind by the craftsmen, it has been possible to prove the existence of other workshops as well: tools for carpentry such as axes, spoon bits, rabbet, turning tools, chisels, knives and wooden chips. The blacksmith also left some tools: smith's tongs, chisels, iron bars, half-finished articles and iron scrap. Apart from these articles, he also made knives, metal plates of all sizes, fibulas, buckles, fishhooks and lots of other things. Metallurgic analyses of iron items lead to the assumption that iron ore was imported from other parts of Scandinavia, among them Trøndelagen in Norway.

The bronze founders left small hammers, chisels and punching tools, a casting ladle for pewter, several bronze bars, fragments of crucibles, pieces of molten bronze and scrap of copper.

The following items came from the goldsmith's and the silversmith's workshops: touchstones, whetstones, fragments of moulds and crucibles, small tools, gold bars and silver ingots and scrap for remoulding objects such as Roman silver *denarii*. In addition, there were rough and finished precious stones such as opals, amethysts, garnets and carnelians.

In the amber workshops there seems to have been a comprehensive production of amber beads, amber gaming pieces and pendants made of amber. We have found large quantities of rough and finished amber as well as iron awls and iron files. Several pieces of amber have been finished with a turning lathe.

The finds from the comb maker's workshop included large quantities of parts of antler from red deer as well as a wooden cutting block, knives and a drill for making ornaments, a lot of scrap material and material to make objects such as combs, handles for knives, various tools and gaming pieces.

Recent finds provide indications for local pottery. The site has also yielded very few examples of imported pottery like potsherds from Västergötland dated to Late Roman Iron Age and Slavonic ceramics from the late 8th century.

For the sake of completeness, I also mention the finds of some weapons and of objects which reflect life in the settlement: pinchers, ear-picks, pendants and arm-rings, crozles and steel, whorls, iron keys, fish-hooks, gaming pieces made of glass, and belts and buckles.

Finally, I want to point out the finds of about 40 weights of lead and bronze. The heaviest one weighs about 40 grams and the smallest one only 1 gram. The inhabitants may have used Roman scales.

One of the more spectacular groups of finds consists of the so-called *guldgubber* (gold foil figures). 102 of these figures were found within a comparatively small area just north of the brook. They may be dated to the end of the 7th century, and it is quite certain that they are to be related to cult acts at the trading centre. But what acts? And to what purpose? The motives undoubtedly derive from Nordic mythology and are connected with the fertility cult.

The Early Germanic Iron Age – the Migration Period – is a continuation of an exchange system of the Late Roman Iron Age, luxury imports being predominant. Imports came from both eastern, central and western Europe, and southern Scandinavia held a key position in the further distribution along the Norwegian coast and in the Baltic regions. This

exchange was probably embedded in a Germanic social network. The important site of Dankirke south of Ribe in Jutland is simultaneous, but here it is only possible to prove activities of crafts and trade.

In the early 6th century, the eastern imports ceased to come in, probably because of the ethnic-political shift from a Germanic to a Slavonic dominance south of the Baltic. The Germanic cultures in southern Scandinavia became exclusively dependent on supplies from western Europe.

When shipping and trade spread from the old cultural centres all over the country, renewal replaced tradition. The most important moving power in this process may have been the introduction of the sail, perhaps in the 7th century. This enabled transport of the same quantity of goods with a considerably smaller crew, and the sailing season was probably extended beyond the actual summertime. As a consequence of this the first merchant vessels were built, and a decentralization of shipping and trade, landing places and ports began.

This shift is accompanied by a new type of trade goods which consist of basic commodities: quernstones made from basalt lava from Mayen in the Eifel region, whetstone and soapstone from southeastern Norway and Pingsdorf-type ceramics from the Rhine area. Basic commodities appear in the Ribe area in a long-distance trade context during the 8th century, approximately at the same time when Ribe is established as a trading centre. Ribe seems to replace trading centres such as Lundeborg/Gudme and Dankirke, where imports probably were part of an administrative trade.

Dendrochronology tells us that Ribe was founded between 704 and 710 as a market place along the north bank of the river. The market place was planned and organized from the beginning. The presence of specialized craftsmen such as bead-makers, manufacturers of amber items, comb-makers, and bronze founders has been proved. To this can be added the fact that huge layers of cattle dung hint at trade in cattle being common even then. Ribe is located on a site where the north-south traffic over land crossed the Ribe river, itself linked directly with the tidal zone of the sea. The artifact material reflects contact with Frisia and Saxony, and thus Ribe served as a transit point for Scandinavia.

The fact that the division of the site into areas, which were reorganized in 721/22, was maintained over approximately 100 years is best explained by the presence of some permanent authority which must also have been able to ensure peace in the market place and access to the site.

In 1986, the numismatist D.M. Metcalf suggested that the appearance of the large amount of Wodan

monster sceattas could be explained by their having been struck in Ribe by a king c. 720-25.

It is true that the market place was seasonal, but only 250 m to the southeast, remnants of a permanent settlement and a cemetery dating from the same century have been found. A ditch enclosing the settlement dates from the first half of the following century, and its only purpose was to function as a demarcation line showing the extension of the town. A real fortification is not seen until the second half of the 10th century, when it has the form of a moat and rampart such as we know examples from other places.

The Danish kings' interest in trade in the Early Viking Age can clearly be seen from the Frankish sources which tell about Willibrord, Ansgarius and others, not to forget king Sigfred's trade agreement with the Carolingians in 873. Thus, the Danish coins reflect periods of a strong royal power, which – following foreign patterns – tried to impose respect for the local currency and coins, at least in those trading centres where they were minted.

