THE NEW DRAPERIES *in the Low Countries and England*



EDITED BY
N. B. HARTE

PASOLD STUDIES IN TEXTILE HISTORY 10

The history of the varied group of textiles known as new draperies raises central issues for the development of the European economy in the pre-industrial period, but no single book surveys the development of new manufactures in England and the Netherlands. *The New Draperies in the Low Countries and England* updates the traditional historical view, transcending a narrowly regional approach and adopting an international perspective which offers many original insights and suggestions for new lines of enquiry.

European and North American scholars discuss changes in manufacturing techniques, describing the ways in which socio-political circumstances, such as war and the migration of workers, affected these industries. Setting the trade against a wide canvas which spans Western Europe, India, and the Middle East, these scholars connect the history of the new draperies to a broader context of textile production.

The Editor, N. B. Harte, is Senior Lecturer in Economic History at University College London, and Director of the Pasold Research Fund.

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PASOLD STUDIES IN TEXTILE HISTORY, 10

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PREFACE

THIS book is the product of a conference of invited participants held in Leuven, Belgium, in April 1988 with the financial support of the Pasold Research Fund from Britain and the National Foundation of Scientific Research in Belgium. The Pasold Research Fund is especially grateful to Professor (now Baron) Herman van der Wee of the Centrum voor Economische Studien at Leuven for all he did to facilitate the conference, and for the active assistance of Dr Eric Aerts. We are also grateful to the Irish College in Leuven, which provided very agreeable accommodation.

The essays in this volume are revised versions of papers presented at the conference, which also discussed papers from Professors Jan Craeybeckx and Jean Paul Peeters of the Free University of Brussels and from Dr (now Professor) Penelope Corfield of Royal Holloway College, which are not included in this volume. Dr Luc Martin was present at the conference and his essay, based on the Cambridge Ph.D. thesis he was then working on, has been added to the volume.

Professor Leo Noordegraaf was unable to attend the conference, and his paper was delivered, with memorable theatrical effect, by the late Professor D. C. Coleman. The late Professor Charles Wilson also attended the conference, contributing also memorably to the discussions and to the *après*-conference proceedings. Especially valuable contributions were also made by Dr Joan Thirsk, Professor Eric Kerridge, and Miss Natalie Rothstein.

The editorial task has not been an easy one; I am grateful to the contributors to this international volume for bearing with me and with each other. For production of the first two maps, we are grateful to Catherine Pyke and Nicolas Mann of the Department of Geography at UCL, and for the compilation of the index, we are grateful to Colin Smith of the Department of History at UCL. Miss Ruby Way, the Secretary of the Pasold Research Fund, provided much assistance before, during, and after the conference.

N. B. HARTE

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ABBREVIATIONS

AB	Assembly Minute Books
ADN	Archives Départementales du Nord
AEM	Archives de l'État, Mons
AGR	Archives Générales du Royaume, Brussels
AM	Archives municipales
APC	*Acts of the Privy Council*
BL	British Library
BM	British Museum
CPSD	*Calender of State Papers Domestic*
HMC	Historic Manuscripts Commission
MAB	Municipal Assembly Book
MCB	Mayor's Court Book
NCC	Norwich Consistory Court
NNRO	Norfolk and Norwich Record Office
NRO	Norfolk Record Office
PCC	Prerogative Court of Canterbury
PRO	Public Record Office
SPD	*State Papers Domestic*
UEA	University of East Anglia

1

INTRODUCTION

N.B. HARTE

WHAT were the new draperies? This book does not provide a simple answer, or a single one. The question becomes a conundrum, raising all sorts of interesting issues. The history of the new draperies presents especially complicated problems for the historian of technology, of economic and social organization, of trade and marketing, of fashion and consumption. A textile can easily be described as 'new' when it is only new from a particular point of view—'new' to the observer of production at a particular place, perhaps with a vested interest to defend, or to promote, 'new' to the merchant, perhaps bringing into inter-regional or international trade a product that had long supplied a more local market, 'new' to the formulator of revised legislation or other local or guild regulation. The issue is further complicated by terminological complexities; a new word can be used, consciously or unconsciously, to ring the changes on an established item, while old terms can be recycled into new usages, thus apparently masking key changes.

Such problems are familiar to the economic historian grappling with textiles in almost any context, but they are problems which present themselves almost overpoweringly in the case of the varied group of textiles referred to at various times during the Middle Ages and the early modern period in certain parts of Europe as 'new draperies'. None of them were completely new products, as D. C. Coleman pointed out, in the sense that 'gunpowder, coal gas, rayon, the motor car, the zip fastener' were. 'They were simply [*sic*] new fabrics, new designs, different colours, different finishes; changes in yarn, in weaves, in patterns. They were, in essence, mutations . . .'[1] The new draperies can be seen as the result of that 'very varying and new fangling of manufactures' which characterized the European economy in the proto-industrialized period, before the major and evident technological changes of the period of the industrial revolution.[2]

It would be wrong, however, to see the proto-industrial period as one in which there was no technological change at all. The contributions to

this volume show that, as well as the various persistent tendencies to reduce what economists have come to call 'transaction costs', there were seemingly minor technological changes of critical importance, evidently diffused in a complex time-lagged way, alongside the characteristic 'varying and new fangling' of techniques. The problem of the new draperies raises central issues for the economic historian of 'pre-industrial' Europe.

As far as England is concerned, the old view of the role of the new draperies can now be seen as outdated. The simplistic story was that various types of new and lighter textiles came in the late sixteenth century to rival the long-established production and exportation of traditional English woollen broadcloth, the heavy cloth woven from yarn of wool that was carded, and then fulled to make it resemble a strong, weather-proof, and non-fraying variety of felt. In this process of diversification, a key role was given to various Flemish and Dutch immigrants who brought to England new techniques which resulted in a differentiation between the 'old' and 'new' products. The 'new draperies' of late sixteenth-century England, certainly new among England's exports, were thought to have their direct origin in a process of diffusion from the low countries of types of textiles that had originated there as the *nouvelle draperie* of the fourteenth century. What was innovated was a new type of textile, more complex in its technique of production, using a different type of wool, spun in a different way, and woven with different types of woollen or worsted yarn and even different fibres, that found a new market because of its cheapness and adaptability. What was new in the medieval Low Countries was new in sixteenth-century England too. Such was the old orthodoxy, sketched in many an economic history textbook.

The story is sustained in an old jingle, much quoted, though of obscure if almost contemporary origin, linking changes in textiles and brewing technology to wider historical changes in the 1530s:

> Hops, Reformation, bays and beer
> Came to England all in one year.

It is still not clear if the production of 'bays' or baize in England began as early as the 1530s, nor is it clear if what came to be called 'bays' in Colchester in the late sixteenth century was a commodity newly introduced by craftsmen from the Low Countries or a development of an older small-scale Essex product under a new name. Professor Coleman wrote, in a well-known re-examination of the problem of the new

draperies in 1969, now perhaps itself outdated, that the 'new' textiles in England were at least partially based on 'a commercialisation of peasant techniques, a drawing in to the market economy . . .'.[3] Eric Kerridge, in his recent compendious and important account, *Textile Manufactures in Early Modern England*, goes so far as to reject the term 'new draperies' entirely; he sees the term as having purely fiscal significance.[4] In a legal sense, it is true that in the late sixteenth century the term referred to those textiles not covered by the long-established English tax on the export of cloth—that is to say, the types of broadcloth that could be reduced to 'shortcloths' for Customs purposes—dating from 1347.[5] Yet it is apparent that the term cannot be dismissed as readily as Professor Kerridge implies. The concept was in the mind of late sixteenth-century Norwich, as Luc Martin and Ursula Priestley demonstrate, in no merely legalistic sense.

Some of the essays in this volume throw light on the vexed problem of the new draperies in certain regions in England and certain regions in the low countries. There is scope for much more regional research, perhaps especially in the production and finishing of textiles in London in the sixteenth and seventeenth centuries, which, as Dr Holderness points out in his contribution, remains a conspicuous gap in our knowledge. It is odd, in this regard, that we appear to know more about Sandwich and Canterbury, or about Colchester and Norwich, than we do about London, the rapidly growing metropolis in this period. But the intention of this volume is to transcend a narrowly regional approach, and to attempt to embrace a perspective that is international in scope as well as long-term in implication.

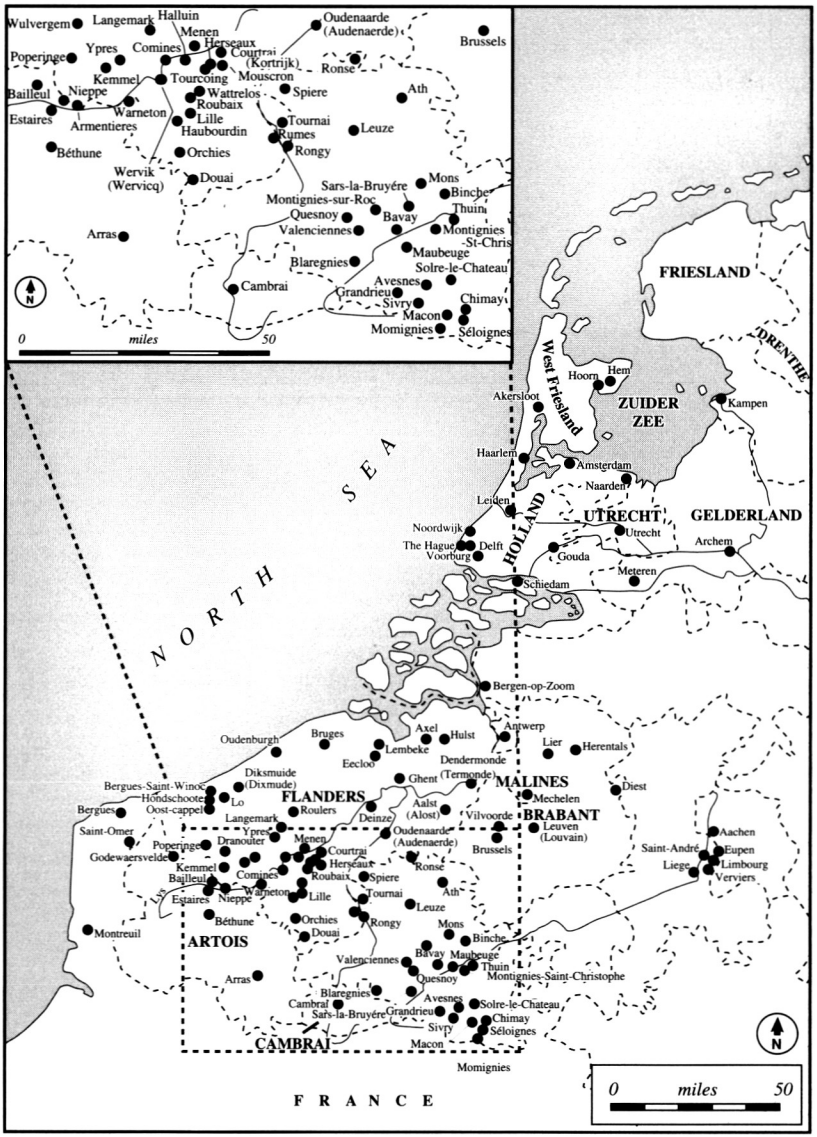
The first two contributions to this volume are of especial importance in this regard. In their different ways, Patrick Chorley and John Munro range over a long period and deal with many important and original themes. A generation ago, the late Professor E. M. Carus-Wilson elevated the diffusion of water-powered fulling in England into an 'industrial revolution of the thirteenth century'.[6] It can hardly be legitimately claimed as an industrial revolution, but the introduction of mechanized fulling, following the introduction of the horizontal loom, the spinning wheel, and the new technique of carding into medieval Europe in the twelfth and thirteenth centuries, can surely be regarded as the beginnings of a significant revolution in the system of production of textiles. The technological changes, the 'new' ways of producing textiles, were in fact derived from India and China, just as the 'new' technique of knitting was diffused from the Arab world in the Middle Ages.[7] The

'new draperies' need to be seen in a broad context of all manner of 'varying and new fangling' that is of the essence of the historical development of textiles.

Economic historians conventionally approach the history of textiles fibre by fibre, usually looking separately at the industries based upon wool, linen, cotton, silk (and, in the twentieth century, artificial fibres). Historians of dress have long been frustrated by this approach, realizing that clothes—the end-product for most (but by no means all) textiles—are generally composed of many different types of textile.[8] The history of the new draperies further reveals the inadequacy of this approach. Wool is by no means a homogenous product. There are different types of sheep, different types of wool, different ways of preparing the wool for spinning, different ways of spinning, different ways of combining yarn while weaving, different ways of weaving, different ways of incorporating yarn derived from other fibres, different ways of finishing and dyeing cloth, as well as different ways of naming and marketing the product. These are not antiquarian byways; this book shows that an examination of such issues is central to the development of the European economy in the pre-industrial period.

NOTES

1. Coleman (1973), 8–9. Note his inclusion of rayon in this list of examples.
2. Ibid. 12, 15.
3. Coleman (1969), 421.
4. Kerridge (1985), pp. vii, viii–ix, 91.
5. See Carus-Wilson and Coleman (1963), 2, 14–15, 22, 199.
6. Carus-Wilson (1954*a*).
7. See the suggestive remarks in Ponting (1971), 4–11, and in Irena Turnau, 'The Diffusion of Knitting in Medieval Europe', in Harte and Ponting (1983), 368–89.
8. See N. B. Harte, 'The Economics of Clothing in Late Seventeenth Century England', in Harte (1991), 288–290.



MAP 1. The Low Countries, showing places referred to in the text



Map 2. East Anglia, showing places referred to in the text

2

THE EVOLUTION OF THE WOOLLEN, 1300–1700

PATRICK CHORLEY

THE technical history of the woollen, from its first emergence into documentary light in the thirteenth century until the innovations of the eighteenth, remains largely unexplored. Much of the literature leaves the impression that it was largely uneventful. In contrast to the worsted, with its increasingly lush proliferation of varieties from the late Middle Ages, the woollen appears almost as a constant, basically unchanging in the method of its production.

While this was broadly true of the finishing processes of fulling, raising, and shearing, which determined the persistent characteristics of the type, and of weaving on the horizontal broadloom, it was far from the case with the preparatory processes. As is well known, a defining criterion of the later woollen was the use of the card both for warp and weft—in conjunction with the great wheel, at least for finer qualities. It was by these techniques, described in detail in the classic accounts of Roland and Duhamel, that the yarn was produced for the broadcloths made in the great European woollen-manufacturing centres of the seventeenth and eighteenth centuries—Leiden, Verviers, Sedan, Elbeuf, the West of England, and the rest. It had been quite otherwise with the *grande draperie* of Flanders, Brabant, and Champagne, which dominated the European market during the thirteenth and the earlier fourteenth centuries. This was woven, warp and weft, from wool that had been combed, and had been spun on the spindle and distaff. The origins and earliest history of carding are obscure. They are largely a matter of speculation, which, however interesting, cannot be further indulged in here. There is, in my view, no unequivocal documentary evidence of carding before 1300 anywhere in Europe; and although the spindle-wheel was familiar, its use appears to have been confined to the weft of coarser woollens, which moreover seems most often to have been prepared with the bow.[1]

No account exists of the transition from the medieval to the modern woollen in respect of these technical changes, a transition that was prolonged and difficult. The present essay aims simply to chart its main lines; and that very largely within the confines of the Low Countries and Italy.[2] The documentation is entirely from published materials. Apart from the north Italian industry for which there are two other major sources—the business records of clothiers in and around Florence from the mid-fourteenth century, and contemporary descriptions of the manufacturing process, notably the famous Florentine *trattato dell'arte della lana*—the evidence consists essentially in the technical regulations laid down by the guilds and other authorities. It has been assumed that these represented 'best practice', although clothiers were doubtless not always as law-abiding as they should have been.

The evolution that is my subject took place in two distinct stages. In the first carding was employed only for the weft. The warp continued to be combed and to be spun on the rock, whereas the weft was now normally spun on the great wheel. A new standard type of woollen emerged, which, although it may appear transitional in the overall perspective of development, was to have a long and successful history. In the second stage, the outcome of which was the modern woollen, carding and wheel-spinning came to be applied to the warp. It is impossible to assign any clear periodization to the two stages because their timing varied from region to region and there were many overlaps. Very broadly speaking the first stage was characteristic of the fourteenth century, and in much of Europe, notably Italy, it lasted well into the sixteenth century. By then the second stage was under way in the Low Countries (even earlier no doubt in England), although it was only in the seventeenth century that it came fully to fruition.

But before I embark upon trying to give substance to this schema, I should say something about the technical and economic significance of the changes involved. The defining characteristic of the woollen is of course the felted form that it assumes through fulling. This gives it not only its distinctive feel, look, and drape when finished, but also its strength and structure, which unlike the worsted, depends not so much on the strength of the component yarn as on the way it meshes together. It has been argued, I think convincingly, that among the historical possibilities the combination of carding and the great or spindle-wheel, which remained in use for fine woollens, apparently with little change, right up to the Industrial Revolution, produces the yarn with the

greatest felting potential. The other available options, carding/rock-spinning, and combing/wheel-spinning, would tend to enhance its worsted at the expense of its woollen character. This would be even truer of the initial combing/rock-spinning association, although the yarn produced by the latter—in the *draperie*—was certainly not, as is sometimes said, a worsted yarn in the later sense.[3]

On this basis one might see the evolution towards the classic woollen as determined by a kind of teleological pull towards the realization of its full potential. The difficulty was to combine feltability with the other qualities needed in the yarn, most obviously strength, uniformity, and fineness, which were much less easily obtained through the new technique than the old. The mid-fourteenth century Bruges *Livre des Métiers* contrasts the knotty weft yarn spun on the wheel most unfavourably with the rock-spun warp. These qualities did not matter so much for the weft, but they were essential for the warp, if a fine cloth were to be made. This explains the two-stage evolution—the comparatively rapid adoption of the new method for the weft, the long delay in doing so for the warp.[4]

Until the problem of spinning fine carded warp had been overcome, in my own somewhat tentative view not until the later sixteenth century, the all-carded woollen had a very different character from the half-carded (or all-combed) type, and one which limited its capacity to compete at the top end of the market. Because of the thickness of the yarn it tended to be less densely warped, and to have a far higher ratio of warp to weft weight. In the Castilian regulations of 1511 this is as high as about 1 : 1 compared to 1 : 2 for the half-carded type. It was in consequence considerably heavier. In Italy, where the half-carded type was developed furthest, warp counts of up to 4,000 ends are recorded, and warp–weft ratios of 1 : 3. The body of the cloth was very much in the weft, carried by a dense and finely spun warp. These figures compare with a maximum of rather over 2,000 across a similar loom width for the all-carded type by the later sixteenth century. It is only in the mid-seventeenth century that counts of over 3,000 are recorded. The warp–weft ratio began to shift back to something like 2 : 3. A genuine superfine cloth of the modern type had been developed.[5]

Earlier, however, the all-carded cloth could hardly have been described as superfine. There were complaints that it was too heavy and used too much wool. It might look good, but it did not last. This was in part at least because, as an official Castilian comment put it in 1528: 'it uses too much warp and too little weft'.[6] One way of palliating the

problem—for this must surely be the explanation of the practice—was to limit the proportion of warp ends from carded wheel-spun yarn. This seems to have been quite common in the Low Countries during the transitional period, although I have not found evidence of it elsewhere. In Malines, for example, it was permitted to use one in three ends from this type of yarn in some middling cloths.[7]

Over and above its effect on the feltability of the yarn, there is a further important question concerning the association of carding and wheel-spinning, which has major economic implications. The two basic preparatory processes offered the greatest scope for cost reductions in manufacturing, accounting as they did for a very large proportion of the total, far more than the finishing processes. This was, for example, about 50 per cent on average for the already half-carded and wheel-spun cloth made by the Datini in Prato (excluding dyeing and the raw wool). Carding appears to have been a cheaper operation than combing; but the major potential for saving was, of course, provided by the spinning-wheel, which was certainly the most important cost-saving innovation of the period. Figures from Italy and Spain show that the rock was 100–200 per cent dearer than the wheel per lb. of wool spun. Admittedly the difference is exaggerated because the comparison is between warp and weft, which was always cheaper to spin. But eighteenth-century figures from Elbeuf (Normandy), relating to wheel-spinning for both, show that it basically holds: the warp was now only 38 per cent dearer.[8]

A key question is therefore whether it was easier to produce a decent yarn with the spindle-wheel, using carded rather than combed wool; whether carding may have been, if not a pre-condition, at least a major facilitation for the diffusion of wheel-spinning. There are technical reasons for thinking that this might have been the case, given the single-handed draughting imposed by the spindle-wheel. But I leave this to the experts. As regards the historical record, the association between the two techniques does seem to have been pretty close—if less so for the weft than the warp. I have seen no evidence that wheel-spun warp in the *draperie* was ever anything but carded, and conversely no evidence of the hand-spinning of carded wool either for the warp or the weft.