The site of Hedeby (Haithabu) is situated at a brook near the western end of the Schlei, a long narrow inlet of the Baltic Sea in the southern part of the Jutland peninsula. We are told that king Godfred came to Sliestorp in 804 – a *portus* (i.e. Hedeby), a merchants' settlement or a trading place. In 808 king Godfred moved merchants from the Slavonic site of Reric to Sliestorp. Furthermore, he had a large rampart built across the country, protecting it against Saxony. The excavations at Danevirke have not identified this rampart. Probably, Godfred only repaired the large construction of 737 and made it ready for action.

Archaeological finds from the extensive excavations at Hedeby support the written sources in providing a picture of a well-organized and sizable settlement. The fact that the oldest dendrochronological dating yielded by the extensive investigations is from 811 is doubtlessly less important within the context of our discussion, as only a small percentage of the built-up area has so far provided suitable material for this important method of dating. The commercial importance of Hedeby is demonstrated by its establishment at this harbour location, by the large quantities of trade goods recovered on the site, and by coins minted locally – or maybe these coins were also minted in Ribe!. The intensive commerce and craft activities make the picture of a well-developed division of labour in this period very explicit. The residents of Hedeby probably imported their food from surrounding agricultural communities rather than producing their own.

In this context, it should be mentioned that no stables have been found in association with the small

houses in Hedeby. To a large extent, the inhabitants must have lived by activities other than farming.

Crafts formed an important part of life in Hedeby. The excavations yielded large amounts of finished articles and semi-finished products, raw materials, scrap material and a variety of tools.

In the Viking Age, too, we find travelling craftsmen along with the craftsmen who were confined to one locality. The travelling craftsmen first had to seek work or a spot for their workshop – and they also frequented the many seasonal markets. We must assume that they were specialized craftsmen who catered to specific needs. In particular, their work furthered cultural uniformity.

In Hedeby, the metal crafts seem to have been highly specialized, but along with objects of precious metal they also produced cheap ornaments of simpler materials such as tin and/or lead, but with a tasteful design! Among other things, the large finds of 42 bronze patrices from the port of Hedeby provide evidence of this. They show that such moulds were used for a real mass production.

All of this underlines the importance of this locality as an international trading centre with could be access both by sea – remnants of jetties have been found – and over land. Strangely enough, the finds from the harbour seem to indicate stronger commercial ties with the Baltic than with Western Europe. The town itself shows a reverse picture.

The distinct foundation of a town is a consequence of an increasing division of work, between handicraft, trade and transport, which implies a surplus from the food producing industries. With an increasing economic surplus, it is possible to organize more and more joint assignments which in turn make it necessary to finance higher and more complex social structures.

Ole Crumlin-Pedersen has tried to illustrate the loading capacity of the Scandinavian trading vessels throughout the Viking Age and into the Middle Ages. The already mentioned prosperity of the trade is also reflected in the size of the ships known from this period. Already in the 11th century, we can detect a distinct specialization of large ships for navigation on the open sea and with a loading capacity of some 24 to 40 tons, reaching c. 60 tons by approximately the year 1140. A really big freighter such as the Skuldelev 1 ship was capable of carrying about 25 tons or 40 cubic meters with a crew of only 4 to 5 men.

Thus, some of the ships calling at the trading centres and the first towns on the seacoast were built to carry considerable amounts of goods, and these large ships required less shallow approaches to the shore as the largest among them had draught of 1.5 meters when fully loaded. Simultaneously with these

large ships, smaller freighters were also built; they had a length of 10 to 14 meters, a draught of less than 1 meter and a loading capacity of 4 to 20 tons. We know them from wreck 3 in Skuldelev which could carry only 4 tons or 12 cubic meters with a crew of 4 to 5 men, and from later finds, including the very well-preserved Gedesby ship from the end of the 13th century, excavated in 1990.

On the whole we can characterize trade by sea as an important factor in the prosperity of most towns in the Middle Ages, but trade by sea was in no way limited to the towns.

At that time, royal power tried limit trade even more to market trade. Market trade and loading and unloading of goods in the Late Middle Ages were limited to towns with municipal privileges. These towns were separated from the surroundings in special jurisdictions (*birker*) organized under the so-called '*herredsting*' (a Danish type of a lower court). In the 12th century, the Danish word '*birk*' also meant a trading place, an independent court district not subject to the '*herredsting*'. In Latin diplomas from the Late Middle Ages, the word is translated into '*villa forenses*' – a settlement, maybe a '*købing*' or village with market privileges.

This local court '*birkeret*' was often attached to localities with fishing activities and consequently also with trading activities. There is a distinct connection between Crownland and '*birkeret*' in the coastal zone.

We do not know for certain who owned the ships in this period. The ownership structure of the smaller vessels can hardly have been very complicated, but as to the large seagoing vessels, these may have demanded considerable means, and who owned these large vessels?

The archaeologist Claus Feveile has recently presented an interesting case-study of the tuffstone churches

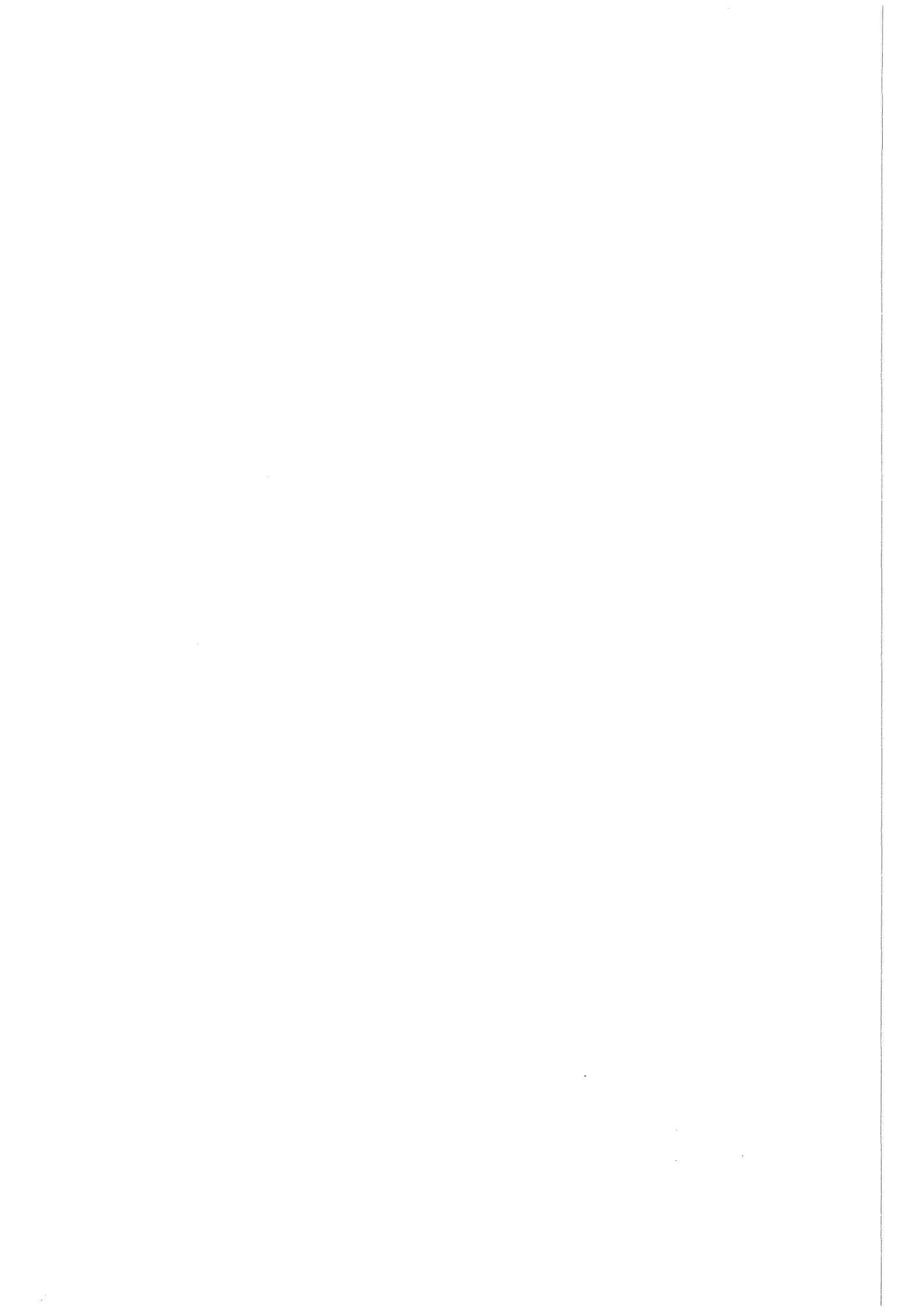
in southwest Jutland. His purpose is to estimate the quantity of imported tuffstone which came from the region of Andernach south of Cologne. In a convincing way, he points out that the tuff was brought in for use in the 57 churches in southwest Jutland as a conscious and rational import and not as an occasional ballast. Ballast was unnecessary for a ship which had been loaded properly. The connection between building material and architecture in these churches is so distinct that tuffstone must have been an important and characteristic import article.

The study showed that a parish church built exclusively of tuffstone required between 100 and 150 cubic meters of tuffstone, corresponding to 180-288 tons, and that at least 4,000 cubic meters of tuffstone have been imported to southwest Jutland between 1175 and 1250.

The people involved probably used ships with a capacity of up to 15-20 tons to transport these new building materials – though larger vessels are another possibility as well. In proportion to a single parish church, as many as 9 to 15 fully loaded ships were needed to transport the necessary quantity of tuffstone.

With this short survey I have tried to demonstrate a development beginning in the 3rd century A.D. with settlements and activities and also looking at the Early Viking Age of which we hardly dared speak until recently. But we must also admit that the somewhat sparse source material from the time around the year 1000 has been better analyzed and used in these and elsewhere than the far richer material extant for the following 2-3 centuries. Fortunately, things seem due to change in the coming years, and Claus Feveile's investigation of the tuffstone churches in Jutland is a worthy start.

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Tiel in succession to Dorestad Archaeology in a 10th/11th-century commercial centre in the central riverine area of the Netherlands

The Frisian Trade, Dorestad, and Tiel

During the Early Middle Ages, trade in the central riverine area of the Netherlands was for a long time determined by the centres of Dorestad and Tiel. Situated at the bifurcation of Kromme Rijn and Lek, Dorestad was the older one. Tiel, located in a similar way at the fork of the rivers Linge and Waal, was the second. Each of them played a role in the extensive trade network known as the Frisian Trade system. Within this context, the term Frisian does not have ethnic connotations but first and foremost territorial ones. It refers to the wide territory in which a large group of traders was active economically over a number of centuries. This territory more or less coincided with the region of the North Sea with some extensions. It ranged from the Baltic in the north to the Channel in the south, and from England in the west across the sea and along the different major rivers deep into the European continent. The two centres were situated in the delta area of two of these main waterways, the Rhine and the Meuse.

As a basically territorial system, the Frisian trade did, however, always include traders of Frisian origin who took up a prominent position within the system throughout the whole period of its existence. In this sense, Frisian must be understood as belonging to the people who lived in the elongated coastal area then known as Greater Frisia. It stretched out from the mouth of the river Weser in the north down to the marshy lands of the so-called Sincfal which was part of the Scheldt estuary in the south.