Because of the superiority of the sources, stage one in the evolution can be followed most clearly in northern Italy. The earlier statutes of the *arti della lana* leave little doubt that the standard practice, *c.*1300, was for the warp to be of the familiar combed and hand-spun type, while the weft was bowed, and probably already spun on the wheel. Although

bowing is not part of my subject in this essay, it should be pointed out in passing that in this period it was a far more important and widely used technique than the literature suggests. It was commonly employed for the weft of the cheaper *draperie sèche* in the Low Countries and northern France—for example in the two great centres of Valenciennes and Tournai. In northern Italy therefore the only change involved in the first stage was the substitution of carding for bowing in the weft, which, combined with the fact that the industry, although its output was large, had no international reputation for quality to defend, may account for the ease and speed of the transition compared with the Low Countries.[9]

The earliest record of carding appears to be an entry in the Florentine guild statute of 1331, which refers to 'panni qui fieret alla francescha sive cum scardassis'. The Florentines seem to have regarded the technique as typically northern; and it has been argued that its adoption was a major element in what turned out to be a highly successful effort on their part from around this time to upgrade the quality of their product by imitating the methods of the Low Countries. How typical carding was of these at this time is questionable, as we shall see. But it is worth emphasizing that in Florence as elsewhere in northern Italy its introduction was associated with an improvement in quality, which in the case of Florence at least led by the end of the century to its best cloths being as fine as any in Europe.[10]

The technique seems to have caught on rapidly. By the mid-century we find the half-carded type being made by the Del Bene in Florence and the Delle Bracche in Pisa. It was this type that was made by the Datini in Prato in the 1390s. The successive stages of its manufacture can be followed in detail in the records of the company published by Melis. They correspond almost exactly to the famous description of cloth-making in the Florentine *trattato del arte della lana* of a few years later.[11] Although less information is available about the centres north of the Apennines, the same development at about the same time can be traced in the statutes of Padua and Venice. The first mention of the new technique in the latter city is in connection with the introduction of a superior cloth employing 'lane francesche e d'Engelterra'. The Paduan statutes (adopted also in Vicenza) indicate production of the half-carded type, by their stipulation that the warp should be 'tutto quanto a rocha, petená a petene'.[12]

In the important Languedoc industry, which can in some respects be assimilated to the Italian in its traditional methods, and the qualities of cloth that it produced, there is probable, if not unequivocal, evidence of

carding in the later thirteenth century. The half-carded type already seems to have been standard in the 1320s. It is taken for granted in a statement of manufacturing costs prepared in 1329 by the consuls of Narbonne, one of the major centres of the industry. When, at the end of the century, records first become available for the adjacent Iberian region (Barcelona and Cuenca in Castile) they show, as might be expected, the same situation.[13]

Having rapidly adopted carding for what was already probably a wheel-spun weft, the Italian clothiers seem to have made no attempt to apply the two techniques to the warp. The half-carded woollen remained the standard product of the north Italian centres until their final decline in the seventeenth century. Its persistence can be seen in the records of the Florentine *arte*, and in the mid-sixteenth-century books of the firm of Raffaello dei Medici, whose woollens show no change from those produced by the Del Bene two hundred years before.[14] It can be seen in two contemporary descriptions of the trade by clothiers, the one from Ferrara dating from about 1550, the other from Venice about fifty years earlier. The fortunes of the Venetian industry, which was the most successful north Italian woollen industry during this century, were almost certainly based on the half-carded woollen. The preparatory processes as described in Garzoni's *Piazza Universale*, published in the city at the end of the century, are identical to those recorded in the *trattato*. The wool is first combed, and the warp is then spun on the rock: 'la lana poi che resta nei pettini si scardassa da scartaggini . . . e scardassata ch'é, si fila . . . col mulinello, per farne trama'. In Spain, on the contrary, a remarkably successful industry grew up during the sixteenth century based on the modern woollen.[15]

It is somewhat surprising that the Florentine clothiers should have regarded carding as a typically northern technique, and one furthermore that was evidently well established in the 1320s. It is surprising too that its introduction in the Florentine industry should have been a vehicle for upgrading its product. There is virtually no documentation of carding in the Low Countries and northern France by this time: it comes from the 1330s onwards. According to the generally accepted view, de Poerck's for example, in the initial phase, indeed right up to the end of the century, the technique was used only for coarse cloth.[16]

Support for this view comes from the series of bans, often backed by draconian penalties, that were imposed by the guild authorities during the middle years of the century, in Douai, Ghent, Malines, Brussels,

apparently Louvain; as well as in the two great Champagne centres of Châlons and Provins. The Douai ban laid it down that the weft should be made as 'anchiement a esté acoustumé a faire . . . est assavoir que les traimmes d'iceulx draps ne soient point gardés'. This group, although Ypres is an absentee—and a significant one as we shall see—comprises virtually all the cloth towns that together dominated the top end of the international market in fine cloth during the first half of the century. Some, I suppose, might try to interpret this evidence in a Freudian way, as meaning the opposite of what it says. But although the technique was clearly being experimented with, equally clearly it was not the normal practice in this branch of the industry.[17]

A different light is thrown on the situation, however, by some other examples of guild intervention, the significance of which has not, I think, been recognized. Carding was also prohibited at this time in Valenciennes and Tournai, two of the major old-established centres specializing in the *draperie sèche*, the traditional coarse branch of the industry. It was in this branch, and in this branch only, which remained important there, that it was banned in Ypres, still perhaps the greatest of the northern cloth towns, although here there was a general veto on the use of the technique for the warp.[18] The evidence therefore suggests that the accepted view needs qualification, that carding encountered resistance in both the major branches into which cloth manufacture had traditionally been divided, the coarse as well as the fine. Both these branches were now in decline—becoming more rigid under pressure in their technical specifications perhaps, responding by a more exclusive affirmation of the methods that had originally brought them prosperity.

Where then did the new technique establish itself? The obvious candidate is the 'nouvelle draperie' in Coornaert's sense, the new and cheaper type of *draperie ointe* that, it is widely agreed, was developed from the earlier fourteenth century. As J. H. Munro has shown, this tended to displace the old *draperie sèche*, and it also probably competed with the traditional high-quality and dearer *draperie ointe*.[19] The Florentines associated the technique of carding in the north more particularly with wool-dyed cloths and medleys, *draperie ointe* types; and their links with the Low Countries were so close that their testimony must be taken seriously. A host of new centres arose on the back of this 'nouvelle draperie', usually epitomized by Courtrai, Wervik, and the draperies along the river Lys, but including numerous other places in Flanders and Brabant. Old centres of the *draperie sèche*, both large and small, converted to it. Saint-Omer and Tournai are examples; and

Poperinghe, whose clothiers claimed that the old lines were no longer saleable.[20] It was introduced sooner or later in the old centres of fine cloth manufacture, such as Ypres, Douai, Malines, and Brussels.[21]

Clearly, if it could be shown that the new drapery was essentially similar to the Italian type, with carded and wheel-spun weft, it would explain a lot about its success, both in terms of the novelty of the product and in terms of cost. The reduction in price compared to the old top-quality woollen has usually been explained as the result of simplifying the finishing processes. Both Coornaert and, more recently, Munro have emphasized this, although the evidence is not altogether clear.[22] But it seems to me, given the major part they played in costs, that the preparatory processes offered the greater scope for reductions; and that the application of carding and wheel-spinning to the weft could have been as, if not more, important a factor than savings in the finishing process.

As regards carding there is a good deal of evidence to support this hypothesis. To start with, so far as I know, in none of the new centres, in the southern Netherlands at least, was carding prohibited.[23] But if the relevant guild regulations contain no prohibitions, they often, unfortunately, contain no pertinent information at all. This is true in the case of Wervik and another of the Lys towns, Comines. It is true too of the 'niewe draperie' introduced, as we saw, in Ypres in 1334, which was very similar to the Wervik cloth and possibly its model. Yet we know that carding was practised in Ypres in the *draperie ointe* at the time; and where more likely than in the production of this new cheap type?

There are, moreover, numerous examples, where the occupation is mentioned in conjunction with combing, implying I think, given the usually limited range of output, production of the half-carded type. Most of these examples come from places that can be assimilated to the typical 'nouvelle draperie' centre. Such are Ath, Diest, Audenarde, Aire, Oudenburgh, and Béthune—the latter an interesting case, because carding was banned for *sec ouvrage* there, and it can be shown to have been employed precisely for a 'nouvelle draperie' type.[24]

In Saint-Omer, one of the great thirteenth-century dry drapery producers, that converted to the *draperie ointe*, the half-carded woollen appears to have become standard by about 1400. It is assumed at any rate in a statement of typical manufacturing costs dated to this time. In Douai, which had been one of the great quality producers, the new lines introduced in the 1390s alongside the old 'grande draperie', were explicitly of this kind.[25] So too were those that had been permitted

somewhat earlier in the Champagne towns, and, almost certainly, those that were developed somewhat later in Malines and Brussels.[26]

In 1377, pressing their case for restrictions on carding to be lifted, the Troyes clothiers claimed that carded draperies now dominated the market. 'Les draps cardez', they argued, 'sont de plus belle et plaisan façon et mieux marchant et plus exploictant à faire, et en fait-on plus aisez et à moins de frais que ceux des non cardez . . .'.[27]

If, as the Troyes clothiers argued, production costs were lower in the carded woollen, the main reason may have been, as was remarked earlier, because the weft was now wheel-spun, whereas in the old, all-combed type it was not. The overall coincidence in time between the diffusion of the two new techniques in the Low Countries and northern France is, I think, fairly clear; and, although the evidence is thin, there are pointers to resistance to the wheel as well as to the card in the old quality centres. It was banned in Châlons and Provins for example—and in Douai specifically for the *draperie ointe*, although by 1400 it had become current, in association with carding.[28] Numerous regulations from the mid-fourteenth century on, right down to the sixteenth (Leiden for example in 1527, and Antwerp at about the same time) prohibit its use for the warp, implying that it was employed for the weft. The point is spelled out in the specifications laid down for the new drapery permitted in Troyes in 1377, which stated 'que l'en puisse carder les tremes seulement de tous draps et pignier aux pignes les estains [warps] sans yceulx estains carder ne filer au tour, mais au fusel'.[29]

A major question, therefore, both as regards the 'nouvelle draperie' and the broader technical evolution of the woollen, is what precisely the connection was between carding and wheel-spinning? Was it easier, as I have suggested, to spin a uniform yarn on the great wheel from carded than from combed wool? Was the association thence an essential characteristic of the 'nouvelle draperie' and the secret of its success, as of the contemporary Italian product? To answer in the affirmative would be to accept a hard version of the argument. The soft version would take account of two qualifying facts: first that in the fifteenth century and doubtless earlier, combed wool was successfully spun on the wheel for the weft; secondly that carding was not in all circumstances—as will now be shown—a prerequisite for the production of a cheaper type of *draperie ointe*, and was not universal in manufactures with a good claim to be called 'nouvelles draperies'. This soft version, while not denying the major importance of carding, or the possible technical interdependence between it and wheel-spinning, would give more emphasis to the

latter both as a more general, and as a partially independent factor. As usual the hard version is more interesting, the soft more plausible.

The most important qualifying instance is provided by the industry of the northern Netherlands. It expanded greatly during the fifteenth century: until the very end of the period competition from it was probably a more serious cause of the difficulties increasingly experienced in the south than that from England, upon which too much emphasis is usually placed. The Dutch industry's output was mainly of middling quality, comparable to the 'nouvelle draperie' of the preceding century. The most successful centre was Leiden, which produced exclusively an all-combed cloth, the weft of which was, by the end of the fifteenth century, commonly spun on the wheel. Carding was rigorously forbidden, as it was in Utrecht, Gouda, and The Hague, which produced a similar cloth. The technique was banned as late as 1480 in Schiedam, having previously been allowed, when the town turned over to the 'Hagsche draperie'.[30]

The historian of the Leiden industry explains this policy in terms of a concern to maintain quality, the usual view of guild hostility to carding in the Middle Ages.[31] But this does not seem entirely convincing at a time when in Italy and also in the southern Netherlands a carded cloth was being produced of a much higher quality than the Dutch fabric. A different explanation may be proposed. Common to all these centres was the use of (mostly English) skin-wool as the main raw material, a point whose significance has not, I think, been recognized.[32] Skin-wool being comparatively cheap, it may explain the competitive edge of the Dutch even with the old type of cloth. It may perhaps explain the resistance to carding as technically unsuitable—more likely to damage the weaker fibres. For the correlation is clear. In Amsterdam, where skin-wool was not permitted, and only English fleece-wool was employed, carding was current, and a good-quality half-carded cloth was made. The same was true in Haarlem; only here a line made from skin-wool was also permitted, for which the comb was stipulated.[33]

It was not only in Holland that the all-combed woollen survived. It continued to be made in the south, although it seems largely to have been confined to the higher qualities. Its resilience is demonstrated by the development of a new superfine variety during the fifteenth century, by which the type maintained its dominance at the top end of the market. This was the *bellaerts*, the 'fleur von alle draperie' as it was later called in Bruges.[34] It followed in the tradition of the twilled cloth of the thirteenth century and the plain weave *dickedinne* of the fourteenth.

How it differed from these, what exactly its technical characteristics were, is not clear. (Its weft was probably wheel-spun.) It was made in the old centres of superfine manufacture, Malines and Brussels, and in Bruges.[35] It was taken up too in centres of the 'nouvelle draperie' such as Diest and Lierre, and particularly Courtrai, which became famous for its *bellaerts*. Arguably the development of the product reflects the recourse to quality in the face of competition on the middle and lower ground—the exploitation of the production factor in which the South still had the advantage against those with lower raw material or labour costs, the factor of skill. This trend has been noted both in the traditional cloth industry and in southern textile manufactures more generally, although it did not of course rule out the alternative response, epitomized by the *sayetterie* of Hondschoote, of going further down the market.[36]

Both in its chronology and its geography the second phase in the evolution of the modern woollen, the application of carding and wheel-spinning to the warp, is more obscure. This is because of the even greater reticence of the guild regulations. The question has in any case barely been discussed in the literature, which tends unthinkingly to telescope the two phases together. This in spite of the fact that Posthumus long ago pointed out its importance, which the history of the Leiden industry brings, in fact, into sharp relief. In 1538 carding was still stated in Leiden to go 'geheel contrarie de kuere deser stade' (and wheel-spinning of the warp was still prohibited); in the last redaction of the *keur* of the 'oude draperie' made in 1569, when the industry was on its last legs, the ban was reiterated with some minor exclusions. When the industry revived fifty years later, it was on the basis of the modern woollen—the model as we shall see for most of the fine cloth manufactures that developed in Europe during the seventeenth and eighteenth centuries.[37]

Almost everything that I can say about the matter is the outcome of pursuing a single philological hare through the texts. That is the term *moerwarp* and its variants. Verwijs and Verdam, although they give several examples of its use, are unable to offer any definition of it; while the two textile historians who have discussed it, de Poerck and earlier Willemsen, are unable to offer definitions that are satisfactory. The term seems to have come into use about 1400.[38]

The earliest instance that I have found is in a Bruges regulation of 1408, which refers to cheap unsealed cloths 'daer gheen wevel in

gescoren es ofte vele moederwarps'. The association with weft yarn already provides a clue, which is elucidated by the (unpublished) Brussels *keur* of 1466/97. Among the specifications for the *bellaerts* cloth referred to above is an article which forbids the employment of a carded and wheel-spun yarn for the warp. Against this article there is a marginal comment: 'nota dat metten cryoele gesponnen is dat is moerwerpte'.[39] The definition is only in terms of spinning; and the prohibition of combing *moerwarp* in an early Haarlem *keur* of the outset of the fourteenth century suggests that this was the primary meaning. But, given the association between the operations, the probability is that the term also came to connote carding. This is made virtually certain by later texts from Malines, Naarden, and Brunswick. The Malines regulations refer to 'moeyerwerp . . . oft gecaerts'; those of Naarden to 'laeckens van moerwarp ende ongekemde wolle'. In Brunswick cloths were divided into two classes, those with 'gekammten werpe' and those with 'mauerwerpe'.[40]

Having established the meaning of the term, we can get some idea of the pattern of development in the Low Countries, because *moerwarp* was often the object of prohibition or restriction by the guilds. In the North, in those centres where carding was permitted such as Amsterdam and Haarlem, its use was severely forbidden. This was true even in Naarden and Hoorn, two places specializing in cheap goods. In Hoorn in 1508 a clothier was banished for ten years for breaking the regulation, a penalty twice as severe as that inflicted in 1363 on a Malines clothier for carding. In Naarden 'laken van moerwarp ende ongekemde wolle' were first permitted as late as 1607.[41] Not surprisingly, as control would have been redundant, *moerwarp* is not mentioned in the *keuren* of those centres such as Leiden and The Hague, where carding was banned altogether. As we have just seen, the ban was maintained in Leiden until late into the sixteenth century; and this was probably the case in the other centres. By this time the industry of the northern Netherlands, which had been so prosperous in the preceding century, was everywhere moribund. It never reached the second stage of evolution.

In the South, *c.*1500, the transition was under way; but it does not seem to have advanced beyond a fairly rudimentary stage. Although *moerwarp* is recorded, as we saw, in Bruges as early as 1408 as being used in some very coarse cloths—certainly not *draps marchands*—little progress seems to have been made during the following century in developing a technique for producing a fine yarn. Generally the use of such yarn was either forbidden altogether (Oudenburgh—in a

fifteenth-century text admittedly—but Breda as late as about 1570); limited to a very small proportion of the warp ends (Alost 1527 as in Schiedam earlier); or, when its use was free or freer, restricted to the lowest grades of cloth (Louvain 1513). Even in Kemmel and Wulverghem, 'draperies rurales' *par excellence*, under the watchful tutelage of Ypres, permitted only the fabrication of coarse cloth that did not employ English wool, it was assumed (1479) that *moerwarp* would not be used, although it was allowed.[42]

The Louvain *keur* covers no less than nine qualities of cloth, in which the bottom grade, made from wool flocks, could be warped entirely from the dubious yarn, and the next to bottom with every third warp end. The same proportion recurs in the Malines *keur* of 1544, only here in respect of a significantly better cloth, if still one made from local rather than English wool. The cloth in which *moerwarp* could be freely used was also less coarse than that in Louvain thirty years earlier, indicating perhaps a gradual technical improvement. But all these grades came at the lower end of the Malines range. They were in the category of *gekairde laken*, a type that had already been made alongside the old *gekemde laken* a hundred years earlier, as it had in Brussels, only not apparently with great success. Now it was developed more actively in a vain effort to stave off the old industry's final decline. It embraced the very highest-quality superfines made from Leominster wool. Despite their name, these *gekairde laken* were not, as we have shown, of the modern all-carded type. But in Malines at least, the admixture of a carded wheel-spun yarn in the traditional warp appears to have been increasing. There is evidence of the limitations being disregarded. This interesting, technically intermediate, product illustrates one way in which the transition to the second stage could be accomplished.[43]

In this field there is no happy medium between bold assertion and detailed philological analysis of the sources. If I have devoted so much space elaborating on an obscure term that has hardly emerged from the footnotes in the previous literature, it is because there is almost no other evidence in respect of the Low Countries. Among published sources, the 1512 regulations of the small Hainaut centre of Lessines are unique in explicitly distinguishing two classes of cloth, one of *stain de leigne peignée*, the other of *estain gardé*. One might cite too those of Bergues from the mid-fifteenth century, which make a similar distinction in terms of rock- and wheel-spun warp. The latter, almost certainly carded, was also used in Brussels at this time for coarser goods. In

Hertogenbosch a *keur* entry of the same period permits a carded warp in 'stucken', cheap cloth not subject to the regulations of the hall.[44]

It would be unwise to be categorical when the available evidence is so limited. But despite the two important exceptions to which I will shortly come, the overall inference is pretty strong that until well into the sixteenth century only a comparatively small part of the woollen cloth produced in the southern Netherlands was of the modern type, and that part largely confined to coarser goods. Here too, although there had been more progress than in the North, stage two does not seem to have been widely reached by the time that the industry went into serious decline in the second half of the century. It should be pointed out, however, that in evidence submitted to the Castilian crown around 1500, when it was preparing a policy for the local industry, one of the objects of which was to reduce imports, the claim was made that much of the Flemish cloth coming into the country was of the all-carded type, *alla bervyna* as it was called. So perhaps the published sources exaggerate the traditionalism of the industry.[45]

There are, moreover, two exceptions, two shafts of light in the obscurity, which are of major importance because they involve two of the success stories of the Low Countries woollen industry during this period, two of the only ones in fact. I refer to Armentières and Bailleul, neighbouring towns in the west quarter of Flanders—which was the one real growth point of the textile industry in the sixteenth century—between the two great centres of *sayetterie*, Lille to the east and Hondschoote to the west. It can be shown, I think, that these two centres succeeded during the course of the century in developing a fine, even superfine, all-carded cloth. This probably accounts for their expansion at a time when most of the *draperie* towns were in decline; their ability to withstand English competition, which was reaching a maximum; and later for the fact that they emerged from the 'troubles' with their industries still viable.

The case of Armentières is admittedly not altogether clear. The regulations from the first half of the century show that the warp wool was still separated from the weft in the traditional way by combing. But they also show that it was carded—that a special type of card was used in fact. There seems no reason to suppose that the Armentières *outrefins*, which were so successful on the international market, were not of the modern type. This is made the more probable by evidence from Saint-Omer, which was accused of imitating Armentières and whose cloths were certainly similar in specification. In 1544 the existing

warp–weft weight ratio of 2 : 3 (the same as Armentières) was relaxed to roughly 1 : 1—a proportion inconceivable in the half-carded woollen. (2 : 3 would itself be highly unlikely.) The reason was that 'on ne peut amener les fileuses a filler assez fin pour revenir au poids du statut'. Here the problem of spinning warp yarn from carded wool, that was both fine and strong, had clearly not been overcome; and that this remained to an extent true of Armentières is suggested by the comparative heaviness of the cloth. Their warp-counts, however, and the quality of English and Spanish wools used, put these cloths in a quite different category from those that were described earlier, and justify their own description as *outrefin*.[46]

The case of Bailleul, for which the evidence comes from towards the end of the century, is unequivocal and still more interesting.[47] Although its own regulations, dating from this period, are too perfunctory to be very helpful, they do show exactly the same categories of cloth as the *belsche laken* introduced in Bruges and Leiden in the 1580s by refugees from the town. These were indisputably all-carded: the Leiden regulations leave no doubt about this.[48] The top quality were 84s, but by the next decade Bailleul itself was making 90s. When, in an apparently not unsuccessful effort to revive the old industry, a new regime was installed in nearby Menin in 1613, clearly modelled on that of Bailleul and Armentières, the count had risen to 93 *portées*—or 2,232 warp ends compared to 1,920 for the best (earlier) Armentières cloth. The top Bailleul cloths employed finer quality wools and their prices were significantly higher: in 1593 88 *patars* the ell compared with 70 for the best Armentières; and 51/4 for ordinary *outrefins*.[49] An Amsterdam commercial report of 1648, referring to the situation thirty or more years before, in the first decades of the century, emphasizes the high quality of the cloths made in Bailleul, Menin, and the surrounding district at the time; and compares them very favourably with the contemporary Dutch—and therefore Leiden—product, before the Dutch possessed the 'rechte handelingh' in the manufacture, as the report puts it. These cloths were probably the finest made in northern Europe at the time.[50]

It is impossible in this short survey to undertake an analysis of parallel long-term developments in northern France and Germany. Such an analysis would not, I think, materially alter the picture. Here too the half-carded woollen survived into the sixteenth century as the dominant type. This was the case in both the main German cloth-producing regions, the Rhine valley and Lusatia/Silesia. It was the case in

Normandy, the woollen industry of which had been highly successful in the fifteenth century and a major competitor of the Low Countries. The Rouen *drap de sceau* was of this type, although here too coarser all-carded cloths were produced by the rising 'country' *draperies*.[51] Outside the Low Countries the main pioneer in upgrading this type seems to have been Castile: the industry of Segovia in particular rapidly improved the quality of its product during the first half of the sixteenth century, becoming a centre of European importance.[52] But before returning to the Low Countries for the final episode of the story, the protagonist of which is Leiden, I must turn briefly to the English industry, both because of its central role in the overall evolution of the European woollen industry, and because of its obscurity in this context.

In comparison with the Low Countries or Italy there is little to study. The absence of powerful guilds may have been a blessing for the industry, but it is a curse for the historian, leaving him, so far as I can see, in almost total ignorance of its technical evolution. The result of this ignorance, and perhaps too of the insularity of English historians, who rarely seem to have studied the continental sources, is that it is usually simply assumed that English broadcloth was always of the modern all-carded type, that nothing ever changed.[53] It is a most improbable assumption, but one so deeply ingrained that it leads a reputable historian such as L. F. Salzmann to translate the word 'peigner' as carding, as it appears in the early fourteenth-century *Little Red Book* of Bristol. This is not the only example of such a translation—which itself tends to give a spurious validity to the assumption. Salzmann, who evidently believed in the 'longue durée', uses as his main source for English medieval cloth-making methods a seventeenth-century poem. Surely contemporary practice in the Low Countries is a better guide.[54]

What then was the pattern of evolution in England? When was the all-carded woollen developed? It certainly seems to have been earlier than in the Low Countries. Around 1500 it was claimed in Castile, in the sources referred to above, that all English cloth coming into the country was of this kind.[55] But how much earlier was it? Was it standard from the beginning of the industry's revival in the mid-fourteenth century, when as far as exports were concerned it was producing a pretty cheap and coarse article? Was it not rather a development of the fifteenth century, when the scanty evidence for it begins to accumulate? How important was it in the industry's so successful offensive in continental markets? If it did take place earlier in England, why was this so? I simply ask these questions, in the hope of enlightenment.