The Frisian trade was essentially a system oriented towards international exchange. In its prime Dorestad fulfilled the central function in it. With its position on the northern edge of the early Frankish kingdom, it was in contact with the Frisian world and could develop high quality connections in all directions. The traffic along the rivers and across the sea linked the Rhineland to England while at the same time connecting the Scandinavian territories with the entire northwestern part of the Frankish kingdom. The extensive modern archaeological research which

was undertaken here made it possible to demonstrate quite clearly the high ranking of Dorestad within the international network. But the evidence also made it clear that its prominent position in the international trade began to wane during the 8th century AD; in the 9th century Dorestad passed to a regional level and afterwards, its importance even shrivelled to that of a micro-stage settlement.

By the end of the 9th century, the impact of the recession must have been so strong that apparently a replacement of the international function of Dorestad was desired. New places were found in Deventer on the river IJssel river and Tiel on the river Waal, both rivers being prominent tributaries of the Rhine and thus also part of its vast delta area. A royal grant transferred to these new centres not only the rights (a.o. a mint and a toll) which Dorestad had enjoyed, but also the men themselves who had enforced and profited from these rights. They were authorized to move to the newly endowed *emporia*.



Tiel, by way of introduction

It can be said that right from the start Tiel made a good job of taking over. It enjoyed a surprisingly quick rise during the 10th century and around the year 1000 AD the settlement already figured as the most flourishing centre of traffic in the lower delta of the Rhine and Meuse. One of the echoes of this success may well be the questionable fame of Tiel being one of the two centres – the other one being Utrecht – that were affected by the last Viking raids in the region in 1006 and 1007 AD. These attacks do not, however, seem to have been more than incidents. They did not in any way hamper the rise of the early town during the following years.

The 11th century may be considered as the real 'Golden Age' of Tiel. We will come back to this later on. The prosperity as such did not, however, last very long. For several reasons – and perhaps it was even more the fact that these coincided within a relatively short period of time which made them so decisive – the prosperity did not outlast a time span of two centuries. Around the year 1200 AD, it was almost over. Again, we will revert to this below.

The position of Tiel in the economic development of the riverine area is a well-known phenomenon in historical literature. So is the important role which it played in the beginning of medieval urbanisation in the northern Netherlands. Our understanding of both facts was for a long time based almost completely on written sources: archaeology hardly took part in the debate. In the case of Tiel, the output of the archaeological discipline may be called retarded. It is significant that while the archaeological investigation of Dorestad started already before 1850, the first archaeological excavation in Tiel which focused on the history of the town dates from more than a century later, shortly after 1950. Before, some scattered observations were made and several finds from all over the town core were collected. They all pointed out that in one form or the other the settlement did function during the period of the 10th/11th centuries which from a historical point of view was the information scholars were looking for. But the Tiel mint, so well recorded in written sources, could not be documented archaeologically through local finds, but only through a variety of finds in Scandinavia.

Regular archaeological investigations within the town started in a hesitant way. Around 1950, the repair of World War II damages led to diggings here and there. Initially, they yielded little. Much more successful, however, were the extensive diggings in the parish church of St. Martin (Maartenskerk). They revealed ten building periods. The sequence began in the 8th or 9th century with a plain rectangular hall-

church erected on top of an older cemetery. The development of the building finished with the huge late gothic church of the 16th century, parts of which are still in use. After the church diggings, a few other excavations that were more extensive than the earlier ones took place in the town centre. It was not, however, until recently, when a new scheme for the reconstruction and rebuilding of the town centre was adopted, that it became possible to implement a full and modern programme of archaeological investigations. The programme itself is still in full swing and in this paper we can only present a very preliminary report on the first results.

The new investigations focus on a variety of themes but the emphasis lies on the main period of the settlement in the 10th/11th century. One of the themes is that of the situation of the early settlement within the landscape and more particularly its relation to the river system in and around the town, both as it was initially and after it went through later changes. Other topics are the chronology of the successive building phases of the period mentioned, the layout of the settlement as a whole and its components, the different functions and more specifically where these functions were centred. And, finally, the work of course also concerns the pattern of finds with special reference to three of the most intriguing categories for the period: imported ceramics, coins, and some of the craft products.

A first comparison with Dorestad

Almost automatically, any survey of early Tiel leads to a comparison with its predecessor Dorestad. A first point is their environmental and geographical setting. Both were located on a major river which in both cases was part of the extensive Rhine system. Both settlements emerged at the confluence of the main river with another one. Due to environmental changes in parts of the river systems there seems to have been water erosion in both places resulting in parts of the settlement being washed away. In both cases, the process could, however, have been reversed. In those cases, examples of which also occurred in other parts of the system, the riverbed shifted outwards and away from the settlement core, resulting in a process of silting up and/or filling in the former water current.

Another point of resemblance may be found in the layout of both settlements. One of the characteristics of the spatial features of Dorestad is the settlement layout in zones or quarters. As they were identified through archaeological work, these quarters all had different origins, had been granted different rights,

and revealed themselves to have had different functions. The quarters could be particularly well recognised on the river bank where some of the main functions of the settlement, such as trade, commerce, and crafts, were fulfilled. The question then became: would it be possible to find an analogy in terms of layout in Tiel as well?