Where I would particularly like it is on the quality of English woollens during the sixteenth century, as this is most pertinent to the immediate argument. Obviously the range was wide. Although the standard West of England export seems to have been a fairly coarse article, there is evidence of fine English cloth (perhaps of the half-carded variety). Almost the only technical indicator available for the period is the warp-count. These are remarkably low: 700–1,200 (Norwich, 1502); 800–1,100 (Coventry, 1518); 800–1,400 (the West of England at the turn of the century). The figures seem to be typical. They imply a coarsely spun yarn, and a low warp density, given that the finished width of English broadcloth was seven quarters or 1,645 cm. Compare, for example, Armentières *outrefins* at 1,800 ends across 1,400 cm. or the highest-quality Malines half-carded cloth, the *gulden aeren*, at 3,120 ends across 1,980 cm.[56]

There is, however, one document that shows a very much wider range in the warp-count of English cloth: the rates agreed by the London weavers in 1456 divide broadcloth into five categories, the lowest being of 600–900 ends, the highest of 1,800–2,000. Did this top category have a combed warp? Similar warp counts are typical of superfines of this kind produced across the Channel at this time. In Rouen, for example, the range given in 1424 is 1,800–2,200. Or were the London weavers already producing a superfine all-carded cloth? The question must remain open. But if the latter was the case the thesis advanced here that the seat of technical advance in this respect was the southern Netherlands would obviously have to be revised.[57]

Although the writer Pierre de la Court—himself a Leiden clothier—was exaggerating when he claimed in the 1650s that Leiden had drawn to itself the whole European fine cloth manufacture, there is no doubt of the city's supremacy at this time. Although there were signs of recovery in the industry from the early 1620s, the breakthrough came with remarkable suddenness around 1630. As the Amsterdam report of 1648 cited earlier puts it, 'onse drappereye van handt tot handt beterende', the industry caught up with and overhauled its Flemish competitors in the Bailleul and Menin district. The improvement in quality associated with the expansion of the industry can be followed in the progressive increase in warp densities—from the maximum of 1,800 ends envisaged in the *keur* of 1585 to the 22–2,400 mentioned in the 1630s and the 3,600 reached by 1650.[58]

Unfortunately the otherwise copious Leiden sources provide very little information on how this improvement was achieved. The technical

history of the industry remains obscure, and the industry's historian is unable to throw much light on it. Bailleul clothiers had, it will be recalled, established themselves in the city in the 1580s; and although the immigration then fell away, it continued until about 1620. Over the period as a whole the Bailleul refugees constituted one of the largest single contingents of textile workers coming to Leiden, and one that came from a centre that concentrated exclusively on *draperie*. There were also a significant number from Menin and Armentières. Although later immigrants during the peak period of growth in the 1630s and 1640s came rather from Liège, Limbourg, and the Rhineland (to which many Flemish and Walloon cloth-workers had moved during the troubles), these districts had not as yet achieved any reputation for quality. It is a reasonable hypothesis therefore to attribute the technical superiority of the Leiden industry to the transfer of skills developed earlier in the Bailleul–Armentières district and discussed above. That at any rate is a more likely explanation than the English influence suggested by Posthumus.[59]

Be this as it may, the fineness of Leiden cloth was clearly the result of the fineness of the yarn from which it was made, which was itself the result of a refinement of the carding process, which probably proceeded *pari passu* with the refinement of the raw material used, now exclusively Spanish merino wool. It is significant that the preparatory occupations —spinning, scribbling, and carding—had become more professionalized, no longer largely female and rural as they had traditionally been, but, particularly in the *draperie*, also urban and male.[60] It was the key contribution of these skilled artisans, recruited from Holland, that was emphasized by Colbert's agent in 1667 when the *manufacture royale* was being set up in Carcassonne. It was they and their implements that were arguably mainly responsible for developing a superfine broadcloth industry for the first time in the West of England.[61]

It is hardly an exaggeration to say that through the transfer of technical skills, not exclusively, but arguably most importantly, in the preparatory processes, the whole European fine cloth industry, as it emerged in the later seventeenth and the eighteenth centuries, was modelled on that of Leiden—in Colbert's remarkably successful initiatives at Sedan, Abbeville, Louviers, and in the Languedoc; in the West of England; and, earliest and perhaps most importantly, in the Verviers, Eupen, Aachen triangle, which in the eighteenth century became the major European fine cloth producer, and which acted as a technical relay, the medium through which a fine cloth industry was finally de-

veloped in central Europe. It was a European-wide phenomenon, the most important perhaps in the history of the wool textile industry in the two centuries before the industrial revolution. It still awaits its historian.

NOTES

1. Duhamel du Monceau (1765); de la Platière (1780). Despite some shortcomings the only serious work on medieval techniques remains de Poerck (1951). See also Chorley (1987), 349–79. Doubtless carding had already been introduced in the 13th cent. But Malanima (1986), 126, does not substantiate his claim that there was widespread production of carded cloth, particularly in Italy, by the later part of the century. He mentions Florence, but there is no reference to carding, only to combing and bowing, in the lengthy *Statuto dell'arte della lana* of 1317 (Agnoletti (1940)). The word 'cardatura' cited from an 11th-cent. inventory from Puglia appears to relate to *stuppa* (flax or hemp). Of the two references adduced from 13th-cent. Portuguese texts, one is ambiguous, but the other denotes carding as raising, not as a preparatory process—a confusion that the historian has to be wary of. See also n. 13.
2. This essay has been drawn from a larger study of the evolution of wool textile types and their methods of production in the medieval and early modern periods, on which I am at present engaged. This will also cover developments in England, France, and Germany.
3. Lemon (1968).
4. Gessler (1931), 29.
5. For the Castilian regulations of 1511 see: *Recopilacion* (1618), ii. 124–40. Examples of the high warp counts of the best Italian 15th-cent. cloth can be found in Rebora (1970), 143–63; and Zanazzo (1914), 105. Warp-counts of all-carded cloth are further discussed on pp. 21–3, where references are given.
6. *Recopilacion* (1618), ii. 140–8. There was considerable controversy about this type of cloth (termed *alla bervina*) at the time when the Castilian crown was preparing the general regulations for the cloth industry that were eventually issued in 1511. Its defects were emphasized in two memoranda of the 1490s by an Italian merchant, Francesco di Prato, who was an interested party, but whose comments remain pertinent. They are printed by Iradiel Murugarren (1974), 347–52.
7. See p. 19.
8. For costs of the preparatory processes, see in particular, as his figures are based on the actual business records of the Datini: Melis (1962*c*), prospetto 27, p. 354. Also Rebora (1970), 162; and Iradiel (1974), 396–402. Production costs in Elbeuf are given by Barbe (1894), 194.

9. The most explicit documentation of the 13th-cent. Italian type comes from the Pisan *statuto* confirmed in 1305, which is printed in Bonaini (1854–7), iii. 670: 'lana che si da a bactere . . . si da a filare a filatoio. . . . lo stame a filare a roccha . . .'. There is an almost identical passage in the Venetian *Mariegola*: Fano (1936), 170. There is no doubt that the term 'bactere' refers to bowing. See also Agnoletti (1940), *passim*. It is not possible to explore the other evidence in detail here. For the Low Countries see Chorley (1987), 376.
10. The Florentine industry and its successful shift to quality production has been studied by Hoshino (1980). The statute of 1331 is cited on p. 129.2.
11. Melis (1972), 498 (Del Bene). Pecchiai (1906), 442–4 (Delle Bracche). The *trattato* is printed in full in Doren (1901), i. 484–93.
12. Relevant guild regulations from the major centres of Milan and Como do not appear to have survived. For Venice see Fano (1936), 179–83. The Paduan statutes are printed in Cessi (1908). The citation is on p. 125.
13. For the Narbonne costs see 'Livre de comptes' (1895–1902), ii. 853. The statutes of 1279 printed by Mulholland (1941) contain a reference to 'cardadores' (p. 12, para. 31), which might apply equally well to the preparatory as to the finishing process of raising, as the term is used for both occupations in the Languedoc and in the neighbouring region of Spain, and the context is indecisive. That the editor may be right in stating that carding as a preparatory process was practised in Toulouse (p. xxxiv) could be inferred from a ban on the use of metal cards for raising contained in the same statute (p. 9, para. 21). The term is already used in the statutes of 1227—possibly the earliest known reference to carding in the sense that concerns us, but equally possibly a reference to raising. For these statutes see Mullholland (1955), 167–80 (para. 34). The Barcelona statutes of 1387 are printed in Bofarull y Mascaro (1851), 255–77; those for Cuenca of about 1400 in Iradiel (1974), 257–62.
14. See e.g. the regulations in the *Deliberatione* (1576). The Medici records are cited by de Roover (1974), 85–118. According to the most recent study of the Florentine industry manufacturing methods remained basically unchanged until its final collapse in the 18th cent.: Malanima (1982), 209. Both the *arte* and the Medici records show, however, that there was some experimentation with *stami di palmella*, as carded warp was called.
15. The Venetian description is printed by Rebora (1970); the Ferrarese by Ferraro (1876). Sella (1961), 119, cites no evidence for his claim that the Venetian industry used carded wool for the warp, simply asserting that Spanish wool was too short to be combed. This is demonstrably untrue: Spanish wool had been employed by the Low Countries and more especially by the north Italian industry since the 13th cent.; although it may have got shorter in the 16th cent., it remained the main wool used e.g. by the Medici firm cited above in the traditional-type cloth that they made. It is much more probable that Venetian cloth was made by the methods described by Rebora's *anonimo* at the outset of the century and by Garzoni towards its end: see Garzoni (1599), 735. Fioravanti

(1567), 51, also describes the combing and hand-spinning of the warp. On the development of the Castilian industry see p. 22.

16. De Poerck (1951), 55–9: 'on le réserve régulièrement aux laines inférieures. . . . Il n' y a que dans une place de troisième ou quatrième ordre qu'il figure à côté du peignage, comme une technique parfaitement normale et réglementaire.' See also Endrei (1968), 51: 'La fabrication de la trame par le procédé du carde traduisait une concession qualitative.'
17. Espinas and Pirenne (1906–24), ii, no. 348 (Douai, 1352); ii, no. 443 (Ghent, 1350). Joosen (1935), 562 (Malines, 1364). Favresse (1946), 195 (Brussels, 1372); the ban was reiterated in 1385: Favresse (1947*a*), 52. That carding was also prohibited in the third of the great Brabant centres, Louvain, at this time, can be inferred from the later regulations cited by van Uytven (1961*b*), 362–4. *Ordonnances* (1723–1849), v. 193 and vii. 78–80 (Ban lifted in Châlons, 1369 and 1384). Bourquelot (1865) i. 219 (ban lifted in Provins, 1370). The hierarchy among the major cloth-producing centres is discussed by Chorley (1987).
18. Espinas (1931), no. 457 (Valenciennes, 1358). Dubois (1950), 153. (The ban in Tournai was initially imposed in respect of *sec ouvrage* only, later extended to *ointe*, before being lifted in 1365, except for lambswool, however, which was the main raw material employed for the weft in the *draperie sèche*). Espinas and Pirenne (1906–24), iii, nos. 771 and 785 (Ypres, before 1363). For the distinction between *draperie ointe* and *sèche* see Chorley (1987), 371–7.
19. Coornaert (1950), 59–96. Coornaert was here more cautious about the concept of a 14th-cent. 'draperie nouvelle' than he had been twenty years earlier, when he effectively launched it in his classic work (1930*a*), 12–13. It is admittedly not entirely unproblematic. See also Munro (1971).
20. In Saint-Omer the shift can be seen in the *keures* from the later 14th cent. printed by Espinas and Pirenne (1906–24), iii, nos. 695, 696, and 704; similarly in those of Tournai printed by Dubois (1950). It was at the centre of the contemporary conflict between the clothiers of Ypres and Poperinghe: see de Pauw (1899), particularly pp. 77–8, 157.
21. The new line called *dueten* introduced in Ypres in 1334 was certainly of this type. See Espinas and Pirenne (1906–24), iii, no. 772; also ii, nos. 371 and 374 for Douai (1390 and 1394). The later history of the Malines cloth industry is the subject of three important recent articles by J. P. Peeters: (1978), (1986), and (1985*a*). The introduction of a 'nouvelle draperie' is discussed more particularly in the first of these. For Brussels see Favresse (1961*a*).
22. Coornaert (1950), 71. Munro (1971), 5.
23. There is a partial exception in Vilvoorde: in the *keuren*, transcribed in 1494 but doubtless originating earlier, carding is prohibited for whole cloths—i.e. those of better quality: Peeters (1985*b*), 35.
24. The guild regulations of all but the first two of these towns are in Espinas and Pirenne (1906–24), i, nos. 6, 7, and 8 (Aire); i, no. 118 (Audenarde); iii, no. 622 (Oudenburgh); i, no. 129 (Bethune). For Ath see Fourdin (1867), 221. For Diest see Stallaert (1891), ii. 24.

25. D' Hermansart (1881), 175. Espinas and Pirenne (1906–24), ii, nos. 371 and 374 (Douai, 1390s). The earlier *keur* of 1357 (no. 357), which banned carding, made an exception for medley cloth.
26. For the references for the Champagne towns and Malines and Brussels see nn. 17 and 21. Peeters (1978) does not discuss the problem of whether the *gecaerde laken* first mentioned in Malines around the mid-15th cent. were of the half-carded type; but later evidence shows them to have been so. See p. 9.
27. *Ordonnances* (1723–1849), vi. 281–4.
28. See n. 17 for the Champagne towns; for Douai, Espinas and Pirenne (1906–24), ii, nos. 371 and 382.
29. Posthumus (1910–22), ii. 345–6. Prims (1939), 29. *Ordonnances* (1723–1849), vi. 281–4 (Troyes). The Leiden text refers in relation to wheel-spinning to the 'yef, dair men den inslach (weft) of maict, gewoenlicken is te spinnen'.
30. Carding was repeatedly prohibited in Leiden from the earliest regulations of 1363–84 to the latest of 1569: Posthumus (1910–22), i. 10 and ii. 665–6. Utrecht: Overvoorde and Joosting (1896), ii. 195–9 and 202–8 (bans of 1376 repeated 1414). Gouda: Rollen Conquerque and Meekamp van Embden (1917), 41 (1391) and p. 634 (1505). The Hague: Van Gelder (1907), 295–8 (about 1496; wheel-spinning of the warp was also prohibited here). Schiedam: Heeringa (1904), 193–208 (earlier 15th-cent. *keur* permitting carding); pp. 217–27 (1480 *keur* banning it).
31. Posthumus (1908), i. 55–8 and 68.
32. Posthumus does not give any particular emphasis to skin- or fell-wool in his discussion of Leiden's raw material supply. But it is clear from Posthumus (1910–22) that it formed the major constituent. In 1450–3 two-thirds of all the wool-fells exported from England went to Leiden: Kerling (1954), 65–6. The fellbinders of the English staple singled out the 'Hollendars' in particular as purchasers: Rich (1937), 126. The *keuren* of Utrecht, Gouda, and The Hague also show that fell-wool was much used, if not how much. Those of the first two towns were closely modelled on Leiden, and it can be inferred that their practice was similar in this respect. According to van Gelder fell-wool was the main raw material used in The Hague (1907: 236). This is borne out by the regulations for the 'haagsche draperie' in Schiedam, which enjoined the exclusive use of fell-wool in first-quality cloth and a minimum of two-thirds for second.
33. Breen (1902), 40. This early 15th-cent. regulation was relaxed in 1484 to permit the use of fells equal in quality to the fine Rutland or similar fleece wool normally stipulated (p. 194). The Haarlem *keuren* (1390–1405) are generally comparable to those of Amsterdam, making it clear that carding was practised, but banning it for fell-wool: Huizinga (1911), 99–101.
34. Gilliodts-Van Severen (1904–6), iii. 701 (document of 1541).
35. The specifications for *bellaerts* in Malines are discussed by Peeters (1978), 78–9, and Peeters (1986), 146–61. Although, as he says, Brussels *bellaerts* were not as fine as those of Malines, their quality was greatly improved during the

course of the century, as can be seen from a comparison of the initial *keures* of 1441–3 with those of 1466 and 1497. The first of these are published in Favresse (1947*b*), 143–67; there is some information on the *keur* of 1466 in Favresse (1961*b*), 75–84. Both this and the *keur* of 1497 are in the Archives communales de la ville de Bruxelles: archives anciennes nos. 1435 and 1436. Superfine *bellaerts* are covered in a Bruges *keur* of 1457: Delepierre and Willems (1842), 22.

36. Unfortunately little information is available on the Courtrai industry, which scattered commercial evidence suggests may have been the most important in the southern Netherlands during the 15th cent. The high quality of its *bellaerts* is shown by the specifications cited by Mus (1961), 164. Manufacture of the cloth in Diest is mentioned by Stallaert (1891), 175; in Lierre by van der Wee (1965), 149. Van der Wee comments: 'Als der englische Konkurrenz drohende Ausmass annahm, verschanzte die Tuchzunft sich hinter dem guten Ruf ihres Produktes und stellte sich noch starker auf die Qualität ein.'
37. Posthumus (1908–39), ii. 13, 126 n. 1. For the Leiden references see Posthumus (1910–22), ii. 404, 664–5.
38. J. Verwijs and Verdam (1899), art. *moerwarp*. De Poeck (1951: 49 n. 4) has: 'laine longue non encore séparée de la blousse'. Willemsen (1920–1), 9: 45, has: 'de plaine chaine, sans tenir compte de la lisière'. Both definitions are derived from single instances of the term. Readers of de Poerck need to be wary of the confident way in which he often interprets obscure terms: this is not the only case in which it is not justified.
39. Delepierre and Willems (1842), 13 (Bruges). *Archives* (1436), art. 30. Favresse's translation of the term 'cryoele' as 'fuseau' or spindle (1961*b*: 78 n. 11) cannot be correct, if he means, as he appears to, hand-spinning by distaff and spindle. It is inconceivable that this would be forbidden for the warp of top-class cloth and only permitted for coarse goods. Several articles in the Tournai regulations make it clear in any case that the term refers to the wheel, as Dubois states in his glossary: e.g. 'se li drapiers se scet a plaindre de mal fillet tant a le main cum au carioel . . .' (Dubois (1950), 154, para. 93). A Lübeck text of 1553 also defines *moerwarp* as wheel-spun yarn: 'kein morwarp, ys so up denn grotenn redenn gespunnen wert, und leth sick dem anderen spynnen im fademe nicht gelick recken': Wehrmann (1864), 300–4. The comment that this kind of yarn will not bear stretching is most interesting. It may provide a clue to why tentering back to something like the loom length of the cloth, which had been *de rigueur* earlier on, came increasingly to be abandoned, indeed legislated against during this period. For this change, which has not been discussed, let alone explained, in the literature, see Chorley (1986), 125–30.
40. Huizinga (1911), 101, art. 14. Willemsen (1910), 169. Vollmer (1913), 114. De Vrankrijker (1936), 265.
41. Breen (1902), 41. Huizinga (1911), 101. De Vrankrijker (1936), 265. The judges in Hoorn considered it a 'groote misdaad waardoor de neringe van de draperien soude te niet gaen': Pols (1888), ii. 65 n. 3. In Malines the clothier received five years, the comber employed by him one year's exile: Joosen (1935),

no. 85. These penalties show that the regulations laid down by the guilds were far from being the dead-letters they are sometimes made out to have been.

42. The Oudenburgh *keur*, from a copy of 1556, is dated to the 14th cent. by Espinas and Pirenne (1906–24: iii, no. 622, art. 74); but their content seems to me more suggestive of the 15th. Breda: Bezemer (1892), 172. Alost: Heeringa (1904), 198 (max. 1½ lb. in the warp). Kemma and Wulverghem: De Sagher (1951–66), iii. 615, art. 3.
43. Van Uytven (1961*b*) 365 (Louvain regulations of 1513/28). Willemsen (1910) (Malines, 1544). For the history of the Malines industry in this period see in particular Peeters (1985*a*).
44. Lesneucq-Journet (1906), 323–8. De Sagher (1951–66), i. 521, arts. 40 and 41 (Bergues). Favresse (1961*b*), 78 (Brussels). Van den Heuvel (1946), 236–59, regulations of 1471–2, art. 124.
45. Iradiel (1974), 390. *Informe de Pedro de Buitrago*, about 1500. Buitrago claimed that 'pannos bervies' were 'el principal obraje de Ynglaterra e de Flandes'. He was, however, an interested party, defending the interests of the Segovian industry, which specialized in this kind of cloth, against moves to prohibit its manufacture as an inferior product. (See p. 9 *supra*.) The documentation printed by Iradiel on the preparation of the General Ordinances issued in 1511 emphasizes more particularly English cloths as being exclusively of the all-carded and wheel-spun type: see the *primer proyecto* of 1495 (p. 370, arts. 48 and 49), which mentions only London cloth.
46. No less than six successive redactions of the Armentières *ordonnance* between 1510 and 1538, mainly involving minor emendations, are printed by de Sagher (1951–66), i. 102–91. The regulation laying down the proportion of warp wool to be drawn out by the combers (1511, p. 104, art. 14) appears in all of them. The reference to carded warp ('filleresses de trayme ne porront garder les laisnes des drapiers fors que de neuves gardes et les filleresses d' estain de demy gardes') first appears in the (4th) redaction of 1532 (p. 153, art. 39). It is admittedly not altogether easy to reconcile these two texts. It is possible that the two varieties of cloth known as *plattes listes* and *crombes listes* (see e.g. p. 451) may have corresponded to half- and all-carded types; but such distinctions, in earlier periods at least, seem normally to have referred to plain and twilled weaves. There is nothing in the regulations that explains, or even refers to, the difference. A more likely explanation of the apparent sequence of operations in which combing was followed by carding of the warp, is that the former process continued to be used, as it always had been, to separate the longer (warp) from the shorter (weft) fibres, even though the warp fibres were now subsequently carded. For Saint-Omer see Pagart d'Harmansart (1881), 186–210 (regulations of 1530 and 1544). These also mention combers as well as carders.
47. Although Bailleul certainly did not match Armentières in its output, it was arguably more significant than de Sagher suggests (1951–66: i. 497). Pirenne (1951) cites it together with Hondschoote as an example of an expanding new

textile town of the 16th cent.: (1905 edn.), 634. That it was a centre of some importance can be inferred from the fact that both in Bruges and Leiden the attempt was made to establish the manufacture of *belsche laken*.