The historical record for Tiel shows that it had similar elements of settlement during its early history. First, there are references to a royal stronghold where the royal Rhine-toll – which had come from Dorestad – was presumably established. Neither the stronghold or royal castle itself nor even its site proper are known with any precision. There is, however, the hypothesis that it was situated in an area immediately south of the present-day town, in a zone which has been washed away by the waters of the river Waal. The stronghold could have formed the centre of a royal demesne, which – following the line of the above-mentioned hypothetical analogy with Dorestad – we would like to call the royal or southern quarter of the settlement. We must, however, stress that there is as yet no archaeological evidence whatsoever supporting this assumption. Things are quite different in this respect where the situation of the neighbouring so-called middle quarter is concerned. Here, most of the recent archaeological fieldwork took place. This quarter could be defined as both the harbour and the commercial area. With a total length of some 500 m, it runs along the south bank of the Linge river, from the point where the latter joins the Waal in a northerly and westerly direction and following the first bend of the river. To the west, the area was in turn flanked by a third quarter, which – still continuing the analogy with Dorestad – we would like to identify as the quarter of the nobility. The influence of the nobility in this area is most clearly expressed by the fact that in 892 AD the most prominent noble family of the region established the Saint Walburgis monastery here together with an adjacent fortification. The monastery *cum annexis* was dismantled during the Reformation; archaeological research has never taken place on the site. The conventual grounds must have formed the western boundary of the early settlement of Tiel.

Another analogy between the two places could possibly be found in the layout of three settlement zones parallel to the river. The extensive archaeological research in Dorestad has established the existence of three zones in the northern quarter. Immediately along the river an embankment zone stretched out and here mainly trade and commerce and perhaps also crafts were centred. A through street following the bank of the river with quays and/or harbour facilities along its riverside and rows of merchants houses

set at right angles to the riverbank along its landside leads to a clear picture of a typical riverside trading settlement. Behind this zone, a second and rather broad one is found where the archaeological evidence indicates mainly agrarian functions. Beyond this zone yet another area stretched out which has – with due caution – been interpreted as a ‘possible’ ecclesiastical area. According to the recent archaeological work at Tiel, a somewhat similar division into three zones is also discernible in the middle quarter of this settlement: There is a rather strikingly comparable distinction in terms of use and exploitation of the embankment zone and of the adjoining middle zone of this quarter. We will come back to this later. Beyond these two zones lies also a third area which always has been and still is dominated by the parish church of Saint Martin. Therefore, it could be identified at least as *a* or maybe even *the* ecclesiastical area of early Tiel.

Excavations in the middle quarter of Tiel

Most of the recent excavations were carried in the so-called middle quarter of the settlement. They focused on the relation with the river Linge and dealt with phenomena on both the landside and the riverside of the riverbank. They also dealt with the different zones on the landside.

One of the main results consisted of evidence that occupation of the embankment zone on the landside, which ran immediately along the watercourse, started at the end of the 9th century AD¹. At that time, a regular pattern of plots set at right angles to the riverfront came into being. These first phase plots were rather roomy and remained so for about three quarters of a century after which time they became narrower. Through time, the houses which were built on them underwent regular alterations. The whole development continued until the 12th century, after which point in time a degree of stabilisation set in and changes of any importance no longer occurred.

The three centuries of development in the embankment zone can be subdivided into three stages. During the first one, from the end of the 9th century to *c.* 965 AD, detached houses were erected on the wide premises. During this period, the buildings were reconstructed several times and showed a certain tendency towards ‘roaming’ over the plot. In the meantime, the empty spaces in between were used for the construction of cesspits and wells. During the second stage, which lasted roughly from 965 to 1100, a distinctive narrowing of the tenements took place which was immediately followed by the houses being adapted. They became heavily constructed timber

buildings. Like the former ones, these new buildings still did not fully occupy the entire width of the plot, which resulted in interspaces of 5 to 7 m wide between the walls. But the buildings no longer 'wandered' over the plot. The third and last stage more or less coincided with the 12th century.

As mentioned earlier, there was little or no conformity in the construction of the houses. Form and construction changed in accordance with the different stages in the development of the plots. The early houses were one-aisled buildings and rather flimsy. The stakes of the wattle walls of these houses were either driven directly into the ground or were supported by a sillbeam. The occurrence of a central hearth in these buildings of the first phase could possibly illustrate their function as dwelling houses and/or workshops. The houses of the second phase were quite different. Although again one-aisled buildings, their huge size (7 m wide and over 13.5 m long) made them much more massive than their predecessors. The construction was extremely heavy with very thick posts in the long walls to support the roof. The walls consisted of planks set either horizontally or vertically between the posts. Some of the planks had a tapering profile allowing them to be fitted together by tongue and rabbet. The height of the buildings must have been over 5 metres²; so the presence of an upper floor is plausible. Both the size and the appearance of this type of building most likely point to a function as storehouses. Another large building of this period (11 m wide, length unknown) was found in the middle zone. Unlike the previous ones, this type of building had three aisles. Does this characteristic imply it had a rural function? From the third and last phase only one part of a building is known. It was a slightly curved wall, over 18 m long and belonging to a so-called boat-shaped house-plan. This building was situated in the embankment zone.

The recent investigations in the middle quarter also concerned the waterside of the riverbank. Due to local circumstances, however, it was not possible to have the sites at the landside and the waterside on a single line. On the other hand, the phenomena encountered on these sites did display such a degree of similarity and even congruency that they could profitably be combined. It was, moreover, felt logical to do so, since the location of the sites followed the above-mentioned general development pattern of the settlement.