48. Scanty information about Bailleul, which is not published in de Sagher (1951–66) can be found in de Coussemaker (1875–7), 266–9 and 292–4. They refer (1588) to 84s and 78s as in Leiden and Bruges. Posthumus (1910–22), iii, nos. 292, 323 and 336. Article 13 of the last-numbered 1606 regulations prohibits the use of combed wool. The similar but less detailed regulations of 1584 for *belsche laken* in Bruges are printed in the *Annales* (1972), 44–50.
49. For the relative prices of Armentières and Bailleul cloth see the inquiry of 1593 into the Flemish cloth industry, which for Bailleul also gives the warp-counts (de Sagher (1951–66), i. 450–1 and 505–8). The Leiden and Bruges regulations (n. 48) show that for the top qualities, Leominster wool, which was the finest English wool, or Spanish of equivalent quality, was used in *belsche laken*. In Armentières (n. 46) the best English wool specified was Cotswold, still fine but inferior to Leominster or March wool. For Menin see de Sagher (1951–66), iii, no. 407.
50. Pringsheim (1890), 84–9.
51. This can be inferred from the depositions made during an inquiry held in 1496–7 into the difficulties that the Rouen industry was increasingly experiencing in this period: *Archives départementales Seine Maritime*, F. 375 (Fonds Guitard).
52. Segovia may have had a more important role in the technical development of the European woollen industry than is recognized by Le Flem (1976), 525–36, which seems to be almost the only work on the subject.
53. Carus-Wilson (1987), 637, writes: 'Then came the preparation of the wool for spinning, by carding if it was short staple, by combing if it was long staple wool'. The statement begs the whole question of the evolution of the preparatory processes during the medieval period. Kerridge (1985), 1–5, seems to imply that the all-carded woollen became standard soon after the invention of the metal card in the 13th cent., but he provides no evidence. D. C. Coleman (1969), 419, introduces a welcome note of doubt. Of late-medieval English cloth exports he writes: 'They were—or at least it is generally assumed that they were—mainly true woollens, made of short-stapled wool, in both warp and weft.'
54. Salzmann (1923; 1964 edn.), 206, 215–16. He writes of the preparatory processes: 'they need not detain us long', and cites 'A concise poem . . . on Shepton Mallet', by Richard Watts, published in 1641. He might have detained us long enough to explain the reasons for his translation of the Bristol text. The regulation of before 1346 prohibits sending oiled wool out of town 'à filer ne peigner': Bickley (1900), ii. 8–9. More recently Lloyd (1970), 331, translates 'piniend' as carding, again without explanation. There is no reason to suppose that the term 'peigner' was ambiguous in England, any more than it was in the

Low Countries, where it designated combing in clear distinction to carding, which was as we have seen the object of widespread prohibition.

55. See n. 45.
56. The Norwich figures are in Hudson and Tingey (1910), ii. 105–6. They show a distinction between wheel- and rock-spun warp, which suggests to me that the half-carded woollen was still being made. Those for Coventry are in Harris (1907–13 and 1909), ii. 660. Those for the West of England in Bland *et al.* (1914), 337–42. For Armentières and Malines see nn. 46 and 43.
57. Consitt (1933), 204–5; Ouin-Lacroix (1850), 616–23. A further difficulty should be mentioned here: by the mid-18th cent., in the West Country at least, the 'hundreds' used to measure the warp count had become conventional figures. Mann (1971), appendix 11, pp. 311–15, citing *Commons Journals*, xxvii. 731–2: 'Every hundred is to contain 190 threads and no more'. The author throws no light on when this change happened. If it was already the case in the 16th cent., it would call in question the whole argument. On the basis of the London figures and of continental evidence it seems probable to me that the figures cited are the true ones. The whole field is, of course, strewn with potential pitfalls.
58. Driessen (1911), 74. The MS of 1659 is ascribed to Pierre de la Court. Output figures for Leiden woollens are given by Posthumus (1908), iii. 1184. Unfortunately the table running from 1621 to 1635 clearly has a different basis from that which starts again in 1638 so that the critical period of take-off remains rather obscure. It is difficult to believe that production rose from 3,019 whole pieces, only 258 of which are described as fine, to 17,063 half-pieces in 1639, of which 15,364 are so described. Although the manufacture was described as 'gantschelick vervallen' in 1614, permission was granted to establish a new fulling mill in 1620 to cope with the increasing output: Posthumus (1910–22), iv, nos. 230 and 274. For the references to warp-counts see nos. 288, arts. 12 and 32 (which imply a minimum of 2,000 for cloth made from Spanish wool in 1638 and a normal range of 2,200–400); and no. 357 (which mentions 3,600s in 1650 as a normal product). Figures of 2,700s and over are mentioned in 1646 (no. 346). For the Amsterdam comment see Pringsheim (1890), 85–6.
59. Posthumus (1908), ii. 125–6 and iii. 924, emphasizes the importance of the English model and seems to ascribe the introduction of the all-carded woollen to it. But his case is contradicted by the one document of this period in Posthumus (1910–22), iii, no. 230, that shows an explicit effort to introduce English methods, a regulation of 1614 lifting the ban on the use combed wool, which was considered necessary for the preparation of the warp for stammets and other cloths (including pack-cloths and broad-lists) to be made according to the 'Enghelsche maniere van drapenieren'. But it is interesting that the Leiden clothiers should have thought the use of a combed warp to be characteristic of the English woollen cloth manufacture as late as this. The regulation is not about the employment of noils ('cammeling') in making stammets, as

Kerridge (1985), 27, states—rather surprisingly, as it goes out of its way to ban their use (art. 6). It refers explicitly to 'het cammen ende bereyden van de ketenen' for a range of woollens as well as stammets, a fabric which was often made with a combed warp.

60. See Posthumus's discussion (1908), iii. 619–34. One example: in 1664 an Amsterdam merchant was hiring master spinners and scribblers (to go to Dublin) (1910–22), iv. 571–2.
61. The Dutch workers, Pennautier wrote to Colbert in 1667, 'ont l'art de faire un drap égal à ceux de Carcassonne avec un tiers moins de laine, et cette laine encore ils la filent et l'appresten avec une diligence si grande, qu'un de leurs ouvriers faict plus de besogne en un jour qu'un François dans une semaine.' Depping (1852), iii. 801–3. Later in 1694 the local inspector of manufactures explained the improvement in quality achieved by the Clermont clothiers primarily by the fact that 'ils font filer au . . . grand rouet à la manière d'Hollande, le fil est plus fin que dans tous les autres endroits . . . ou on ne fille qu'à la manière de France au petit rouet . . .'. See Thomson (1982), 235. The small wheel referred to was almost certainly the (hand-turned) Picardy wheel with flyer. The association with a woollen-type yarn is surprising; but this kind of wheel seems also to have been used for the same purpose in the coarse cloth manufactures of Central Europe before the introduction of 'Dutch' methods during the 18th cent. The importance of improvements in the preparatory processes (particularly carding) introduced by Dutch workers, in the technical upgrading of the West of England manufacture during the second half of the 17th cent. also emerges from Mann (1971), 11–14. The critical role played in the development of a fine cloth industry in central Europe in the following century by the transformation of these processes, through the agency of artisans brought over from the Low Countries, is clear from the literature, which is too voluminous to cite here.

3

THE ORIGINS OF THE ENGLISH 'NEW DRAPERIES': THE RESURRECTION OF AN OLD FLEMISH INDUSTRY, 1270–1570

JOHN H. MUNRO

I. THE EARLY MODERN 'NEW DRAPERIES' IN HISTORICAL PERSPECTIVE

A medievalist, reflecting on Ecclesiastes, may ask whether there was anything new about England's 'new draperies', which, along with closely related industries in the cross-Channel Low Countries, gained such international renown for their cheap, light, and very fashionable fabrics during the sixteenth and seventeenth centuries. Nevertheless, the newness of these industries is suspect when so many medieval documents show that similar cheap and light textiles from the Low Countries were marketed throughout Europe and the Mediterranean world during the twelfth, thirteenth, and early fourteenth centuries, some under the same names. Amongst the most prominent in both the thirteenth and sixteenth centuries were worsted-type says; but during the intervening centuries neither says nor similar textiles commanded international markets of comparable importance, certainly not in the Mediterranean basin. The fate of those cheaper-line textile industries during the later Middle Ages, their virtual extinction and then resurrection, is a mystery whose resolution may also explain the true origins of those early modern industries known in Tudor–Stuart England as the 'new draperies'.

II. THE PIRENNE THESIS ON THE 'NEW DRAPERIES'

The term 'new draperies', however, did not always have the same meaning in both England and the Low Countries; and the historical literature

on the 'new draperies' is unhappily beset with a terminological confusion that can be traced to Henri Pirenne's sparkling and seminal article of 1905: 'Une crise industrielle au XVIe siècle: la draperie urbaine et la "nouvelle draperie" en Flandre'.[1] Obviously that latter term can be translated only as 'new drapery'. With dramatic clarity, Pirenne portrayed this sixteenth-century Flemish industrial crisis as the clash of opposites, of medieval and modern draperies. The traditional urban industry, highly regulated and guild-dominated, producing high-priced luxury woollens, had finally succumbed to the much more aggressive and lower-cost competition from both the more luxury-oriented English cloth industry and Flanders' own cheaper-line *nouvelles draperies*. Pirenne viewed both of these proud victors as essentially new, rural-based industries; and, in his view, the Flemish *nouvelles draperies* in particular had gained such a striking victory precisely because they were a rural, guild-free, tradition-free, far more innovative, and resilient textile industry that represented a more modern and liberal mercantile-industrial capitalism.[2]

In Pirenne's portrait, the *nouvelles draperies* had first developed in the agricultural villages along the Lys (Leie) valley of south-west Flanders during the fourteenth century. Despite constant attacks by the powerful urban draperies, they had survived and prospered by producing what Pirenne described as a really new type of textile: cheap, light cloths, supposedly made from Spanish wools, which were directed at far broader, much more elastic markets, under various names, such as says, bays, serges, and ostades. The most important *nouvelles draperies*, according to Pirenne, were those of Armentières, Neuve-Église, Bergues-Saint-Winoc, and Hondschoote, which reached their peak about the mid-sixteenth-century. Subsequently, during the Revolt of the Netherlands (1568–1609), they suffered irredeemable damage from the Spanish reconquest. Even before that final catastrophe, however, Flemish Protestant textile artisans, seeking refuge across the Channel, had re-established their crafts in Norwich and other East Anglian towns, where they flourished anew as England's soon to be famed 'new draperies'.[3]

III. PIRENNE'S FALLACIES: THE TRUE NATURE OF THE FLEMISH *NOUVELLES DRAPERIES*

Pirenne's dramatic scenario did not, however, remain unchallenged. A quarter-century later, in 1930, Émile Coornaert pointed out some

serious deficiencies in his analysis, in a masterful though little-read monograph on Flanders' leading *sayetterie*, at Hondschoote; and twenty years later Coornaert felt compelled to reiterate those neglected criticisms in a journal article. Regrettably, after so many years, Pirenne's views still command more acceptance than those of Coornaert, whose conclusions must not only be restated but expanded on the basis of the very considerable research conducted since 1950.[4]

In using the term *nouvelle draperie*, Pirenne had badly confused two quite separate textile industries, which had risen in different periods under quite different circumstances. Nevertheless, their histories were indeed interrelated, though in ways that neither Pirenne nor even Coornaert had fully envisaged. The first group constituted the true *nouvelles draperies*, which developed from the early to mid-fourteenth century as genuine though subordinate members of the woollen industry, the major wool-based textile industry of this era. In the Low Countries, woollen manufacturing was known as the 'greased drapery' —*la draperie ointe* (in Flemish, *gesmoutte draperie*).[5] The second group in Pirenne's portrait, which gained (or regained) prominence only much later, from the later fifteenth and sixteenth centuries, was part of the essentially worsted branch of textile manufacturing, though one often producing hybrid worsted-woollens. In the Low Countries, it was known variously as the 'dry drapery'—*draperie sèche* (in Flemish, *droge draperie*, or *ongesmoutte lakenindustrie*) or the 'light drapery'—*draperie légère* (or *lichte draperie*). Pirenne's four leading so-called *nouvelles draperies* were in fact evenly split between these two branches of wool-manufacturing: Hondschoote and Bergues-Saint-Winoc belonged to this latter group of semi-worsted *sayetteries* or *draperies légères*, while Armentières and Neuve-Église were the true *nouvelles draperies* and thus genuine members of the woollen industry.[6]

Even in the sixteenth century, woollen cloth production in Armentières and Neuve-Église differed in no real technical fundamentals, other than wool qualities, from those of the surviving or former traditional urban *draperies de luxe* in Flanders, Brabant (Brussels and Mechelen), and Holland (Leiden).[7] Nor did their cloth production differ essentially from that found in various other small-town or village draperies listed by Pirenne and verified by Coornaert as genuine *nouvelles draperies*: Poperinge, Comines, Warneton, Eecloo, Caprycke, Hulst, Axel, and Lembeke. In addition to the two leaders, Armentières and Neuve-Église, and the others on Pirenne's list, may be added other prominent *nouvelles draperies*: Kortrijk (Courtrai), Wervik (Wervicq),

Menen (Menin), Dendermonde (Termonde), Aalst (Alost), Diksmuide (Dixmude), and Oudenaarde (Audenaerde). Subsequent and generally less important additions were: Messines, Haubourdin, Halluin, Bailleul, Estaires, Eeke, Meteren, Nieppe, Deinze, Kemmel, Lo, Langemarck, Flêtre, Godewaersvelde, Dranouter, Linselles, Tourcoing, and Bousbecques.[8]

During the fourteenth and fifteenth centuries most of these *nouvelles draperies* had indeed encountered bitter opposition from the three leading Flemish drapery towns—Bruges, Ghent, and Ypres, known collectively as the *drie steden*—who frequently accused them of deliberately counterfeiting their own fine woollens. That accusation is probably unfair, even if a few *nouvelles draperies* had stooped to copying the selvages and seals from the *drie steden*'s woollens. Nevertheless the *nouvelles draperies* did pose a considerable threat in producing good-quality imitations of traditional luxury woollens at a lower price, primarily by using lesser quantities of somewhat cheaper wools.[9] Furthermore, by employing small-town or rural labour, much of it part-time or supplementary agricultural labour, with lower living costs, and possibly, as Coornaert has suggested, by using more simplified production techniques, the *nouvelles draperies* undoubtedly also succeeded in reducing their wage expenditures;[10] but that apparent wage advantage may have been partially offset by lower productivity or inferior workmanship. In any event, the value-added labour costs in manufacturing luxury woollens of this era rarely accounted for more than 35 per cent of the wholesale price.[11]

If the woollens of these *nouvelles draperies* were less costly than those of the traditional urban draperies, they were not, however, cheap cloths, certainly not by the later fourteenth century, as Tables 1–3 clearly indicate; and each would have cost most skilled craftsmen of this era the larger part of their annual incomes.[12] In the mid-fifteenth century, most were priced as much as, or more than, the comparable woollens that predominated in England's cloth export trade, which was then about to dominate the upper end of European cloth markets. Indeed, some of these *nouvelles draperies*—Wervik, Menen, and Kortrijk, in particular —produced very fine black broadcloths and even scarlets that were just as expensive as those made by the Flemish *drie steden*.[13]

Nor did these *nouvelles draperies* produce light cloths, certainly not in early modern times. As Table 4 shows for the sixteenth century, Armentières' *oultreffins* woollens (1510) were in fact heavier than many other traditional woollens of this era: weighing, per square metre of

TABLE 1. *Prices of various Flemish, Brabantine, and Dutch textiles purchased by town governments: in pounds gros (groot) Flemish and equivalent values in pounds sterling English,*[a] *c.1438–1443*

Town and textile type	Ells[b] long: (by 2 ells wide)	Value of the piece in £ gros Flemish	Value of 1 English yard[b] in shill. Flemish	No. days wages of master mason to buy 8 yds. in:		Value of 24 yards in £ sterling[a]
				Antwerp[c]	Bruges[d]	
A. Traditional Urban Draperies (Using English Wools)						
Ypres: scarlet	35	12.567	9.64*s.*	139	93	10.481
Ypres: black broadcloth	35	7.000	5.37*s.*	77	52	5.838
Bruges: scarlet	33	11.000	8.95*s.*	129	86	9.730
Bruges: black broadcloth	33	8.000	6.51*s.*	94	62	7.078
Ghent: dickedinnen	30	7.000	6.27*s.*	90	60	6.817
Mechelen: long blue cloth	30	7.275	6.62*s.*	95	64	7.197
Leuven: fine broadcloth	30	4.152	3.74*s.*	54	36	4.066
Leiden: pair of blue *halvelakenen* (half-cloths)	36	5.304	3.96*s.*	57	38	4.305
B. Nouvelles Draperies						
Wervik: scarlet	20	7.000	9.40*s.*	135	90	10.220
Wervik: fine black	20	5.750	7.72*s.*	111	74	8.393
Wervik: dark green	27	3.900	3.88*s.*	56	37	4.218
Kortrijk: red broadcloth	30	3.500	3.13*s.*	45	30	3.403
Menin: fine black	30	6.000	5.37*s.*	77	52	5.838
Menin: perse blue	30	4.600	4.12*s.*	59	40	4.479
Neuve-Église: medley	30	2.125	1.90*s.*	27	18	2.066
Hesdin: green	30	3.000	2.69*s.*	39	26	2.925
Niepkerke: red	30	2.125	1.90*s.*	27	18	2.066
Roeselaere: red	30	2.500	2.24*s.*	32	22	2.435
Diest (Brabant): green	30	2.687	2.40*s.*	35	23	2.609
C. Draperies sèches (worsted-type fabrics: in 1464)						
Eecke, Meunekereede, Zierikzee, Bailleul: dukers and witkins	30	0.563	0.50*s.*	7	5	0.544

[a] In terms of relative silver contents (since cloths were priced in silver), from 1433 to 1464, one pound groot Flemish (20*s.*) = 0.906 pound sterling.

[b] Cloths had a standard width of about 2 ells (8 quarters) finished, but varied by length. The ells varied slightly:

1 Flemish ell = 0.700 m. = 27.559 ins. = 0.7448 English cloth-yard
1 Brabant ell = 0.695 m. = 27.362 ins. = 0.7395 English cloth-yard
1 Mechelen ell = 0.689 m. = 27.126 ins. = 0.7331 English cloth-yard
1 English cloth-yard = 37 inches = 1.343 Flemish ells = 0.940 m.

[c] Antwerp: master mason's and master carpenter's daily summer wage of 10*d*. gros Brabant = 6.67*d* gros Flemish.

[d] Bruges: master mason's and master carpenter's daily wage of 10*d*. gros Flemish (= 15*d*. gros Brabant).

Sources: Town Treasurers accounts:
(*a*) Bruges (with most of the prices for the *nouvelles draperies* and *draperies sèches*): Stadsarchief Brugge, stadsrekeningen 1437/8–1464/5.
(*b*) Bruges Vrij: Algemeen Rijksarchief, Rekenkamer nos. 42,552–8.
(*c*) Ypres: Algemeen Rijksarchief, Rekenkamer nos. 38,658–64.
(*d*) Ghent: Stadsarchief Gent, stadsrekeningen 400: 15–16.
(*e*) Kortrijk: Algemeeen Rijksarchief, Rekenkamer nos. 33,181–4.
(*f*) Mechelen: Stadsarchief Mechelen, stadsrekeningen I: 111–23.
(*g*) Leuven: Stadsarchief Leuven, stadsrekeningen nos. 5060–75.
(*h*) Leiden: Gemeente Archief te Leiden, Archief der Secretarie van de Stad: archief van poortmeesters en burgemeesters, no. 522.
(*i*) Antwerp wages: Van der Wee (1963), i. 458–9.
(*j*) Bruges wages: Stadsarchief Brugge, stadsrekeningen 1437/8–1443/4.

TABLE 2. *Prices of English woollens and worsteds, and foreign linens, in pounds sterling: in the royal wardrobe accounts of Henry VI, for 1438–1439*

Textile	Range of prices	Value of 24 yards[a] in £	Price of yard[a] in shillings	% of mean value of short dyed broad cloth[b]	No. of days' wages[c] for a master mason to buy 8 yds. of cloth in	
					Oxford	London
					(6*d*. daily)	(8*d*.)
Woollen scarlet	highest	22.800	19.00	896	304	228
Woollen scarlet	mean	14.428	12.02	567	192	144
Long dyed broadcloth[d]	highest	11.200	9.33	440	149	112
Long dyed broadcloth[d]	mean	5.969	4.97	235	80	60
Short dyed broadcloth	highest	4.000	3.33	157	53	40
Short dyed broadcloth	mean	2.545	2.12	100	34	25
Short dyed broadcloth	lowest	1.400	1.17	55	19	14
Kersey	mean	1.793	1.49	70	24	18
Strait(s)	mean	0.658	0.55	26	9	7
Worsted[e]	mean	0.350	0.39	14	6	5
Linens: Holland	mean	2.912	2.43	114	39	29
Linens: Brabant	mean	0.632	0.53	25	8	6

[a] In terms of the English cloth yard of 37 ins. = 1.343 Flemish ells = 0.940 m. All woollens were normally 7 quarters (1.75 yds.) wide; worsteds were normally 5 quarters (1.25 yds); but the widths of the other textiles are unknown. The linens were probably much narrower; thus their value in terms of a square yard would have been correspondingly higher.

[b] The standard short broadcloth of assize (finished) was 24 ys. by 7 quarters (1.75 yds) wide: the standard used in this table.

[c] Master craftsmen in the building trades in London consistently earned 8*d*. sterling a day in this period; those at Oxford and Cambridge earned only 6*d*. a day, the difference reflecting living cost differentials.

[d] Long broadcloths of assize (finished) were 30 ys. by 7 quarters; but prices given here are in terms of 24 yards, for short broadcloths.

[e] Worsteds were normally 5 quarters wide (1.25 yds.); the length (15–18 yds) have been converted to 24 ys., for comparison with broadcloths.

Sources: Textile prices (Wardrobe Accounts): PRO, King's Remembrancer Exchequer, E. 101/409/2; London wages: Guildhall Manuscript Library: various London guild accounts (e.g. Carpenters' Wardens' Accounts, MS 4326; Brewers' Accounts, MS 5440; Cutlers' Accounts, MS 7146); Oxford wages: Rogers, (1866–1902), vol. iv.

finished cloth, 5 per cent more than English broadcloths from East Anglia; 7 per cent more than Mechelen's *gulden aeren* broadcloths, made from England's finest wools, the Leominster 'March' wools of Herefordshire; and 29 per cent more than Ghent's *dickedinnen* broadcloths, made from English March and Cotswolds wools, and its most renowned medieval woollen, virtually unchanged in 1546 (certainly from 1456).[14] More comparable in weight to English broadcloths were woollens from two other *nouvelles draperies*: Haubourdin's *oultreffins* (1539) and Diksmuide's *grooten claus* (St Nicholas seal, 1523), though even these were still somewhat heavier than Ghent's *dickedinnen* broadcloths, as also shown in Table 4B. All of these woollens, from the traditional and *nouvelles draperies*, as the table also indicates, underwent very considerable felting and shrinkage during fulling, 50 per cent or more in area, which was the principal factor in their high density and considerable weight.[15]

The more closely that these *nouvelles draperies* came to imitate the fine heavy woollens of the traditional urban draperies the more they came to resemble them also in industrial structure, craft organization, and especially industrial regulation; and the less, therefore, did they resemble Pirenne's model of modern liberal mercantile-industrial capitalism. Furthermore, as the major *nouvelles draperies* became more and more professional and export-oriented, most of them also lost their rural, quasi-agricultural character to become more truly urban, albeit in small town settings.[16] Presumably also, therefore, as these *nouvelles draperies* became more professional, corporate, regulated, and urban, their advantages in labour and other manufacturing costs were correspondingly reduced.[17]

TABLE 3. *Prices of Flemish, Brabantine, Dutch, English, Florentine, other Italian, and Catalonian woollens in Spain, Italy, Poland, and the Levant, c.1390–1425: in Florentine gold florins and English pounds sterling*[a]

Textile producer	Range[b]	Prices of cloths sold in							
		Spain[c]		Italy (Pisa)[d]		Poland[e]		Levant[f]	
		Florins	£ stg.	Florins	£ stg.	Florins	£ stg.	Florins	£ stg.
FLANDERS									
Urban Draperies[g]	H								
	M	44.0	6.60			43.7	6.56		
	L								
Nouvelles Draperies[h]	H			30.0	4.50	21.9	3.29	28.3	4.25
	M	27.9	4.19	26.4	3.96				
	L			23.5	3.53	17.5	2.63	19.2	2.88
BRABANT									
Large Towns[i]	H			146.5[i]	21.97	46.7	7.00		
	M	44.2	6.63					38.5	5.78
	L			29.3	4.40	23.3	3.50		
Small Towns[j]	H			38.4	5.76	35.0	5.25		
	M			27.9	4.19				
	L			14.3	2.14	20.4	3.06		
HOLLAND	M					21.9	3.29		
ENGLAND	H					35.0	5.25	28.0	4.20
	M								

	L					20.4	3.06	14.0	2.10
Essex	H			33.8	5.06				
Cotswolds	H			26.9	4.03				
	M			21.8	3.27				
	L			13.0	1.95				
Straits (Essex, Guildford)	H			16.6	2.50				
	M	6.1	0.92	12.2	1.84			6.0	0.90
	L			5.2	0.78				
ITALY									
Florence[k]	H			56.2[k]	8.42	32.1	4.81	54.0	8.10
	M	64.4	9.66	55.9	8.38				
	L			55.6	8.34	29.2	4.38	30.0	4.50
Tuscany	H			28.9	4.34				
	M			23.3	3.50				
	L			10.2	1.53				
Lombardy	H			51.7	7.75				
	M			30.7	4.60				
	L			11.0	1.64				
Verona	H			38.5	5.77				
	M			34.4	5.16				
	L			24.9	3.73				
Pisa	H			49.9	7.49				
	M			22.3	3.34				
	L			16.7	2.50				
CATALONIA	H			25.1	3.76				
	M	11.9	1.78	16.7	2.51				

TABLE 3 (*cont.*)

Textile producer	Range[b]	Prices of cloths sold in							
		Spain[c]		Italy (Pisa)[d]		Poland[e]		Levant[f]	
		Florins	£ stg.	Florins	£ stg.	Florins	£ stg.	Florins	£ stg.
Perpignan	L			9.5	1.43				
	H			25.1	3.76				
	M	13.6	2.04	21.7	3.25				
	L			18.4	2.76				

[a] In this period, 1 gold fl. or ducat (3.56 g.) was worth 3*s*.
[b] Price range: highest, mean, or median price, lowest price.
[c] Spain: cloth sales by the Datini Company in Barcelona, Valencia, and Majorca, 1394–1410.
[d] Italy (Pisa): cloth sales by the Datini Company (1383–1402) and the Bracci Company (1391–1397) in Pisa: means of the two companies' cloth sales, except for Florentine woollens (see note k).
[e] Poland: cloths priced in Polish groszes per ell: converted to cloths of 35 ells, in Florentine florins, @ 24 g. = 1 fl.
[f] Levant: cloth sales by Italian firms in Beirut, Damascus, Alexandria, and Constantinople, *c*.1375–*c*.1425.
[g] Flemish urban draperies: Bruges, Ypres, Ghent.
[h] Flemish *nouvelles draperies*: Wervik, Kortrijk, Menin, Comines, Dendermonde.
[i] Brabant large towns: Brussels, Leuven, and Mechelen. The unusually high-priced woollen sold at Pisa was probably a Brussels scarlet.
[j] Brabant small towns: Lier, Herenthals, Tienen.
[k] Florence: Florentine cloths purchased by the Bracci Co. in Pisa, 1391–7 only. Those purchased by the Datini Co. from 1383 to 1402 only; cloth sales by the Datini firm exhibit a far too anomalous price range: from a low of 18.75 fl. to a high of 118.85 fl. (probably a scarlet), with a median price of 51.44 fl.

Sources: Spain: Melis (1962*b*), 219–43. Italy (Pisa): Melis (1959), 321–65. Poland: Wyrozumski (1983), 248–58. The Levant: Ashtor (1978), 303–77.

IV. PIRENNE'S FALLACIES AND THE WOOL SUPPLY FOR THE TRADITIONAL URBAN AND THE *NOUVELLES DRAPERIES*: ENGLISH, SCOTTISH, DOMESTIC, AND SPANISH

In fact, however, the major difference between the woollens of the traditional and *nouvelles draperies*, in both quality and price, lay chiefly in their wools, a difference that became more marked by the fifteenth century. Pirenne, of course, also thought that the wool supply provided an essential difference between the old and new draperies: English vs. Spanish wools. Although the true *nouvelles draperies* did indeed come to use Spanish merino wools, Pirenne unfortunately misunderstood the real nature of these wools. Indeed, most of the misunderstandings about the medieval and early modern cloth industries are rooted in a failure to comprehend the differences in the wools that they utilized.

Luxury-quality woollens of the medieval *draperie ointe* required, in both warp and weft, very fine, short-stapled wools—under 2 inches (5 cm.)—with the curly, serrated fibres that promoted extensive felting and shrinkage during fulling, to give the woven cloth its cohesion, strength, high density, and weight. Such wools had to be heavily greased with butter or olive oil—hence the term '*ointe*': to restore the natural oils lost in extensive wool-scouring, to facilitate the combing, carding, spinning, and weaving processes, and thus to protect the delicate fibres especially from any damage in entanglements.[18] The wools that best met all these requirements for luxury production in medieval Europe, especially in felting properties, were grown in England. The very finest and thus the most costly were 'March' wools from the 'Welsh Marches', especially Herefordshire ('Leominster Ore', 'Ryelands') and Shropshire; the next best, from the Cotswolds (Gloucestershire, Worcestershire, Oxfordshire); a more distant third ranking of wools came from Lincolnshire (Lindsey and Kesteven); and a fourth level of satisfactory quality, from other central Midlands counties.[19]

From about the early to mid-fourteenth century, the traditional urban draperies in Flanders and Brabant (and subsequently also at Leiden, in Holland) were using only the better grades of English wools in their finer sealed woollens, those produced for export; indeed they all strictly forbade the use of any non-English wools, except in the 'small-cloths' produced for local consumption.[20] According to their relative qualities, such wools normally accounted for 65–75 per cent of pre-finishing manufacturing costs in the Low Countries's urban *draperies ointes*.[21] Many of the Flemish *nouvelles draperies* also relied on other,

lower-priced English wools, especially from the central Midlands; but some also produced cheaper though still exportable woollens from much coarser northern English, Scottish, and Flemish wools (some of them 'dry' wools), which the *drie steden* themselves utilized only for so-called *snylaken*, for local, domestic consumption.

For the Flemish, Brabantine, and then Dutch draperies, these English wools became dangerously expensive from the later fourteenth century, after steep increases in wool-export taxes, and after the establishment of the Calais Staple in 1363; for the Staplers subsequently became an effective cartel of wool-sellers in passing most of that tax incidence on to foreign buyers, chiefly in the Low Countries. By the late fourteenth century (1380–99) total export taxes amounted to 45–50 per cent of the mean domestic price of Cotswolds and Midlands wools.[22] The gradual fall in the mean *nominal* prices of those wools from 1360–9 to 1390–9, about 16 per cent overall, is illusory, however, because the extent of English deflation was so much greater—24 per cent; and thus *real* wool prices had in fact risen during this period.[23] Consequently, the Low Countries' draperies had a very strong incentive to find alternative fine wools; and ultimately some of them found satisfactory wools from Spain's later-famed merino sheep.

In the early fifteenth century, however, Spanish wools were far from being comparable to the English; and even as they slowly improved in quality, a deeply ingrained prejudice against them impeded their adoption in the Low Countries. Earlier, from the twelfth to mid-fourteenth centuries, the pre-merino Spanish wools had been regarded as amongst the very worst in western Europe.[24] Condemned as no better than 'waste wools', they had been banned from most Flemish draperies, and were permitted only in making the very cheapest, coarsest cloths—such as Bruges's *sarges*, *c.*1200;[25] and also in evidently similar cloths woven in London, *c.*1300.[26]

True merino wools developed only from the mid-fourteenth century, as a new, much finer type that Spanish sheep-herders of the Mesta had developed by breeding certain sheep imported from Marinid North Africa, and by steadily improving their flock management.[27] Like the finer English wools, the ultimately perfected Spanish merino wools also had thin, curly, serrated, short-stapled fibres (5 cm.) so favourable to felting; and these wools obviously also had to be heavily greased. The first documented use of these merino wools outside of Spain was in some northern Italian draperies, in the later fourteenth century, when the best cost only 35–40 per cent as much as English Cotswolds wools.[28]

In the Low Countries, by the early fifteenth century, a few small draperies can also be found using merino wools, in south-west Flanders and adjacent Tournai.[29] Many more Flemish *nouvelles draperies* also switched to Spanish wools from the late 1420s, especially after the imposition of the infamous Calais Staple Partition and Bullion ordinances. These bullion laws, so widely detested on both sides of the Channel, made the already high-priced English wools brutally expensive by forbidding any sales credit and by requiring full payment in English coin or bullion; and furthermore, to enforce these regulations, by the Partition Ordinances, the crown placed the Staple trade in the hands of a monopolistic clique, which raised wool prices even higher.[30] Nevertheless most of the traditional urban draperies still refused to give up their English Staple wools, for fear that any substitution would irreparably damage their reputation for peerless quality. Even the leading *nouvelle draperie* at Wervik, now far more traditional than 'new', initially took that same conservative stance for this very reason, and so required its drapers (from 1447) 'annually to swear an oath upon the holy cross to use none but English wools'. But in 1463 the Burgundian ducal government overrode the Wervik magistrates to permit a new drapery using Spanish, Scottish, and Flemish wools, though limiting it to *petits draps* and stipulating that it must never use English wools and must operate entirely separately from the older drapery.[31]

Despite the threat of extinction, the Flemish *drie steden* postponed their inevitable shift to the steadily improving Spanish wools until much too late, well into the next century. Ghent may have been the first to do so. Cloth manufacturing with Spanish wools can be documented there from at least 1519 (possibly from the 1490s);[32] but a recent contention that Ghent had already established a Spanish-wool-based *nouvelle draperie* in the 1450s seems untenable.[33] Bruges, rather more surprisingly, continued to boast as late as 1533 that its 'principal industry' remained cloth manufacture from English wools;[34] and indeed that same year its magistrates explicitly reaffirmed the traditional ban on non-English wools.[35] That attitude may explain why an attempt to establish a *nieuwe draperie* with Spanish wools at this very time proved to be abortive.[36] Bruges succeeded in establishing a viable Spanish-wool-based drapery only after September 1544; and from June 1548 all woollens, 'new' and 'traditional', were made there exclusively from Spanish wools.[37] Finally, in the smallest of the *drie steden*, Ypres, the use of Spanish wools can be documented with certainty only from this same period, 1545.[38]

In the neighbouring Brabantine urban draperies, Spanish wools had been accepted much sooner and more readily. As early as 1443, the Brussels magistrates had formally authorized a *nouvelle draperie* utilizing Spanish and other non-English wools, to make *bellaerts*, though also requiring that it be completely segregated from the traditional, English-wool-based luxury drapery.[39] Even earlier, in 1415, Leuven, with the weakest of the traditional urban draperies, had instituted a *nieuwe draperie* that utilized French, Scottish, and domestic (*hierlandsche*) wools;[40] but the use of Spanish wools themselves cannot be documented there until the revisions of the industrial codes or *keuren* in 1481–1513.[41] By that time, or soon after, the nearby Mechelen drapery may have been producing cloths from Spanish merino wools, though no documents regulating their use are extant before the general *keure* of 1544.[42]

Somewhat surprisingly, the younger Dutch drapery of Leiden, supposedly far more progressive than the Flemish and Brabantine urban draperies, agreed to adopt Spanish wools officially only in June 1522 (after Brussels and Ghent, but before Bruges), when they were 25 per cent cheaper than the now scarce and far too costly Calais Staple wools. Even so Spanish wools were used in only limited quantities, mixed with English wools; and Leiden drapers subsequently (1536) abandoned Spanish wools to protect their reputation for high quality and safeguard their now limited cloth markets.[43]

Even in the mid-sixteenth century, therefore, Spanish merino wools were not yet as fine as the best English wools, and in the fifteenth century they probably rivalled only mediocre-quality Midlands wools. In the 1430s, the author of the *Libelle of Englysshe Polycye* had boasted with good reason that Spanish wools were no good for cloth-making unless they were indeed mixed with English.[44] Table 4B shows just such a mixture a century later for many of the *nouvelles draperies* (as well as Leiden): at Armentières, two-thirds merinos and one-third fine English wools. Even in their wools these *nouvelles draperies* still remained closely related to the traditional urban *draperies de luxe*.

V. PIRENNE'S OTHER 'NEW DRAPERY': THE FLEMISH *DRAPERIES SÈCHES, DRAPERIES LÉGÈRES,* AND *SAYETTERIES*

As Table 4C also shows, the branch of Flemish cloth manufacturing that was distinctly different in its wools was the third: the *draperie sèche*

TABLE 4. *The physical composition of woollen and worsted cloths in the Low Countries and England during the sixteenth century*

Part A: Traditional woollen broadcloths (*draperies de luxe*)

	Leuven	Mechelen	Ghent	England
Ordinance Date	1519	1544	1546 (and 1462)	1552
Name of Woollen	Oppersten Zegel [1st Seal]	Gulden Aeren [Golden Eagle]	Dickedinnen Five Seals	Coloured Short-cloths of Suffolk, Norfolk, Essex
Wools Used	English: Cotswolds, Middle March Berkshire	English: Leominster (Hereford) only	English: Fine March, Cotswolds, Berkshire	English: Unspecified [short staple]
Warp-Count	2400	3120	2066	not specified
Length on Loom	43 ells[a]	48 ells[b]	42.5 ells[c]	n.s.
Width on Loom	16 qtrs.[d]	16 qtrs.	14.5 qtrs.	n.s.
Weight on Loom	90 lb.[e]	n.s.	n.s.	n.s.
Length After Fulling	30 ells	30 ells[f]	30 ells	32.22 ells = 24 yds.[g]
Width After Fulling	10 qtrs.	10 qtrs.[f]	9.5 qtrs.	9.4 qtrs. = 7 qtr. yds.
Warps per cm.	13.81	18.11	12.46	n.s.
Final Weight	n.s.	58 lb.[h]	51 lb.[i]	64 lb.[j]
Area: in sq. m.	36.227	35.604	34.913	37.095
Weight: per sq. m. in grams	n.s.	764.4	633.8	782.6

[a] 1 Brabant ell [Brussels, Antwerp] = 0.695 m. = 27.362 ins.
[b] 1 Mechelen ell = 0.689 m = 27.226 ins.
[c] 1 Flemish ell [Bruges] = 0.700 m. = 27.559 ins.
[d] Quarter ell: here one quarter of the Brabant ell = 0.174 m. = 6.84 in.
[e] 1 Brussels pound (lb.) = 467.670 g. = 1.03 lb. avoirdupois English
[f] Estimated: prescribed dimensions after tentering but before final shrinkage (retrayage) were 32 ells by 11.5 quarters.
[g] 1 English yd. of cloth assize = 37.0 in. = 0.9398 m. = 1.343 ell.
[h] 1 Mechelen pound (lb.) = 469.25 g. = 1.03 lb. avoirdupois.
[i] 1 Ghent pound (lb.) = 433.85 g. = 0.96 lb. avoirdupois.
[j] 1 pound avoirdupois English = 453.593 g.

Part B: Woollen broadcloths of the *nouvelles draperies*

	Armentières	Diksmuide	Haubourdin	Bruges
Date of ordinance	1510; 1546	1523; 1546	1539	1544
Name of woollen	Oultreffin	Grooten Claus [St Nicholas]	Oultreffin	Dobbel Leeuwen [Lion]
Wools used	2/3 Spanish 1/3 English: Cotswolds, Lindsey, Berkshire	Spanish, English, Scottish Rhenish, Flemish	Spanish and English mixed	Spanish only
Warp-count	1800	1968	1800	2010
Length on loom	42 ells[a]	41 ells[a]	42 ells[a]	44 ells[a]
Width on loom	12 qtrs.	14.5 qtrs.	12 qtrs.	14 qtrs.
Weight on loom	88 lb.[b]	84 lb.[b]	82 lb.[b]	n.s.
Length after fulling	30 ells	30 ells	30 ells	30 ells
Width after fulling	8 qtrs.	8.5 qtrs.	8.5 qtrs.	8.5 qtrs.
Warps per cm.	12.86	13.26	12.10	13.51
Final weight	52 lb.[b]	50 lb.[b]	48 lb.[b]	48 lb.[b]
Area: sq. m.	29.400	31.238	31.238	31.238
Weight: per sq. m. in grams	820.5	742.5	712.8	712.8

[a] 1 Flemish ell [Bruges] = 0.700 m. = 27.559 ins.
[b] 1 Bruges pound (lb.) = 463.90 g. = 1.02 lb. avoirdupois

Part. C: Worsteds and mixed worsted woollen fabrics: *draperies légères*

	Bergues-Saint-Winoc	Hondschoote	England: Essex	
Date of ordinance	1537	1571; 1576	1579	1579
Name of fabric	Fine narrow say	Small double say	Colchester single bays	Essex broad says
Wools used	Flemish, Artesian	Flemish, Scottish, Frisian, Pomeranian Kempen	English: Long-stapled Worsted Warps + woollen weft	English: Worsted Warps; weft unspecified
Warp count	1400	1800	n.s.	n.s.
Length on loom	n.s.	40 ells[a]	n.s.	n.s.

	Bergues-Saint-Winoc	Hondschoote	England: Essex	
Width on loom	n.s.	5.75 qtrs.	n.s.	n.s.
Weight on loom	n.s.	n.s.	n.s.	n.s.
Length after fulling	40 ells[a]	36.75 ells[a]	45.65 ells = 34 yds.[b]	13.43 ells = 10 yds.[b]
Width after fulling	4 qtr. ells	5 qtr. ells	5.37 qtr. ell. = 4 qtr. yds.[b]	5.37 qtr ells = 4 qtr. yds.[b]
Warps per cm.	20.00	20.60	n.s.	n.s.
Final weight	11 lb.[c]	16 lb.[d]	22 lb.[e]	2.75 lb.[e]
Area in sq. m.	19.600	22.509	30.030	8.83
Weight: per sq. m. in grams	260.4	322.4	332.3	141.2

[a] 1 Flemish ell = 0.700 m. = 27.559 ins.

[b] 1 English cloth assize yd. = 37.0 ins. = 0.9398 m. = 1.343 Flemish ell.

[c] 1 Bruges pound (lb.) = 463.90 grs. The average weight of 347 says sold at Bergues-Saint-Winoc in 1538–9 closely approximated the prescribed weight: 11.931 lb. From De Sagher (1951–66), i. 593–6, no. 186.

[d] This is the weight (in lb. avoirdupois) given for 'sayes of Flanders' of 27 yds. [= 36.25 Flemish ells] in the Burghley papers of 1578, cited in Usher (1920), 200.

[e] 1 English lb. avoirdupois = 453.593 g.