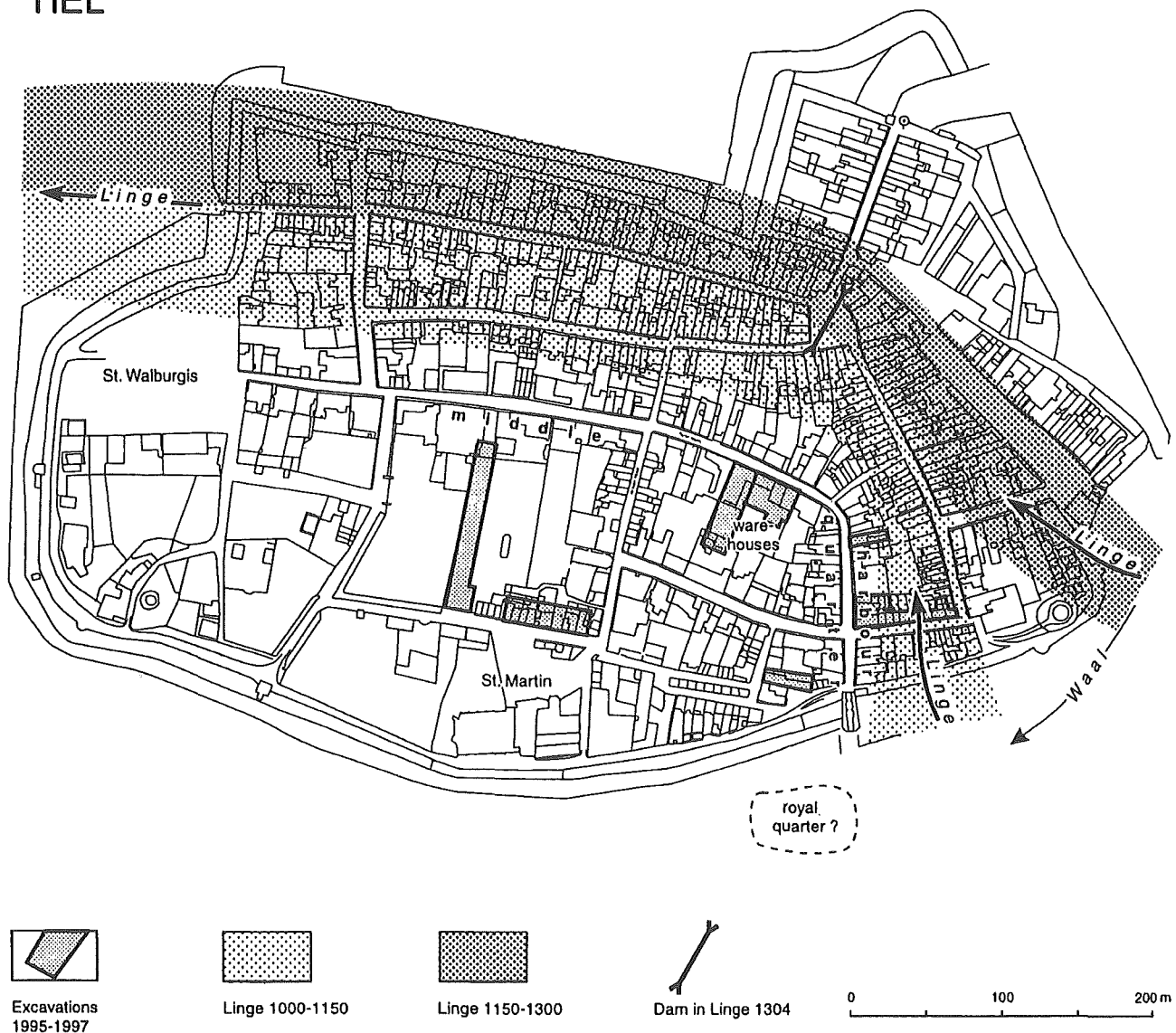
The riverside sites showed the development of a harbour in the same period as the parcelling and building on the landside. The harbour came into being along the 'southern'³ embankment of the Linge river. It started around 900 AD. Since at that point the

slope of the riverbank was rather steep, the need for the creation of special mooring places arose right from the beginning. Initially, from the late 9th century until presumably c. 957/960, separate piers on piles were built. The piers stood at right angles to the riverbank and each could be over 12 m wide. In a second stage, the system of individual piers was altered and converted into what seems to have been one single and uninterrupted wooden platform on piles, a kind of quay which stretched out over the entire zone of a marshy strip of land at the water's edge. Although the platform itself had not survived, most of the piles underneath had been preserved and a couple of rows in the outer 4 to 5 m of the former quay could be investigated. The interspaces between the piles were partly filled in with earth and at the waterside the quay was fenced off by a revetment made of wattle. This situation lasted until the years around 985 AD when a new development started.

During the second half of the 10th century, a process of silting up of the natural watercourse developed. In the harbour area, sand was deposited by the river and as a result, the draught in front of the quay became shallow. A reaction followed around 985 when the quay was replaced by a new platform. The latter was laid down on top of the earth used to fill in the riverbed. But there was another, very distinctive change as well. The filling in now took place in narrow strips (c. 5.5 m) running at right angles to the riverbank. The long sides of the strips were covered with wattlework and their ends were closed off with a revetment of planks set against posts. This strip-like partitioning at the waterside can also be seen as an echo of the first pattern of individual plots which we may assume to have been characteristic for the properties on the landside of the embankment in this period. A measure of individuality was also re-emerging in the techniques that were put into practice on the different plots. Re-used timbers from houses and/or ships were eventually used as separate bottom layers for filling in the narrow strips. In one case, a cover of willow-twigs laid down on top of the foundation wood and combined with a deposit of natural sand, formed a most peculiar bottom layer in this respect.

The fourth stage of development of the harbour meant a new range of activities in the embankment area. The main purpose of the operation was to raise the level of the site. The filling in with earth was now combined with the creation of internal timber 'boxes'. The long sides of the raised strips were reinforced with planks set against a row of short and thick entrenched posts. Again, the re-used planks could for the greater part be attributed to dismantled ships; we will come back to this later. The new works were

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executed during the 11th century and took place in several phases. On the newly created grounds and following pattern of the narrow plots, some houses were built, possibly in two rows: one row along the street which ran on top of the riverbank, the other down in the yards directly on the waterfront. These buildings lasted until roughly 1125. Then the area seems to have become deserted.

The position of the harbour was determined by special environmental conditions. It was, first and foremost, because of the nearby junction of the two rivers that the smaller one could offer a sheltered harbour for the busy traffic on the major river. But the harbour did not only play a role as a station in the long distance trade along the Waal, it could also function as the starting point and/or end station of a regional trade route along the Linge. In this period of the 10th and 11th centuries, the junction on the side of the Linge was forked with (at least) two branches and a sand 'island' in the middle. The harbour was

made in the western branch and was initially linked only to its western side. The eastern side came into use from the third stage of development (*i.e.* before 1000 AD) onwards and from then on, both sides developed along the same lines. The continuing filling in of the watercourse together with the building of successive waterfronts naturally caused the harbour to grow narrower. By the end of the 12th century, the former riverbed was reduced to a kind of 'canal', only 15 m wide. Not long afterwards it was completely filled in and another century later it was covered up completely. In the late 14th century, the former harbour area became a living quarter and was built over with successive layers of constructions.

Finds and trade

Do the archaeological finds reflect in any way the trade and traffic at Tiel during its hey-day? As usual

in these cases, the answer must be twofold. The finds certainly bring out some trends, but they also reveal intriguing absences. Moreover, one must always keep in mind that it is only part of the trade *contacts* and never the totality of trade *relations* that can be represented by this type of evidence. Even when keeping this in mind, however, the evidence that has come from Tiel may in some respects be described as surprising. This applies in the case of special finds made of wood and timbers, particularly from ships, stone, and metal, and in that of some groups of imported ceramics.

The greater part of the ship-timbers found in the harbour works come from river-barges. These shallow vessels, some 20 to 25 m long and with a flat bottom, were extremely well-equipped for all transport purposes on slowly moving rivers, even shallow ones. The boats were far from solid and, therefore, they had a rather limited life-span which could last from four to eight years. As carriers for all types of goods they were obviously very useful. This type of ship has had a long tradition on the rivers of the Continent and even today one can see them in use in certain places. As far as the ships found in Tiel are concerned most of them will have come down loaded with merchandise from the Upper- and Middle-Rhine areas. At their destination, the 'old' and 'dilapidated' ones will have been dismantled to be used in the piers and the reclamation works for the new harbour.

In addition to the evidence for the ship-building tradition of the barges, which could be roughly called Rhenish, came another signal pointing in quite a different direction: some remains were found that could be attributed to a nordic shipbuilding tradition. Some parts derived from a type of ship that is well-known from Denmark and Northern Germany as a Viking vessel of the first half of the 11th century. The Tiel finds suggest a ship or ships of a size larger than that of the parallels in the North. Marks of fire on part of the finds indicate that the vessel (or vessels) at Tiel must have burned down before the timbers were re-used. Another surprising outcome of the analysis was that some of the wood in these ship finds originated from Southeast England. Thus this new evidence allows us to depict a Viking ship-building tradition for the period around 1000 AD which was widely spread over much wider areas of northwestern Europe than Scandinavia.

Most of the ceramics found in Tiel were imports. Already at the start of the settlement in the late 9th century, the trend was obvious. But it became completely convincing when the town reached its peak in the 10th and 11th centuries. The figure of imports among the ceramic finds at the four recently excavated sites amounts to about 75 % of the total, 65 % of

this total coming from the Rhineland and 15 % from the Meuse region. These figures clearly reflect the importance of trade in general and directions of the two main traffic routes in particular.

As far as the types of pottery are concerned, the presence of the so-called *Reliefbandamphorae* – and particularly of the (very) large ones with a (very) thick wall – from the Rhineland is significant. Judging from the total weight of the fragments that were excavated more than half of these objects have been found in the harbour area. This has led to the assumption that these huge egg-shaped vessels might may originally have functioned as containers for bulk goods. At Tiel, the merchandise could have been subsequently repacked in smaller quantities for one or more regional markets outside the town after which the useless 'wholesale package' was thrown away. It is worth noting that this type of large vessel is a more or less rare occurrence among contemporary archaeological finds in the regional areas.

Among the quantitatively important groups of imports at Tiel belongs also the so-called Duisburg ware. Recently a proposal has been formulated to consider this specific type of pottery a 'guide fossil' for 10th-century assemblages. A first and rather hastily composed inventory of finds in the Netherlands following the discoveries at Tiel suggest that it occurs regularly on 10th-century find-spots in the Dutch delta. What makes it special for Tiel, however, is the great quantity in combination with a considerable diversity in terms of shapes. The Duisburg ware again is a clear sign of the importance of the Rhine trade here.

Conspicuously absent among the Rhenish wares found at Tiel are the older types so abundantly present at Dorestad. Their absence may be seen as another argument for both the end of the mercantile activities at Dorestad and their beginning at Tiel.

Worked stone constitutes a third group of imports. The finds of stone point in two directions. From the south and connected with the Rhine trade come numerous fragments of tefrite querns. Part of these were still semi-finished. They seem to have been imported to Tiel either to be finished here or to be distributed from here to more distant (work)shops. All originate from the eastern Eifel region that had a long tradition as production area, as we already knew from the many comparable imports in Dorestad. The other direction from which an import of stone may have come is Scandinavia. In the harbour area of Tiel, a fragment of a mould made of soapstone was found and possibly it comes from the south of Norway where an export industry of soapstone was operational in this period.

Some metal finds are possibly also of Scandinavian origin. They include one of the two arms of a

folding balance and a globular 'ball-weight', both dating from the second half of the 11th century. It is likely that these objects were linked up with the exchange of money. At any rate, they were directly linked with commercial activities. The findspot was in the embankment zone of the middle quarter, where the big warehouses stood.

From the same area come two notable coins. The type is still unknown – a very late Dorestad type has been suggested – and the holds true where the place where they have been minted is concerned. The period of minting must have been the end of the 10th century.