Sources:
Leuven (Louvain): Stadsarchief Leuven, no. 1526, fo. 203^{r-v}, 210^{v}.
Mechelen (Malines): Willemsen (1910), 156–90.
Ghent (Grand, Gent): M. J. Lameere, H. Simont, *et al.*, (1910), v. 272–83; Boone (1988).
England (woollen shortcloths): Great Britain, Parliament, *Statutues of the Realm*, vol. iv: 1, pp. 136–7 (statute 5–6 Edwardi VI, c. 6).
Armentières: De Sagher (1951–66), vol. i. 102–17, no. 36; pp. 144–9, nos. 40–1.
Diksmuide (Dixmude): De Sagher (1951–66), ii (1961), 123–8, no. 248; pp. 141–51, no. 251.
Haubourdin: De Sagher (1951–66), ii. 304–5, no. 275.
Bruges (Brugge): Willemsen (1921), 5–74.
Bergues-Saint-Winoc: De Sagher (1951–66), i. 530–1, no. 163; p. 538, no. 165; pp. 561–67, nos. 176–77.
Hondschoote: De Sagher (1951–66), ii. 362–9, no. 290; pp. 378–81, no. 291; p. 415, no. 299.
England (bays and says): Pilgrim (1959–60), 36–59; Usher (1920), 200.

and *légère*, which had began to flourish (anew) from the mid fifteenth century, to become ultimately the predominant textile industry in the sixteenth-century Low Countries. In contrast to all the woollen draperies, the true *draperies sèches* used wools for both warp and weft that were generally longer-stapled, coarse, and tightly twisted, receiving virtually no additional greasing: so-called 'dry wools', with their natural oils retained, largely unscoured in their preparation. When woven, they required no fulling, beyond a simple cleansing, and thus no real felting

and compression, or any subsequent napping and shearing. These *draperies sèches*, whose products were consequently much lighter than any of the aforementioned woollens, were thus a subset of the more broadly defined *draperies légères*, which also included many that manufactured hybrid fabrics with dry worsted warps and greased woollen wefts, which did require some fulling (scouring, shrinkage, and felting), though much less so than in the traditional woollen industry and the *nouvelles draperies*.[45]

Perhaps the most famous and influential of these hybrid worsted-woollen draperies was the Hondschoote *sayetterie*. Contrary to Pirenne's oft-repeated assertions, Spanish merino wools were never used in any of these *sayetteries*, whether they were pure worsted (warp and weft) or hybrid worsted-woollen draperies. The Hondschoote documents specify only coarse Flemish, Scottish, Zealander, Frisian, Kempen, and Pomeranian wools.[46] Table 4C clearly indicates why even the hybrid worsted-woollen *sayetteries* were nevertheless true members of the *draperies légères*. Says from Hondschoote and Bergues-Saint-Winoc weighed only a third as much as woollens from Armentières, Mechelen, or East Anglia. Even heavier says and bays normally weighed no more than half as much.[47]

VI. ENGLAND'S 'NEW DRAPERIES': THE HYBRID WORSTED-WOOLLEN FABRICS

The Hondschoote *sayetterie* was reputedly the prototype for some of the subsequent post-1560 English 'new draperies' set up by Flemish and Walloon Protestant refugees in East Anglia.[48] They similarly made hybrid fabrics from worsted warps and woollen wefts; but even if their producers and the names of their fabrics were 'new', quite clearly this region had produced at least worsteds and likely also the hybrid fabrics well before the Flemish influx. Whether English or Flemish in origin, whether semi- or full worsted in their production, these English 'new draperies' were, therefore, despite the name, fundamentally different from any of those Flemish *nouvelles draperies* just examined.[49]

In emphasizing the 'newness' of these products, historians of England's 'new draperies' have focused upon the mixed fabrics and thus upon the different techniques to prepare the warp and weft yarns for spinning: by combing and carding, respectively. Furthermore, many English historians have also incorrectly assumed that, from

medieval times, all short-stapled wools used in woollens were necessarily carded and that only coarse, longer-stapled wools were combed, uniquely for worsted yarns. Consequently, the published documentary evidence that late-medieval Florentine cloths were woven with combed warps and carded wefts very reasonably led Professor Donald Coleman to suggest an Italian origin for both the Hondschoote-type *sayetteries* and the English 'new draperies'.[50]

That evidence is rather misleading, however, for those Florentine cloths were wholly woollen, basically no different from the very best-quality Flemish woollens, many of which were then also woven with combed warps and carded wefts. In fact originally, from ancient times, *all* wools—short and long-stapled, woollen and worsted—had everywhere been combed, and then spun on the drop-spindle or 'rock'; and many late-medieval woollens (e.g. those of Leiden) were still composed of combed 'rock'-spun yarns throughout.[51] Carding and related wheel-spinning were a relatively recent phenomenon, arriving in western Europe about the twelfth or early thirteenth century via Muslim Spain, and they were probably first introduced into Italy's cotton fustian industries.[52] Though both carding and wheel-spinning were well suited to short-stapled fibres, they both encountered considerable hostility from the European woollen industries, especially from the luxury branches, because the yarns so processed were generally weak, knotty, and uneven. Carded wheel-spun warps could be easily broken or impaired when stretched on the loom or pulled apart by the heddle-harnesses for passage of the weft-bearing shuttle.[53] Grudgingly, however, carded wheel-spun yarns came to be accepted for the wefts in many though not all western European woollen industries, which long continued to ban those techniques for preparing warp yarns.[54] Rather surprisingly, however, Hondschoote's *sayetterie* evidently continued to comb wools for the wefts as well as for the worsted warps.[55]

VII. THE MEDIEVAL ORIGINS OF THE EARLY MODERN *SAYETTERIES* AND ENGLISH 'NEW DRAPERIES'

If Professor Coleman's thesis on the Florentine antecedents of the Hondschoote *sayetterie* and English 'new draperies' cannot be vindicated, what was their true origin? The second part of his thesis suggests another possible solution: a twin root in the 'commercialization of peasant techniques', evolving from medieval rural handicrafts that had

earlier served only local needs.[56] Say-making was in fact a very ancient textile industry in western Europe, probably dating from the Roman era; and it had become commercialized in both rural and urban settings, especially in northern France and the Low Countries, far earlier than is commonly suggested.[57] Thus by the twelfth and thirteenth centuries, this textile region could boast of a large number of flourishing export-oriented *sayetteries*, widely dispersed in villages such as Hondschoote, Poperinge, Diksmuide, and Ghistelles, and in most of the large towns as well: Saint-Omer, Arras, Valenciennes, Tournai, Douai, Lille, Ypres, Bruges, Ghent, and Leuven (in Brabant).[58] According to Alain Derville, says had constituted Saint-Omer's principal export for most of the thirteenth century, reaching a peak of perhaps 60,000 pieces annually.[59] During this era, most of these towns had also hosted other if similar *draperies légères*, producing such generally light fabrics as stamforts (*estanforts*), *biffes*, *faudeits*, *afforchiés*, and *tiretaines* (fustians with linen warps, woollen or cotton wefts). At the same time, these urban draperies still retained an important rural component: especially for the preparatory stages of wool-sorting, wool-beating, combing and/or carding, spinning, and some weaving, under a 'putting-out' cottage system of production. Much of their wool was also obtained from the local Flemish and Artesian countryside, though considerable amounts of wool were evidently also imported from Ireland, Scotland, and possibly also Germany.[60]

These *sayetteries* and other *draperies légères* of the twelfth and thirteenth centuries were not simply some minor adjunct to the more famed urban *grande industrie de luxe*. Two recent, well documented articles demonstrate their very great importance for textile exports from north-west Europe to the Mediterranean basin during the twelfth and thirteenth centuries. The first, by Hilmar Krueger (1987), concerning Genoa's trade with Sicily, Syria, Egypt, and Constantinople in the years 1155–1205, contends that northern French and Flemish says and serges (*sagie*, *sargie*, *saie*) 'were exported more frequently than other type of cloths'; and that northern cloths, including English *stanfortes* [stamforts], predominated over Mediterranean textiles, of which 'only the Lombard fustians formed an impressive item of export'.[61]

The second article, by Patrick Chorley (1987), provides by far the best analysis yet published on cloth exports from northern France and the Low Countries during the thirteenth century. Chorley contends that 'the majority of members' of the Hanse of Seventeen Towns, the Franco-Flemish organization for marketing textiles to the Champagne

Fairs, 'manufactured *only* these sorts' of cheaper textiles, which the 'élite towns', more famous for quality woollens, also produced.[62] His analyses of textile prices, ranged in an unbroken continuum from the cheapest to the costliest cloths (scarlets), show that the prices of *biffes*, *rayés*, says, etc. were 'typically about 40–60 % of that of the *lowest* grade of coloured' woollens [of the *draperie ointe*]. In two Iberian lists, they were priced at only 25–33 per cent of such woollens.[63] Quantitative evidence on Mediterranean imports of cheap northern textiles is admittedly slender; but Chorley argues that two Castilian port records in 1293 show 'an overwhelming preponderance of cheap cloth': possibly 94 per cent of total imports.[64] In the Florentine Del Bene accounts of 1318–23, cheaper fabrics still accounted for about 60 per cent of northern textiles traded (though possibly not as cheap as those predominating earlier, in the thirteenth century).[65] Table 5 below, based on these Del Bene records, again demonstrates a similar price comparison: Flemish say prices ranged from 13 to 33 per cent of those for the best Flemish woollens (and 18–42 per cent of the cheaper woollens' median prices).

TABLE 5. *Prices of Flemish and Brabantine textiles (woollens and says) sold in Florence by the Del Bene Company, 1318–23, in soldi affiorini of Florence and Flemish shillings and pence gros per canna of Florence*

Textile town	Maximum price soldi aff.	Median price soldi aff.	Maximum price Flemish gros	Median price Flemish gros	Max: % of Douai maximum price	Med: % of Ypres median price
WOOLLENS						
Douai	192	177	7*s.* 2*d.*	6*s.* 7*d.*	100	142
Brussels	185	154	6*s.* 11*d.*	5*s.* 9*d.*	96	123
Mechelen	158	155	5*s.* 11*d.*	5*s.* 9*d.*	82	124
Ghent	155	131	5*s.* 9*d.*	4*s.* 11*d.*	81	104
Ypres	143	125	5*s.* 4*d.*	4*s.* 8*d.*	75	100
SAYS AND OTHER *DRAPS LÉGERS*						
Hondschoote	63	52	2*s.* 4*d.*	1s 11*d.*	33	42
Arras	50	50	1*s.* 10*d.*	1s 10*d.*	26	40
Poperinge	47	43	1*s.* 9*d.*	1s 7*d.*	24	34
Ghistelles	24	23	11*d.*	10*d.*	13	18

Notes: I gold Florentine fl. = 29 soldi affiorini; and in 1318–23, I fl. = 13*d.* gros Flemish and 13 gros tournois of France. 1 canna of Florence = 4 braccia = 2.452m. = 3.5 Flemish ells (or 2.0673m. = 2.95 Flemish ells).

Sources: Hidetoshi Hoshino (1983), calculated from Table 11.2, p. 190. Peter Spufford (1986), tables on pp. 34, 186, 215.

In a supplementary article Chorley similarly contended, with equally persuasive evidence, that most of the English textiles exported to the Mediterranean from the later twelfth to early fourteenth centuries were also inexpensive fabrics; and furthermore, that the preponderant majority of English cloth exports of this era went to this region, to Italy especially. Manufactured chiefly in England's eastern lowland towns, from York to London, the most important cloths exported were the coarse Northamptons, 'greys', and the marginally more expensive but still 'comparatively cheap' stamforts—a term that he believes is more likely based upon *stamen forte* (i.e. strong warp) than the place name (Stamford).[66] To be sure, our view of English cloth exports around 1300 might be coloured by the reputed fame of Lincoln scarlets; but scarlets were so very high-priced that they always constituted a minuscule proportion of English cloth exports, generally under 1 per cent.[67] Certainly, if we may judge from the weavers' and burellers' ordinances of 28 Edward I, London's cloth industry around 1300 seems to have been principally based on cheaper, coarser, and light fabrics (of about 11 lb.), including *burels* and *wadmal*, some of them made from pre-merino Spanish wools.[68]

VIII. THE DISAPPEARANCE OF CHEAP, LIGHT NORTHERN TEXTILES FROM MEDITERRANEAN MARKETS: THE ITALIAN, LEVANTINE, AND SPANISH EVIDENCE

Nevertheless this impressive expansion of the cheap, light draperies was not destined to last beyond the early fourteenth century, when their fortunes were abruptly reversed.[69] The markets for the *draperies légères* most seriously affected were indeed those in the Mediterranean basin, by far their principal outlet. Sales of cheap, light cloths had long been favoured there by both the warm climate and the many large, densely populated towns—in the Iberian peninsula, Languedoc and Provence, Italy, Constantinople and the rump Byzantine Empire, the Muslim Levant, Egypt, and North Africa (Tunisia, the Maghrib, and Morocco).

A very major source of documents on this textile trade with the Mediterranean are the Genoese notarial archives, edited in several volumes by Doehaerd, Liagre-De Sturler, and Kerremans, for the period 1200–1440. After *c.*1320, they list many costly Brabantine and Flemish woollens, not only from the traditional urban draperies but increasingly those from the more prominent *nouvelles draperies* of the Lys valley: Wervik, Kortrijk, Menen, and Comines.[70] In striking contrast, however,

they mention virtually none of the cheap and generally light cloths from north-western Europe that had appeared so prominently in those Genoese notarial documents during the twelfth and thirteenth centuries.[71] The only significant exception are some 'Irish says', which may be English worsteds.[72] Their documented numbers remain very small in the fourteenth century;[73] but even if truly English, they may be the only remnant of England's earlier export trade in the cheaper, coarser fabrics. Chorley can find very little if any substantial evidence of continued exports of those once so important English stamforts and Northamptons, in Spain, or Italy, the Levant, or elsewhere after 'the first decades of the fourteenth century'.[74]

Records of several fourteenth-century Italian merchant firms provide similar evidence for both the disappearance of the cheaper, lighter fabrics from northern France and the Low Countries, and the increasing prominence of much more costly woollens from the Flemish and Brabantine *nouvelles draperies*. The renowned writer Francesco Pegolotti utilized some such records (from *c.*1290 to *c.*1330) in compiling his commercial treatise *Pratica della Mercatura*. Amongst the many fine woollens from north-west Europe—especially those of Flanders, Artois, and Brabant—the only cheaper, lighter fabrics still listed are says of Ghistelles and Hondschoote (Flanders), Caen (Normandy), and Norfolk—*saie di Norfolco* (i.e. worsteds). Moreover, in comparison with so many of the aforementioned thirteenth-century products, most of these says, especially from Caen, were actually better-quality and so higher-priced products.[75] Those Flemish and Norman says have also been recorded, along with Ypres's *covertura*, in the account book for the Florentine Del Bene firm, for 1318–21. But no northern says can be found in subsequent account books for the Alberti (1329), Covoni (1336–8), and Peruzzi firms (1337–8) of Florence; and, in the many thousands of cloth transactions in the later Alberti account books for 1348–58, only three Hondschoote says appear, along with a few more scattered entries for 'Irish' says.[76]

Much more detailed evidence can be found in account books of Italian merchant firms for cloth sales at Pisa from 1354 to 1402. In those for Baldo da Sancasciano (1354–71) only two isolated sales transactions involve northern says (both at relatively low prices): a single Hondschoote say, in 1357 (13 florins = £1.95 sterling); and four Irish says in 1368 (about half the size or less, at 5 florins each = 15*s.* sterling). In the subsequent records of cloth sales at Pisa, by the Datini (1383–1402) and Bracci (1391–7) companies, northern says can be found only

in one single transaction, for 1396: 33 Irish says, accounting for just 0.56 per cent of the total value of English cloth sales at Pisa in this period![77]

But all three account books record numerous sales of good-quality woollens from many Flemish and Brabantine *nouvelles draperies*: Wervik, Kortrijk, Menen, Aalst, Diest, Lier, and Herentals. With an average value of 27.16 florins or £4.07 sterling—a price representing 195 days' wages for an English building craftsman in the 1360s[78]—they accounted for 32.5 per cent of total sales of Flemish and Brabantine cloths at Pisa in 1354–71 (vs. 53.7 per cent for Brussels and Mechelen luxury woollens, averaging 41.35 florins or £6.20 sterling). Collectively the Flemish and Brabantine woollens (averaging 33.46 florins in price) accounted for 28.6 per cent of total cloth sales by value; Italian woollens (averaging 22.08 florins in price) accounted for 57.7 per cent; northern French woollens (27.14 florins), for 6.7 per cent; English woollens (25.38 florins), for 3.8 per cent; Catalan woollens (22.67 florins), for 2.2 per cent, and Languedoc woollens, by far the cheapest (16.9 florins), for just 1.0 per cent.

Subsequently, from 1383 to 1402, the share of Pisan cloth markets taken by Flemish and Brabantine woollens shrank to just 6.6 per cent; but the Flemish *nouvelles draperies* accounted for almost all of them (97.8 per cent), with an average value of 26.40 florins or £3.96 sterling (Table 3).[79] Generally more expensive Italian woollens, now averaging 32.32 florins in price, still accounted for over half the value of Pisan cloth sales, while English cloths took a most atypically high share of 25.2 per cent. The very small remaining shares of cloth sales were in woollens from Languedoc (9.3 per cent), Catalonia (2.6 per cent), and Normandy (now just 0.8 per cent).[80] In the admittedly less complete and precise commercial records of cloth sales in Naples and Sicily, from 1380 to 1402, principally by the Datini firm, fairly costly woollens of Wervik and other *nouvelles draperies*, priced from 26 to 32 florins (£3.9 to £4.8 sterling), once more predominated amongst the northern woollens sold there. Again, no northern says or any similar textiles can be found in any of these commercial records for southern Italy.[81]

Nor, with the exception of those ubiquitous if infrequent Irish says, can any other cheap, light northern textiles be found in Ashtor's exhaustive survey of western textiles sold in the eastern Mediterranean, principally the Levant, during the later fourteenth and fifteenth centuries. Now greatly outnumbered by Mediterranean woollens, the northern textiles sold in Constantinople, Rhodes, Beirut, Damascus, and Alexandria consisted chiefly of good to luxury quality woollens

from Flanders (Ypres, Wervik, Kortrijk), Brabant (Mechelen, Lier), Normandy (Louviers, Montivilliers), and England, along with some costly linens from Reims and Cologne, silk fabrics and scarlets. Wervik woollens ranged in price from 19.20 to 28.30 florins (£2.88 to £4.72 sterling), while those of Mechelen sold for 38.50 florins (£5.78 sterling).[82]

Similarly in the western Mediterranean, evidence from both state and mercantile records in Portugal and Spain indicate the very same shift in textile consumption from the thirteenth to fourteenth centuries. Thus, those *biffes*, *tiretaines*, *afforchiés*, *camelins*, Flemish says, and similar fabrics that had featured so prominently in their thirteenth-century tariffs can no longer be found in the Castilian tariff of 1369 (Cortes of Toro), nor in a Portuguese-Genoese agreement of 1370, excepting only—once more—Irish says (*saye Ireland parvas*); but prominent in both fourteenth-century documents are again those fine woollens from the major Brabantine centres and the Flemish Lys valley *nouvelles draperies*, especially Wervik and Kortrijk.[83]

Subsequently, for the period 1394–1410, accounts of cloth sales in Spain can also be found in the Datini Company records. Selling only good to luxury quality woollens, but no cheap *draps légers*, the Datini firm earned about one-third of its Spanish sales receipts from fine northern woollens, with an average price of 29.6 florins or £4.44 sterling (Table 3). Of these 28.5 per cent by value were Flemish cloths, very largely woollens from Wervik, Kortrijk, Comines, and Menen, averaging 27.9 florins (£4.19 sterling) in price, while those of Bruges and Douai sold for 44.0 florins (£6.60 sterling); another 6.1 per cent of sales were in woollens from Brabant (Brussels, Mechelen, Leuven), including some of its own *nouvelles draperies* (Lier, Herentals, Diest), with a mean value of 44.2 florins (£6.63 sterling); but only a meagre 1.9 per cent were English woollens. The remaining woollens were Italian (54.1 per cent of total sales) and Spanish (12.8 per cent of sales), both of which will be examined later in greater detail.[84]

IX. THE EVIDENCE FROM NORTHERN EUROPE: POLAND

Similar commercial records are not so readily available for northern Europe, which, in any event, had provided only lesser markets for Flemish says and other *draps légers*. For the 1390s, however, surprisingly rich Polish documents provide important information on western

cloths, 'the most important commodity' in Poland's import trade. As Jerzy Wyrozumski shows and R. C. Carter states more explicitly, 'the main source of Cracow's woollen cloth imports was Flanders [with Brabant] and to a lesser extent England and northern Italy [Florence]', most of whose cloths were very costly.[85] Flemish woollens (35 ells) ranged in price from 43.75 florins (£6.56 sterling) for Bruges cloths to 17.50 florins (£2.63 sterling) for those of the Kortrijk and Geraardsbergen *nouvelles draperies* (and 21.87 florins or £3.28 sterling for those of Dendermonde). Of the Brabantine draperies, Brussels's woollens were again the most expensive, at 46.67 florins (£7.00 sterling), while the cheapest came from Tienen's *nouvelle draperie*, at 20.42 florins (£3.06 sterling); those of the Lier and Herentals *nouvelles draperies* were more costly at 26.65 and 35.00 florins (£3.94 and £5.25 sterling) respectively. The only truly cheap western textiles were the occasional *harras* (presumably from Arras) and some Dutch or Rhenish *karazje* (kerseys), both around 4.37 florins apiece; but importation of the latter 'did not develop on a major scale until the sixteenth century'.[86]

X. THE EVIDENCE WITHIN THE LOW COUNTRIES AND NORTHERN FRANCE FOR THE DISAPPEARANCE OF THE *DRAPERIES LÉGÈRES* AS EXPORT INDUSTRIES

Much more compelling evidence for the virtual extinction of the *sayetteries* and other cheap-line *draperies légères* in the Low Countries and northern France as *export*-industries during the early fourteenth century comes from the records of this region itself. Thus, in Brabant, the last reference to an export-oriented *sayetterie* is found at Leuven in 1298.[87] According to Raymond Van Uytven, fulling mills also ceased operation in this region 'at the beginning of the fourteenth century', evidently because of a 'switchover from cheaper fabrics to luxury materials'; and he, too, had observed that from this period the Brabantine towns were no longer selling their cheaper textiles in the Mediterranean basin.[88]

In Flanders, as elsewhere, the very coarsest and cheapest cloths, especially the *douken* and *faudeits*, were by their very nature unregulated, as mass-consumption products undifferentiated from rival products; but these and similar cheap products are no longer mentioned in this region's commercial accounts from the 1320s.[89] Many of the Flemish says, however, were or came to be somewhat higher quality

fabrics that were subjected to civic regulation by the *keuren* or civic industrial codes. In the very late thirteenth century, Bruges and Ypres both issued their final *keuren* for their once important urban *sayetteries*, which virtually disappear from the records by the early fourteenth century.[90] The Bruges civic government made its final recorded salary payments to its *sayetterie* officials (*decano sagorum et suis juratis*) in the account year 1298/9, though subsequent accounts are missing until 1303;[91] and Bruges's last ordinance concerning its imitation *Ghistelsayen* was issued in June 1314.[92] Similarly, during the early fourteenth century, the town registers of Ypres generally record little or no rental incomes from the civic stalls for *sayes* and *estanfors* (stamforts), which cease to be listed after 1325.[93]

In the adjacent francophone regions to the south and east of Flanders, very similar evidence can be found for the disappearance of their own *draperies légères*, though subsequently, in the fifteenth century, evidence also exists for a more concerted attempt to revive them. Thus in the county of Hainaut, the *keure* for Valenciennes's *sayetterie* was never renewed after its final edition sometime between 1294 and 1309;[94] and its subsequent death can be deduced from a petition to the Count for a charter to re-establish that old *sayetterie* in 1406.[95] By the mid-fourteenth century, the nearby town of Douai to the west had evidently also lost both its once important *sayetterie* and the *draperie légère* for *biffes*, both of which had undergone their final regulation in 1305, the very year in which this once leading Flemish drapery town had fallen under French royal control.[96] Indeed Douai subsequently forbade its citizens to engage in any form of say-making; but then in 1403, just prior to Valenciennes's petition, Douai similarly attempted to resurrect its old *sayetterie*.[97] To the north west, in Artois, the leading drapery town of Saint-Omer, having once exported so many says, failed to find any buyers for its annual say-excise farm from 1299; and Alain Derville, this town's historian, has found a similar shift away from the cheap says to the more expensive striped woollens. Furthermore, Saint-Omer's *sayetterie keuren*, which had become quite elaborate in the later thirteenth century, were not renewed in the fourteenth.[98]

Finally, the French bishopric of Tournai, which had earlier been another of this region's leading say exporters to the Mediterranean, had also lost its *sayetterie* sometime in the fourteenth century. But this town, a neighbour of both Douai and Valenciennes, was evidently much more successful than the others in resurrecting it early in the next century, if only after several abortive attempts.[99] In September 1397 the Tournai

magistrates had authorized the manufacture of new cloths with dry warps and greased wefts. That industry evidently failed; and in 1405 the magistrates chartered *une nouvelle drapperie*, which promised to produce similar mixed fabrics from local lambswool.[100] Five years later, in 1410, the Tournai magistrates issued yet another ordinance, for 'le sayetterie encommencie à faire en la ditte ville', producing quite narrow says, small and large, 'faittes de deux estains' (i.e. two warps), again from local wools. Later in the century, in 1484, Tournai revised its *keures* once more;[101] and thirteen years later, in 1497, Saint-Omer finally succeeded also in re-establishing its *sayetterie*.[102]

Thus very few *sayetteries* in the Low Countries survived continuously through the later Middle Ages as export-oriented industries. Arras, though concentrating on a *nouvelle drapperie* [*ointe*] from 1337,[103] evidently did retain its traditional *sayetterie*, though with a much reduced prominence, since, as indicated earlier, its says no longer appear in the Genoese notarial accounts.[104] The *sayetterie* was included in the general drapery *keure* of May 1367, though not, curiously, in the 1377 revision.[105] Valenciennes's 1406 petition, however, does refer to a *sayetterie* at Arras.[106] Subsequently, in 1479, after this rebellious town had fallen to Louis XI, some exiles from Arras re-established their *sayetteries* at Lille, Mons, and Amiens, where they came to enjoy far greater prominence in the sixteenth century.[107]

Of the village survivors, the most important was of course the Hondschoote *sayetterie*, even if its later-medieval cloth sales were also far less significant than they had been earlier, up to *c.*1320, when, as noted before, its says can still be found in the Florentine Del Bene accounts. Though such says and those of Caen were indeed far cheaper than the Flemish luxury woollens, priced at 9–21 per cent of the latter, they were higher priced than most says, and still costly in terms of a contemporary craftsman's daily wage.[108] Those price data, combined with evidence about some quality controls in evidently new *keuren* for some Flemish and Artesian *sayetteries*, *c.*1285–1300, especially for producing the so-called *sayes drapées*, may indicate an attempt to upgrade their quality in the face of growing market difficulties. If so, such a policy evidently proved abortive. As previously noted, only two post-1320 references to Hondschoote says in Italy can be found: at Florence and Pisa in 1348–58.[109] Furthermore, as Table 7 shows, not until after the mid-fifteenth century did Hondschoote's say production show any marked growth. This *sayetterie* was finally chartered in 1374, but it did not secure stapling privileges from Bruges, as a viable export outlet,

TABLE 6. *Production and sales of says from the Hondschoote sayetterie in quinquennial means, 1390–4 to 1615–19*

Years	Production: represented by the excise farms	Years	Production: represented by the excise farms	Sales: actual[a]
1390–4	480	1505–9	8,800	
1395–9	640	1510–14	9,400	
1400–4	725	1515–19	12,906	
1405–9	747	1520–4	13,669	
1410–14	1,205	1525–9	15,584	
1415–19	1,483	1530–4	18,282	39,612
1420–4	1,888	1535–9	19,264	43,136
1425–9	2,187	1540–4	21,109	43,484
1430–4	2,267	1545–9	21,535	45,391
1435–9	n.a.	1550–4	27,834	52,546
1440–4	2,400	1555–9	32,453	66,369
1445–9	n.a.	1560–4	37,620	86,840
1450–4	4,395	1565–9	41,364	93,219
1455–9	5,227	1570–4	35,732	83,824
1460–4	5,867	1575–9	34,667	83,203
1465–9	5,803	1580–4	6,613	n.a.
1470–4	6,080	1585–9	n.a.	11,847
1475–9	5,867	1590–4	9,226	18,632
1480–4	5,822	1595–9	12,765	22,655
1485–9	6,800	1600–4	12,960	21,490
1490–4	n.a.	1605–9	17,770	29,900
1495–9	4,907	1610–14	23,925	43,927
1500–4	7,360	1615–19	18,784	50,239

[a] Excise tax of 8*d.* parisis per 'cloth' produced. In the sales statistics, double says were counted as two cloths, but not in the *sayetterie* excise farms (for which double says were evidently the unit of taxation). The actual output of says, furthermore, was almost certainly greater than indicated by these production statistics, since they are derived from tax farms.