More 10th-century coins were found in the harbour area, though in a later context. It is a group consisting mostly of imitations of pennies from Cologne minted at an as yet unknown place. To this group some other coins were added. Originally, the entire collection may have formed a merchant's capital that was hidden. The only English coin, a hardly worn specimen struck by king Eadwig of England (955-959), could date the hiding of the treasure shortly after 959. But subsequently, in the 11th century, the earth in which the hoard was presumably hidden was transported to the harbour area to be used as filling earth. There the coins got dispersed between the piles for the new quay.

Tiel succeeded in its turn

The process of the rise and flourishing of Tiel in the 10th and 11th centuries was politically related above all to the policy of the German king. And so was its decline about a century later. There was the long tradition of the central government maintaining a firm grip on the traffic along the Rhine. As a result of this policy, Tiel had become an important royal stronghold in the delta area, in succession to Dorestad. When in the course of the 12th century, however, things changed and a number of reasons caused the failure of the traditional policy, this resulted in the gradual withdrawal of the direct royal influence in the area. In the long run, one of the consequences was the development of towns. The establishment of many of these new centres was – in contrast to what happened before – related to the growth of a power that was regional. For the larger part, this power was in the hands of a few almost independent princely territories. In this group of 'modern' medieval towns, the somewhat old-fashioned concept of an *emporium* was no longer viable. It meant the end of Tiel as a settlement of this nature. On the other hand, and otherwise than Dorestad in earlier times, Tiel now had the opportunity to go through a transformation

and to gain the new status of a medieval town. This happened from the 13th century onwards.

The environmental changes in and around the settlement, to which we referred earlier, have certainly contributed to this transition. The transformation of the watercourses which went on during the period of prosperity of the *emporium* led to the accessibility to the harbour deteriorating increasingly. The recent archaeological investigations made clear that the natural harbour bed in the river Linge silted up in the 12th century until it eventually disappeared. Closer to the centre of the settlement, in front of the warehouses, the river withdrew, making access to deep water ever more difficult. In 1304, the river was closed off with a dam located in the middle of the town and this meant the final end of its role as a through waterway.

At the same time, contemporary changes in the more general pattern of long distance trade also worked out in disadvantageous ways to the position of Tiel. Sedentary merchants took the place of their travelling colleagues and a growing number of new urban markets attracted commercial activities. In many places, local autonomy stimulated the creation of independent organisations such as hansas of towns with their special interests. It became more and more difficult for the individual long distance trader to play his traditional role in this new world. In addition, a few radical technical innovations occurred. The growing draught of sea-going vessels increased the need for more and better facilities for transshipment in the context of river-traffic. In accordance with this, a trend emerged to create new and special transshipment harbours and to locate these down-stream, as near to the sea coast as was favourable to the trade on water. With all these changes affecting long distance trade, Tiel clearly soon lost its first-rank position. New centres took over.

The consequences for the physical appearance of the settlement have been severe. We already mentioned some of them such as the changes in the river course and the loss of the harbour. The archaeological work showed how the large fell into disuse warehouses in the middle quarter. In the course of the 12th century, the level of the whole area was raised considerably and the remnants of the old wooden buildings sank below the surface. The changing role of Tiel in international traffic and trade is also reflected in the comparative analysis of some of the assemblages of archaeological finds. The superabundance of imported ceramics which was most characteristic for the 9th, 10th and 11th centuries came to an end and in the 12th and 13th centuries, the ratio between the imported and local wares became normal. Some features did, however, remain. Among

them, the wide and very long plots of the warehouses in the middle quarter. Changes in this pattern are of a later date. Some of the old plots have been preserved and are still recognizable. The somewhat 'marginal' position of the ecclesiastical grounds with the parish church of Saint Martin situated at the edge of the settlement also remained unchanged.

During the changes, each of the three quarters had its own history. These histories again seem to reflect a transition from the 'peculiar' to the 'normal'. The royal quarter, which by a royal gift from 1000 AD was given to the Maria Convent at Aix-la-Chapelle, was handed over to the duke of Brabant by a new royal grant from about 1180. During the 13th century, it remained in ducal hands and it has been surmised that the merchants' quarter, the *vicus*, was linked to it. The western quarter, that of the nobility, went through a different development. Here, the centre was the Saint Walburgis Convent which had been founded by the nobility, together with its fortification, the *lapidea civitas*. By confiscation, it had already passed into royal possession by the end of the 9th century. Subsequently, in 950 AD, the king granted the whole complex to the bishop of Utrecht. And the bishop afterwards gave it in fee to the duke of Brabant, so that this quarter in fact also became Brabant.

In the course of the 12th century, royal power which initially had created the *emporium* by endowing it with royal rights retreated more and more.

Between 1152 and 1174, the prominent Rhine-toll, which originally came from Dorestad, was taken away from Tiel and transferred upstream to Kaiserswerth near Düsseldorf. Some years later the royal presence at Tiel also came to an end in the physical sense by handing over the old royal quarter to Brabant. Now Brabant became the most influential power in the town and Tiel had become a regional stronghold in the riverine area. Henceforth, the medieval town played its part in the contest between the two foremost territorial powers in the region: Brabant and Gueldres. Further to the west and downstream along the river Waal (more particularly along the section that was named Merwede), a new main port emerged: the town of Dordrecht. From the 13th century onwards, this town took over the old task of handling the long distance trade along the Rhine. Tiel had in its turn been succeeded.

This paper is a preliminary version of a preliminary analysis of four recent archaeological diggings in the town centre of Tiel (Province of Gelderland, Netherlands). It is based *i.a.* on five informative leaflets that have been published in the series *Archeologie in Tiel* 1-5, 1995-1997. I thank the authors Michiel Bartels, Juke Dijkstra, Jan-Willem Oudhof and Karel Vlierman for their willingness to make the information available. In due course, the definitive version of this paper will be published elsewhere with full references.

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