Source: Coornaert (1930*a*), from data in tables on pp. 485–9.

until 1408.[110] Undoubtedly elsewhere in Flanders say-making still survived for domestic consumption: possibly at Cassel, Aire, Aalst, and Oudenbourg, and probably also in some major towns.[111]

XI. THE TRANSFORMATION OF SOME RURAL FLEMISH *DRAPERIES SÈCHES* INTO *NOUVELLES DRAPERIES* DURING THE FOURTEENTH CENTURY

Most of Flanders' other small-town and village draperies, however, had followed the urban draperies in forsaking their former lines of cheap, light fabrics to specialize in the more costly, luxury-oriented woollens. In so doing, from perhaps the 1320s or 1330s, these small draperies transformed themselves into those *nouvelles draperies* whose successful penetration of so many late-medieval cloth markets has just been clearly demonstrated. Certainly they posed a major threat to the *drie steden*, especially when later-medieval markets became so depopulated or contracted by both endemic plagues and warfare. As also noted earlier, the *drie steden* had strenuously sought to curb these rival upstarts, but largely without success.[112]

Ypres and Poperinge have provided the most famous recorded conflict, culminating in a legal suit before the Council of Flanders in January 1373. The evidence presented in this suit is significant, not so much for any supposed 'counterfeiting' by the *nouvelles draperies*, but more for the nature of these industrial transformations. The Ypres delegates began by asserting that 'the village of Poperinge was originally founded on the production of *lakenen onghesmout ende eenblu*', cloths that they defined elsewhere as products of the *gaernine ende onghesmoutte draperie*: i.e. plain 'dry' worsted fabrics (from woad-dyed yarns). Ypres then charged that, during the Flemish rebellion of the 1320s ('Revolt of Martime Flanders'), Poperinge had illegally 'appropriated for itself the production of *ghesmoutte draperie ende strijpte halflakene*, which belong to this town [of Ypres]': i.e. true woollens of the greased drapery, including rayed or striped shortcloths. In reply, the Poperinge drapers conceded that much earlier their predecessors had indeed produced only fabrics of the *gaernine draperie*, i.e. very coarse worsted-type fabrics that elsewhere were called '*douken* and *eenbluwe* of little value'. They further contended that formerly 'Ypres had also made *droghe plaine lakene* ["dry" plain cloths], and continued to make them so long as they sold well'—a contention that Ypres's officials did

not dispute. The Poperinge drapers then contended that subsequently they had been forced to turn exclusively to the *ghesmoutte draperie*, because 'merchants wanted only cloths from this [greased-woollen] drapery'. Should they now be compelled to give up their *ghesmoutte draperie*, they earnestly pleaded, 'not even one person in ten could be employed in trying to sell cloths of the *droghe draperie* [the "dry" drapery]'. To conclude its defence, Poperinge contended that it was merely one of a dozen small neighbouring draperies that had now 'completely abandoned the *droghe draperie*' (i.e. the *draperie sèche*), listing many prominent members of what were now the *nouvelles draperies*: Diksmuide, Roulers, Comines, Warneton, Menen, Linselles, Bousbecques, Kortrijk, Deinze, Dendermonde, and Oudenaarde.[113]

Explaining these industrial changes in north-west Europe is, however, a far more difficult task. Four possible hypotheses, not necessarily mutually exclusive, may be advanced: (1) the rise of rival producers of cheap, light textiles, to gain a comparative advantage over the Low Countries' *draperies légères*, especially in Mediterranean markets; (2) changes in income distributions and the structure of demand that may have favoured the consumption of more costly, luxury-oriented textiles; (3) changes in European fashions; (4) changes in marketing and other distribution costs that discouraged long-distance trade in cheaper textiles. Any such set of explanatory theses, however, must explain not only the virtual demise or drastic decline of the Low Countries' *sayetteries* and other *draperies légères* (*sèches*) during the early to mid-fourteenth century, but also their subsequent revival, after a very prolonged delay, well into the fifteenth century. Each of these hypotheses—except for the nebulous, elusive question of fashions—will be examined in turn, if only to illuminate the vital importance of the fourth factor, on transport and transaction costs in international trade.

XII. HYPOTHESES FOR THE DISAPPEARANCE OF THE NORTHERN *DRAPERIES SÈCHES*: THE RISE OF RIVAL PRODUCERS?

The most obvious solution to the first part of the problem—the virtual disappearance of the northern *draperies sèches*—though not to the second, their resurrection, should lie in the supposed rise of those low-cost rural textile industries that are featured so prominently in historical discussions of the changing economy of late-medieval Europe. A

closer examination of those industrial changes in England and several other frequently cited regions—Catalonia, Tuscany, and Lombardy—does not support this hypothesis, however, essentially because almost all of their 'cheap' draperies had risen to full prominence long before the onset of those crises afflicting the *sayetteries* and other *draperies légères* in the Low Countries. Furthermore, some of these regions underwent structural changes in their textile industries similar to those in the Low Countries during the early fourteenth century.

England

The disappearance of Mediterranean markets for the cheap, coarse English textiles during the early fourteenth century has already been noted. Could that disappearance be the root cause of the well known dramatic decline of the traditional urban cloth industries in the eastern English towns from York to London, between the 1290s and the 1320s, especially since this was the very era of crisis for the Franco-Flemish *draperies légères*?[114] Unfortunately, apart from London's cheap textiles (*burels*, *wadmal*) discussed earlier,[115] evidence about the structure of cloth production in the other English towns during the late thirteenth century is still too meagre to sustain such a hypothesis.[116] The reasons for their decline must remain a mystery, because all of the traditional explanations remain inadequate: increases in woollen cloth imports from Flanders and Brabant (which were then being subjected to very considerable travail and dislocation);[117] supposedly excessive taxation and oppressive guild restrictions; the diffusion of fulling mills into new cloth-making districts in the West Country; and the growth of rural competition.[118]

Nevertheless, by the 1340s, a new and more vibrant woollen broadcloth industry was emerging in other regions, principally the West Country (Gloucestershire, Somerset, Oxfordshire, Wiltshire) and secondarily the south-eastern counties of Suffolk and Essex, not only in small villages but even more prominently in such towns as Bristol, Gloucester, Salisbury, Colchester, Worcester, and also a revived York (most of which also used fulling mills).[119] Indeed, this English cloth industry owed its ultimate international victory chiefly to advantages based not so much on a supposed rural location but on lower-cost fine-quality wools. From the outset of the Hundred Years War, as noted earlier, rival continental draperies had to purchase English wools burdened with sharply increased export duties, *specific* rather than *ad valorem*,

which, by the 1390s, had became all the more onerous, amounting to almost 50 per cent of mean prices, because of the Stapler cartel and general deflation. Within England, however, domestic clothiers could buy the very same fine wools free of taxes and Stapler impositions, while their woollens were subjected to very minor duties that rarely amounted to more than 3 per cent of cloth export values.[120]

Those striking differences in export duties and relative wool costs force us to address a number of important questions about the wool policies of both the old and new draperies in the Low Countries. Why, from about the 1330s, just when those wool export duties were increased, did Bruges and other major textile towns begin restricting the manufacture of sealed woollens exclusively to fine English wools, thus abrogating much earlier *keuren* that had permitted Flemish, Scottish, and Irish wools to be so used as well?[121] Furthermore, why did these Flemish and Brabantine urban draperies maintain those rigid restrictions on wool use for more than a century, long after the cost of English wools had soared to insufferable levels?[122] Why did Holland's most successful drapery, in Leiden, whose rise post-dates the establishment of the Calais Staple (1363), similarly compel its weavers to use only English Staple wools?[123] Why had the leading *nouvelles draperies* also made their broadcloths from English wools, rather than use various alternative and cheaper wools? Certainly they had not really done so before much improved Spanish merino wools became available in the fifteenth century; and even then not all would use them, not even with the deadly crisis of the Calais Bullion Laws. The obvious answer to this general question is that these draperies, old and new, had not earlier (or even later) resorted to cheaper wools, for fear that they would be unsuccessful in marketing the inferior cloths produced from them.[124]

Indeed support for that view can be found not only in the fate of the Franco-Flemish *sayetteries* but also in radical changes in the English cloth trade from the mid-fourteenth century: namely, the very sharp decline in English worsted exports that mirrored the expansion in broadcloth exports. Adequate statistics on English textile exports are unavailable before the imposition of the new Cloth Custom in 1347. In the five following years (to 1351–2) the number of worsteds exported (in single worsteds) was actually 2.28 times greater than that of broadcloths: a mean of 4,351 pieces vs. 1,904 standard broadcloths.[125] Apparently, up to the 1350s, England's worsted industry had fared somewhat better than the cross-Channel *sayetteries*; but the previously cited commercial evidence shows that very few indeed were being sold in

Mediterranean regions.[126] Most English worsteds were probably going to the Baltic zone, where English trade was expanding from the 1360s and where market conditions for such textiles may have remained more peaceful and propitious.[127] But there is no evidence of any further growth in worsted exports; and Allison and Holderness together suggest that the Norfolk industry had peaked by about the mid-fourteenth century.[128] Subsequently, from the early 1350s to the mid-1380s, worsted exports fell sharply: from 23 per cent of broadcloth exports to just about 1 per cent, when compared by relative taxes and values. Despite a slight and unsustained recovery around 1400, worsted exports generally remained at that very low level for almost two centuries.[129]

The rise of English kersey exports in the later fourteenth century, however, provides neither an explanation for the decline of worsted exports nor any important exception, because kerseys were true fulled woollens; and, if coarser than broadcloths, many kerseys were nevertheless much closer to them in both weight and price than to worsteds.[130] Thus the mean prices per cloth-yard given in Table 2 for the royal wardrobe accounts of 1438/9 indicate that kerseys (1.49*s.* per yd.) were 70 per cent as costly as short-broadcloths (2.12*s.* per yd.) but 5.13 times more expensive than single worsteds (0.29*s.* per yd.).[131] Significantly the Flemish cloth ban first imposed on English woollens *c.*1359 later included kerseys but never worsteds;[132] and indeed, in 1400, Bruges's outport of Sluis obtained the concession in dyeing *sayes Dengeleterre* for the local market.[133] Kerseys themselves, however, did not really figure prominently in the English cloth export trade until the later fifteenth and sixteenth centuries, when they had evidently become a much cheaper cloth.[134]

Catalonia

Comparable changes in textile production can also be found in much of the western Mediterranean basin, beginning with Catalonia. Much earlier, from the twelfth century, this region was producing cheap and coarse cloths, whose commercial output, from twenty towns or more, evidently peaked by the later thirteenth century. Then, from the early fourteenth century, Barcelona and other Catalan towns began producing higher-grade woollens in imitation of northern French and Flemish cloths. By the mid-century, these woollens, woven from good quality Burgundian, Majorcan, and subsequently merino wools, were

comparable to medium-quality English broadcloths in size, weight, and value.[135] At Pisa, from 1354 to 1371, the mean price of Catalan woollens was 22.67 florins (£3.40 sterling) vs. 25.38 florins (£3.80 sterling) for English woollens.[136] In the 1390s, when Catalan cloths accounted for 13 per cent of total Datini cloth sales in Spain, some of them, especially from Perpignan, were even more expensive than English cloths.[137] The truly cheap, coarse Catalan textiles of the thirteenth century are not to be found, however, in any records of Spanish, Italian, or other Mediterranean markets during the later Middle Ages.[138]

From the 1420s the Catalan woollen cloth trade began a major invasion of southern Italian markets, especially Naples and Sicily, slowing the growth of English cloth imports and also displacing imported woollens, even lower-priced ones, from Languedoc, Tuscany, and Lombardy.[139] According to Ashtor's analysis of cloth sales in Palermo, by Pisan firms, *c.*1450, 64 per cent were Catalan woollens and 20 per cent were Flemish; but English cloths accounted for only 9 per cent of sales; French cloths, just 3 per cent, and Florentine, now only 2 per cent.[140] No Sicilian cloths are mentioned in any of these accounts (nor in any other Mediterranean accounts), though presumably most Sicilians consumed their own locally produced textiles.[141]

Italy: Tuscany and Lombardy

Similar conclusions can be drawn for the fate of the even better-documented cheap, coarse cloths that had much earlier enjoyed an almost overwhelming predominance in north Italian textile production and trade. During the twelfth and thirteenth centuries, Florence and other Tuscan and Lombard towns had also manufactured a very wide variety of says, *tiretaines*, fustians, and similar fabrics from low-priced domestic and North African wools, sometimes intermixed with cotton or linen, with such names as *saia*, *saia cotonata*, *stametto*, *trafilato*, *tritana*, *taccolino*. In the later thirteenth and early fourteenth centuries, they competed with Franco-Flemish says and *biffes*—from Paris, Saint-Denis, Caen, Poperinge, Ghistelles, Ypres, and Hondschoote—in the very same price range: from 10 to 30 per cent of the median prices for Flemish and Brabantine woollens;[142] and they constituted the very great majority of domestic textiles sold by the Del Bene and other Florentine houses.[143]

From the mid-1320s, however, Florence in particular abruptly switched its production to *panni alla francesca*, made from English

wools (and much later from merino wools as well), in close imitation of the finer northern woollens. By the late 1330s, these fine, luxury woollens were accounting for about 75 per cent of Florentine cloth sales.[144] Indeed Florentine woollens came to be the most expensive sold in all the later fourteenth-century markets examined in this study. In Pisan cloth sales of 1354–71, their *mean* price was 43.35 florins or £6.50 sterling (with a maximum of 115 florins or £17.25 sterling). By that time other Tuscan and Lombard towns were evidently imitating the Florentine woollens. In these same Pisan accounts, their mean prices are 20.43 florins (£3.06 sterling) and 27.55 florins (£4.13 sterling), respectively; and collectively the Italian woollens then accounted for 57 per cent of Pisan cloth sales. By the 1390s, the mean price of Florentine woollens had risen to 55.9 florins (£8.38 sterling) in Pisa, and to 64.43 florins (£9.66 sterling) in Spain, where they were accounting for 27 per cent of total Datini sales revenue (and, with other Italian woollens, 54 per cent of sales).[145] In the Byzantine, Egyptian, and Syrian markets, Florentine woollens were again the most popular, selling from 32 to 54 florins (£8.10 sterling), at a higher price than any Flemish or Brabantine cloths.[146]

Of the cheap Italian textiles that had been so important in the thirteenth century the only ones to maintain some presence in later-medieval Mediterranean cloth markets were Lombard fustians: mixed fabrics with linen warps and cotton wefts. The history of the Lombard fustian industry, producing 'low-priced goods for popular consumption', again illustrates the same phenomenon. According to its most recent historian, Maureen Mazzaoui, the production of fustians, after enjoying a very rapid expansion in the twelfth and thirteenth centuries, began to decline from the early fourteenth century.[147] Ultimately the fatal blow was delivered by the south German fustian industries in Ulm, Augsburg, Ravensberg, Regensburg, Constance, and Basel; but they became serious competitors only from the 1370s, after military strife had disrupted German commercial access to Lombard fustians. That development obviously came far too late to explain the initial crises for any of the cheap draperies examined in this study.[148] Furthermore, the German fustians industry was not really so 'new', having developed out of a lower-quality domestic linens industry. It achieved its greatest growth much later, from the 1460s, expanding along with the revived *sayetteries* in the Low Countries; and both of these industries, producing light and cheap fabrics, reached their mutual apogee together, in the 1560s.[149]

Thus the history of the international trade in the cheaper, light textiles, exported by both northern and southern producers, indicates that they flourished together in the twelfth and thirteenth centuries, with the general growth of the European economy; furthermore, that they also declined or stagnated from the early fourteenth to the early fifteenth centuries; and finally, that this trade also recovered, as the European economy again expanded from the mid-fifteenth century, to prosper once more throughout Europe for most of the sixteenth century. While the post-1560s tribulations of the Flemish *sayetteries* may well have permitted and promoted the subsequent growth of England's 'new draperies' into the seventeenth century, there is no convincing evidence that the early fourteenth-century crisis of the Flemish *sayetteries* either led to or was caused by the growth of rival, market-oriented cheap-textile industries elsewhere.[150] Throughout all these eras, however, we must assume that most Europeans consumed chiefly their own locally produced textiles, which thus never entered into international trade.

XIII. THE FATE OF THE LOW COUNTRIES' *SAYETTERIES* IN THE FOURTEENTH CENTURY: WARFARE AND THE 'STANDARD OF LIVING' DEBATE

Perhaps the industrial crises afflicting the Flemish *sayetteries* and other *draperies légères*, in the Low Countries and elsewhere, during the early fourteenth century may be explained by structural changes in demand. One might suppose, in particular, that rising living standards permitted the lower-income strata to switch from the cheaper textiles to the higher-priced, more luxury-quality woollens. According to most historians, however, any sustained growth in real incomes began far too late, perhaps a half-century or more too late, to explain the onset of those industrial crises: only after continued depopulations from the Black Death of 1348 and successive waves of plague had supposedly altered land : labour ratios and income distributions strongly in favour of wage-earners (a small minority of the population).

Furthermore, such arguments about the structure of demand may also be flawed in their assumption that wage-earners or others of the lower-income strata had ever constituted an important market for even the relatively 'cheap' textiles in international trade, from the twelfth to the early fourteenth century. In this era in particular, most says and

similar fabrics that entered into international trade were probably too expensive for the average medieval wage-earner; and the chief consumers were probably wealthy aristocrats, other landowners, and merchants, who bought says and similar textiles to furnish their large households: for servants' uniforms, bed-hangings, wall-hangings, coverlets, and cushions.[151]

In any event, by the early fourteenth century, and during this era of industrial crisis, the living standards of the lower classes had in fact deteriorated badly; and their economic plight may have become much worse than either before or after. For England, in particular, a large body of literature has now developed about an 'economic crisis' in this very era, related in particular to the dual problems of warfare and overpopulation.[152] That debate began when several historians, most notably Edward Miller, John Maddicott, and Michael Prestwich, argued that England's wars with France, Scotland, and Wales, from the 1290s to the 1330s, produced very harmful economic consequences: particularly from heavy fiscal exactions. For other historians as well, economic damage from warfare in this era was neither ephemeral nor confined to England. Long before this debate, Édouard Perroy had contended that the roots of the late-medieval economic contraction lay in the crises of the early fourteenth century, most especially those involving warfare; and more recently, Joseph Strayer has bluntly and boldly contended that the 'economic consequences of [the Anglo-French wars of 1294–1303] certainly contributed to the great European depression of the later Middle Ages'.[153]

For the peasantry especially, the fiscal burdens of warfare may have become all the more oppressive as they encountered diminishing returns from the culmination of rapid population growth, which may have peaked with the Great European Famine of 1315–17.[154] Famines and/or warfare evidently did result in some regional depopulations—certainly in Essex, Provence, Tuscany. Such conditions (whatever the land : labour ratio), with the soaring cost of food and other necessities, may well have driven most of the lower strata out of the market for even the cheapest commercial textiles, let alone for luxury woollens.[155] Subsequently, however, according to some historians, population growth resumed in much of Europe, possibly at a slower rate but with continued impoverishment until the catastrophes of the Black Death era.[156]

Furthermore, on the morrow of the Black Death living standards of the lower classes still failed to rise; and again a major culprit was the

warfare, most especially but not uniquely the Hundred Years War (1337–1453), that both preceded and accompanied the several waves of bubonic plague that swept Europe for over a century. Those who suffered the most were the lower classes: not only from war-induced taxation, but also from the famines, economic dislocation, armed lawlessness, and civil strife that so frequently accompanied both war and the endemic, recurrent plagues.[157] For many historians, a major consequence of these conditions was a much more highly skewed income distribution, until the late fourteenth century at least, *not* the less skewed distribution predicted by the naïve post-Black Death land : labour models.[158]

Certainly the lower strata, particularly wage-earners, were the chief victims of the drastic inflations that prevailed in much of western Europe during much or most of the half-century following the Black Death: as the consequence of 'excess money' (whose supply did not immediately contract with depopulation), coinage debasements, military expenditures, and disrupted production, especially from warfare and plague. In the Low Countries, and even in England, with Europe's most stable monetary regime, price-level increases of 115 per cent and 50 per cent, respectively, nullified most post-Plague gains in *nominal* money wages.[159] For Tuscany, David Herlihy has similarly documented severe inflation, 'high food prices, frequent famines, [and] repeated protests' bred by 'drastic population decline, destructive wars and social unrest in the countryside', which 'present a uniformly somber picture of disrupted production and continuing want' until *c.*1400.[160] Perroy has pointed out similar conditions for much of later fourteenth-century France.[161] Thus, not until the post-Plague inflation gave way to an almost equally dramatic deflation, by the later fourteenth (England) or early fifteenth century (Flanders, France, and Tuscany), did craftsmen, though more especially the guild-protected ones, enjoy a sustained rise in real incomes.[162]

Even then much higher real wages would hardly have induced even guild craftsmen, let alone labourers, to become significant consumers of the very costly luxury woollens examined in this study. For the later fourteenth century, the high cost of woollens from even Wervik's *nouvelle draperie* has already been noted.[163] In the 1440s, when real wages were evidently nearing a late-medieval peak, a master mason in Bruges—the best-paid artisan in the Low Countries—would have expended 180 days' wages for a full Ghent *dickedinnen* broadcloth, or about 60 days' wages to acquire 8 yards for proper dress; an Antwerp

mason, 90 days' wages for 8 yards; an Oxford mason, about the same, or 34 days' wages for 8 yards of an average English broadcloth. But he would have required only 8 days' wages to buy the same quantity of imported Brabant linens, or 6 days' wages for single-worsteds; the better-paid London mason, 6 and 4.5 days' wages, respectively (Tables 1–2).[164]

For European textiles, therefore, the major impact of this long-delayed rise in real incomes on textile consumption may have been the stimulus it provided for the contemporary, fifteenth-century revival of the *sayetteries* and other *draperies légères* in the Low Countries and elsewhere.

XIV. THE FATE OF THE LOW COUNTRIES' *SAYETTERIES* IN THE FOURTEENTH CENTURY: WARFARE AND TRANSACTION COSTS IN INTERNATIONAL TRADE

Warfare, Transaction Costs, and the Northern Textile Industries

If the previously discussed warfare had curbed demand for cheaper textiles during the early fourteenth century, especially with the adverse conditions of the Great Famine, then the warfare of this and the subsequent era may have been even more significant in undermining crucial supply factors, especially distribution costs in international trade, that had been necessary to sustain the *sayetteries* and other *draperies légères* in northern Europe. The European wars of this era merged into the far more famous and admittedly often more dramatic Hundred Years War; and, hidden in the latter's shadow, the earlier wars (except the previously cited Anglo-French wars) have not received from economic historians the attention that they truly deserve.

If individually the various wars from the 1290s often seem unimportant, collectively and cumulatively, as they spread across Europe and the entire Mediterranean basin, they had a far more destructive impact upon Europe's international trade than did the warfare of the previous two centuries. Increasingly during the early fourteenth century, the most serious damages arose not from the physical destruction inflicted during military campaigns, but from piracy, brigandage, trade embargoes, and the commercially detrimental fiscal and monetary policies employed to conduct that warfare.

The concept in modern economics that embraces these factors is 'transaction costs': all of the direct and indirect costs involved in

exchanging goods and services. They include not just those of transportation, distribution, and marketing,[165] but also market information or 'search' and 'measurement' costs, the costs of negotiating and enforcing contracts, and 'protection costs' to obtain and defend property rights. Because most of these components involved large fixed costs, the 'transaction sector' was subject to considerable scale economies; and thus, in so far as any war-related disturbances reduced the volume of international trade during the fourteenth century, they also raised unit transaction costs, and consequently the floor that determined profitability in marketing lower-priced goods.[166]

If northern producers of says, *biffes*, stamforts—all generic terms—and similar cheap textiles had been exporting them as competitive 'price takers', rising transaction costs would have threatened them with extinction, all the more so if the Mediterranean markets for such textiles had become saturated by 1300. Hoshino has commented that, during this very period, 'many cities [in the Mediterranean] competed for the same market with materials which were qualitatively identical'.[167] By definition, true price-takers could not lure customers by distinguishing or differentiating their products, and thus could not counteract rising costs by raising prices beyond the established market price. If their variable costs rose above that price,[168] the consequent losses would have forced such drapers to desert their *draperies légères* and reorient production towards more luxury-quality woollens, for which any rise in transaction costs would have constituted a far smaller proportion of their sales price. In so doing, they would necessarily have become 'price-makers', seeking to distinguish the quality of their products from all competitors in their own price range, especially by imitating superior and higher-priced products, as the Flemish *nouvelles draperies* subsequently did from the 1330s. As suggested earlier, some Franco-Flemish *sayetteries* may also have made a similar but futile attempt to upgrade the quality of their products during the early fourteenth century.[169]

In the following discussion on late-medieval warfare and transaction costs, one should not assume that international trade links between any major centres remained disrupted for the entire era; and throughout the later Middle Ages, some international trade in the cheaper textiles did continue. Since the adversities afflicting that trade were not continuous, but fluctuated considerably during this era, the transaction costs determining both the price-floor and thus the trade in cheaper textiles also fluctuated.[170] Nor did all regions suffer equally; some were

spared. Thus an industrial shift away from cheap textiles was not necessarily universal; and not all producers would have responded at the same time in the same fashion. Even in afflicted areas of the Mediterranean, such as Languedoc and Lombardy, some cheaper textile industries undoubtedly managed to survive or even to expand beyond their local market precisely because their lower transaction costs gave them a distinct comparative advantage during the warfare and commercial disturbances of the fourteenth century.

Warfare in North-West Europe and the Champagne Fairs, 1290–1328

In north-west Europe the relative tranquillity that had prevailed since the Battle of Bouvines in 1214 abruptly ended in 1294 with the Anglo-French war over Gascony. Possibly that warfare contributed, directly or indirectly, to the decline of England's export trade in cheap cloths and of her urban textile industries; and it may also have harmed the *draperies légères* across the Channel by increasing the costs of imported Irish, Scottish, and the coarser northern English wools.[171] But ultimately the far more destructive consequences came from the extension of this conflict into the Franco-Flemish wars of 1296–1320, whose consequences in turn provoked, in 1323, the revolt of Bruges and Maritime Flanders, which was finally crushed by French cavalry at Cassel in 1328. These disastrous conflicts, along with Philip IV's absorption of Champagne and the drastic coinage debasements and taxation to finance his wars, disrupted textile production and seriously injured the textile-based Champagne Fairs, which had served as the principal agency for marketing the cheap, light French and Flemish cloths to Italy and other Mediterranean lands.[172]

Although many historians have attributed the decline of the Champagne Fairs to the direct sea-route that the Italians had established by the 1320s, Herman Van der Wee has put forth an opposing, implicitly war-based hypothesis: that the Italians were instead forced to divert their north-bound trade via the much longer sea-route precisely because of the chronic disruptions to the traditional transcontinental trade routes linking Flanders, the Fairs, and Italy.[173] The routes along the Rhine and through south Germany certainly also suffered considerable dislocations from the civil wars that plagued the Habsburg Empire for a decade after the death of Emperor Henry VII in 1313. But the southern routes into Italy itself suffered even worse havoc after Henry VII's invasion in 1310 and the resumption of the

Guelf–Ghibelline wars, which devastated Italy for four decades or more. In 1327 an Italian merchant cited those very wars as the reason why he was no longer able to transport his cloths to Genoa from the now dying Champagne Fairs.[174]

Warfare in Italy and the Mediterranean, 1302–1343

The origins of those ruinous Italian conflicts must be sought in the earlier Wars of the Sicilian Vespers, between Aragonese Sicily and Angevin Naples.[175] Commencing in 1282, they were temporarily halted in 1302 by the papal Peace of Caltobelleta, whose consequences were even more destructive. Ten thousand unemployed Catalan mercenaries were then sent from Sicily to defend the Byzantine Empire against Turkish invaders, but ended up ravaging Anatolia, Macedonia, Thrace, and Greece (1303–12), while a smaller group plundered the North African coasts for many years with fleets of corsairs.

Meanwhile, in 1310, the entrance of Henry VII's forces into Ghibelline Milan embroiled all Lombardy and Tuscany in warfare with the pro-papal Guelf forces, led by King Robert of Angevin Naples, for the next thirty years and more. Ambitious to rule Italy, Robert took advantage of Henry VII's death in 1313 to invade Sicily, thus resuming the Angevin–Aragonese wars in the much larger and more devastating Guelf–Ghibelline wars, which ended only with Robert's death in 1343, when the Sicilian and Neapolitan economies were in irredeemable decline. To the north the economic damage was less enduring but still severe, for which the papacy, led by John XXII (1316–34), must bear considerable blame. Its obdurate campaign to crush the Ghibellines ensured twenty years of ceaseless warfare, from Genoa, through Lombardy and Tuscany to Sicily. That Guelf–Ghibelline strife in turn invited foreign military intervention: by French, German, and finally Bohemian armies. After the Visconti-led Ghibelline League had repulsed the Bohemians in 1333, its dominance was challenged by Verona, entangling not only Milan, but also Venice, Florence, Mantua, and Ferrara in perhaps the most brutal phase of the wars, from 1336 to 1339. By that time, and thus well before the Black Death, severe depopulations of 30 per cent or more can be well documented in parts of Tuscany.[176] The late 1330s brought even worse afflictions, from ravaging bands of diverse foreign soldiers, unemployed by the rapidly changing fortunes of war. Catalan, French, German, Bohemian, Hungarian, and even English mercenaries formed so-called Free

Companies to plunder Italy, from Lombardy to Naples, for several decades, while Italy was also struck (from 1348) by repeated onslaughts of bubonic plague.[177]

Warfare in Spain and North Africa, 1291–1340

The Italian market for cheap textiles was not, however, the only one in this region to suffer from such ruinous warfare during the early to mid-fourteenth century: for warfare and piracy ravaged almost all the Mediterranean basin during this entire period, from Morocco and Spain to the Byzantine Empire, Egypt, and the Levant. In 1291–2, the Spanish Christian kingdoms of Castile and Aragon (the latter still engaged in the wars of the Sicilian Vespers) had united with the Muslim states of Granada and Tlemcen (Maghrib) in a grand coalition to rebuff an ominous, growing threat from Marinid Morocco, which already controlled parts of Andalusia. These states, however, frequently warred amongst themselves in shifting alliances that may have reduced the potential damages to Spain. For the most destructive phase, as a truly bitter and brutal Muslim–Christian war, really began in 1316, when Granada united with Morocco (later joined by Ifriqiya or Tunisia) against Castile and Aragon, while Tlemcen was independently warring with Aragon-Catalonia. Almost continuous strife on land and sea led to a military stalemate, until the reinvigorated Moroccans seized Gibraltar in 1333; and they seemed on the verge of conquering all of Spain when, in 1340, the Castilians destroyed their armies at Rio Salado, ending forever the Marinid threat.[178]

Warfare and Commercial Dislocation in the Levant, 1291–1345

In this very same period, European conflicts with Muslim states in the eastern Mediterranean, though less bloody, were no less injurious to commerce, especially since Egypt and the Levant had long provided such a large and important market for cheap textiles. In the now fateful year of 1291, the Egyptian Mamluks captured the vital port of Acre and rapidly conquered the Latin Kingdom of Jerusalem.[179] In that very same year, Genoa and Venice went to war in a struggle to seize control of the Byzantine and Black Sea commerce, which had obviously become much more important with the Italians' loss of Acre and thus direct access to Asian trade. The Venetian-Genoese war raged on sea and land, from Crimea to Crete to the Adriatic, until 1298–9, when the Venetians, defeated at Curzola, sued for peace.[180]

According to Ashtor, the loss of Acre had more far-reaching consequences in the ensuing half-century of commercial strife with the Muslim Levant: for, while trading relations certainly did continue, 'their volume diminished'.[181] The papacy immediately banned all trade with the Mamluks, and subsequently secured similar bans from Genoa (1291), Aragon (1302), France (1312), Venice (1317), and Crete (1323). In 1312, it also authorized the Knights Hospitallers to seize any Christian ships trading with the Muslims. The reduced trade that did survive had to be conducted at far higher costs, if only to pay for papal trading 'licences' or secular 'fines'. During the worst phase, the so-called 'strict embargo period' of 1323–44, when the Venetian consulate at Alexandria was closed, merchants paid exorbitant fees for very infrequent trading licences.[182]

When the Italians sought to bypass the Levant, they encountered increasing disruptions of their trade along alternative routes into Asia from the early to mid-fourteenth century: by civil wars, Turkish incursions, and Catalan ravages within the Byzantine Empire; by Mongol attacks against their Black Sea colonies; by anarchy in the Mongol Khanate in Persia and the Caucasus; and by Mamluk conquests in Lesser Armenia (Cilicia).[183] Finally, in 1345 the papacy, submitting to Italian entreaties, agreed to liberalize its issue of trading licences; but the Italians were forced to resume their Egyptian trade through the monopolistic *Karimis*, at a very high cost.[184]

XV. THE EVIDENCE FOR RISING TRANSACTION COSTS IN INTERNATIONAL TRADE DURING THE FOURTEENTH CENTURY

In the Mediterranean Basin

The greatest damage that this ever-widening net of military strife inflicted on international trade during the early to mid-fourteenth century came from the steep increases in 'protection costs' necessary to defend merchant shipping from both indiscriminate piracy and organized corsair raids: from Aragon-Catalonia, Majorca, Sicily, Naples, Genoa, Venice, Catalan Athens, Granada, Morocco, Tlemcen (Maghrib), Ifriqiya (Tunisia), Egypt, Cyprus, and the Turkish principalities along the Aegean.[185] Arguing that 'the fourteenth century may have been a watershed in the history of naval plundering', Irene Katele has recently documented the very costly measures that Venice, following its naval

defeat at Curzola (1298), undertook to combat piracy and defend shipping lanes in the Adriatic, the Aegean, and Levant.[186] Indeed much earlier Frederic Lane and other historians had shown how changes in naval warfare had so sharply raised shipping costs from the 1290s: by the adoption of trireme-type galleys (faster speed with three oarsmen per bench), replacing biremes; increasing use of specialized crossbowmen; and more sophisticated weapons, including naval artillery from the 1330s, thus necessitating steel-plated body armour.[187] The Venetians found their most effective defence against pirates in the speedy, heavily armed, three-masted 'great galley', developed as a hybrid military and commercial vessel, and organized from 1299 into state-regulated convoys. By providing 'better protection at less cost, against various forms of organized violence', these galleys soon came to be the predominant if not exclusive carriers of luxury cargoes. In view of the very large investments in construction, heavy armaments, and manpower (crews of 200), they were obviously not so economical for transporting cheap bulk goods, which, after 1300, were generally left to another new ship, recently introduced from the north: the labour-saving, square-rigged 'cogs', designed to defend crossbowmen with much higher sides.[188] Genoa, however, did not imitate its Venetian rival with such costly naval measures; but responded instead, in the late thirteenth century, by developing the insurance contract, which, surprisingly, was very slow to spread in either Mediterranean or overland trade.[189] Elsewhere, Catalan records on shipping costs from 1275 to 1330 indicate that arming merchant ships increased freight rates by 25 per cent or more; and Sicilian records show that freight rates virtually doubled over the fourteenth century.[190]

Further evidence for increased transaction costs in Mediterranean commerce during the early to mid-fourteenth century is more indirect but still impressive. At Venice, state loans commanded an ever greater share of investments, with rising interest rates, while commenda transactions—the chief mechanism for financing maritime trade—seriously declined in volume; and of that reduced volume only 19 per cent were financed by commoners in the period 1309–23 (vs. 48 per cent in 1240–61).[191] Genoese interest rates, which had not exceeded 8 per cent in the later thirteenth century, doubled from 6 per cent to 12 per cent between 1303 and 1313, and were commonly at 10 per cent thereafter. Furthermore, from 1293 to 1334, the tax-farm revenues on Genoa's port trade dropped by 53 per cent.[192] Similarly, in Catalonia, from 1305–9 to 1325–7, the annual mean value of taxes on Levantine trade

fell by 84 per cent;[193] and, in Sicily, from 1300–9 to 1320–9, average annual wheat exports plummeted by 94 per cent (18,799 to just 1,200 hectolitres), while mean volumes of mercantile sailings fell 77 per cent, from 1298–1309 to 1319–39.[194]

Some of the most dramatic evidence for economic dislocation and decline can be found at Marseilles, which had emerged as a major commercial rival to Venice and Genoa during the thirteenth century, until the disaster of the Sicilian Vespers and Angevin wars. From the late thirteenth century, revenues from all the tax-farms on trade fell precipitously: those from cloth exports (*draperie*), 80 per cent by 1300–2 and another 63 per cent by 1330–1. Port records also indicate a serious disruption in Marseilles's trade with North Africa after 1314.[195] Such documents also show that, while Marseilles's predominant export up to *c.*1310 had been cheaper textiles, especially French *biffes*, thereafter it became coral, followed by furs, hides, almonds, some linens and generally costly woollens.[196] By the 1330s, Marseilles was suffering from serious depopulation;[197] and an official inquest of 1342 blamed the ruin of its port revenues on the 'Fall of Acre' and those Angevin wars.[198]

Early Fourteenth-Century Monetary Crises

Finally, some consideration should be given to the silver-money 'crises' of the 1320s and 1330s, followed by the very abrupt fall in the gold : silver ratios, from a high of 14.2 : 1 in 1320–6 (at Venice) to a low of 9.4 : 1 in 1350.[199] The crisis evidently began at Venice in the early 1320s, with attempts to reform the *grossi* coinage (1321–8);[200] by the later 1320s and 1330s a severe silver famine had spread to north-west Europe, to England in particular, producing an extremely severe deflation.[201] Along with these problems, the plunging values of gold coins, from 1326 to 1332 especially, was undoubtedly very injurious to Mediterranean cloth merchants, who usually sold their textiles for gold (florins or ducats). Those continuing monetary problems may have contributed to the bankruptcies of the Bardi, Peruzzi, and Acciaiuoli, the greatest of the Florentine banking houses, in the 1340s;[202] and such conditions probably also increased transaction costs in international trade.

The Trade Routes to North-West Europe: By Sea and Land

The maritime Italian towns, however, despite all the adverse conditions of this era, may have gained from the contemporary commercial

reorientation to those newer direct sea-routes to north-west Europe, which they so strongly dominated. Nevertheless, in Van der Wee's view, their relative prosperity would not have compensated for a far greater economic decline in the much larger continental hinterland of late-medieval Europe. Rising transaction costs and a contraction in trade along the overland, continental routes reduced demand for transport and commercial services, labour, manufactures, foodstuffs, and other goods: first along these routes, and then, via the Champagne and other international fairs, along a far larger number of tributary routes that led into numerous regional trade networks servicing thousands of towns and villages throughout the continent. By Van der Wee's commercial model, falling trade and consumption on these routes in turn reduced investment and aggregate incomes—and hence demand for textiles—by a reverse multiplier-accelerator effect.[203]

Furthermore, the long and tortuous sea-routes to north-west Europe—about 7,200 km. from Venice to Bruges—were also continually subject to naval wars and piracy during the fourteenth century, and thus they too evidently experienced increases in freight rates.[204] Nevertheless, the sea-routes were still often cheaper than the even more dangerous overland routes, as indicated by an Italian report on the relative costs of shipping Wervik woollens from Bruges to Barcelona in 1397–8: 15 per cent of the price by sea, and 22 per cent by land. It also noted that some other merchants had 'lost all their profit' by sending their woollens overland.[205] But these data disguise hidden shipping costs from the relative infrequency of sea voyages during the chaotic fourteenth century. Thus between 1332 (when Venice's shipping records became permanent along with state subsidies) and 1400, its galley fleets made only twenty-four northbound voyages, i.e. for just 35 per cent of those years, vs. eighty-six in the commercially more propitious fifteenth century.[206] Even so fifteenth-century sea transport was hardly cheap. Shipping a sack of Cotswold wool by galley to Venice added 25 per cent to the cost; and the Venetians and Florentines both continued to use costly galleys rather than the cheaper carracks to transport woollens to and through the Mediterranean.[207]

The questionable advantages of sea-transport were only relative ones for certain eras determined by specific conditions of safety, frequency, trading volumes, and value : volume ratios; and too many historians have ignored both the role of river transport in transcontinental trade and the relative cheapness of that trade in more propitious times, both before and after the fourteenth century. In thirteenth-century England,

according to Thorold Rogers, grain cartage costs were 'low': only 1*d.* per ton-mile; and a more recent study by James Masschaele shows that such land-transport costs fell with increased scale.[208] Another comparison is worth noting: for, although sending luxury-quality Wervik woollens overland to Spain in 1398 cost 22 per cent of the price (22 florins), some eighty years earlier transporting Caen says overland to Florence, via the Rhone route (the only safe route), had cost only 8.8 per cent of their much lower value (11.5 florins).[209]

XVI. THE RECOVERY AND EXPANSION OF THE *SAYETTERIES* IN THE LOW COUNTRIES DURING THE LATER FIFTEENTH AND SIXTEENTH CENTURIES

The Revival of Transcontinental Trade Routes and the New Fairs

If, as is so often wrongly contended, a relative shift from transcontinental to maritime trade during the early fourteenth century had represented a major advance in European economic development, then it becomes very difficult to explain both the subsequent revival of the overland continental trade routes and the rise of new international fairs from the mid-fifteenth century. The most important and justifiably most famous were the Brabant Fairs of Antwerp and Bergen-op-Zoom, which dominated European commerce and finance from about the 1460s to the 1560s; but also significant in governing the overland trade from north-west Europe to Italy and the Mediterranean during this century were the fairs of Frankfurt, Lyons, Besançon, and Geneva. Furthermore, the revival of transcontinental trade routes and the rise of these fairs seem to be linked to a restoration of relative peace after the end of the Hundred Years War (1453)—an end to anarchic lawlessness, if not to wars themselves—and then to a general demographic recovery and economic expansion of the European economy from this same period. Closely related also to both of these phenomena, moreover, was the contemporary revival and renewed growth of the *sayetteries* and other *draperies légères* in the southern Low Countries and northern France: first in Hondschoote, Bergues-Saint-Winoc (from 1433), and Tournai; then in Lille, Amiens, Arras, Mons, and Saint-Omer; and finally, by the early to mid-sixteenth century, in Bruges, Ghent, Ypres, Mechelen, Leuven, Brussels, Leiden, Armentières, Valenciennes, and also in most of this region's small towns as well.[210]

Van der Wee's thesis on the crucial role of the transcontinental trade routes had been developed from his earlier *chef d'œuvre* on the growth of the Antwerp market to achieve European commercial and financial dominance by *c.*1500. In his view, Antwerp's economy had been founded on a purely regional trade in foodstuffs; and Antwerp's subsequent growth had fundamentally depended upon the revival of overland continental trade routes to the Mediterranean, which ran principally from these Brabant Fairs to Cologne and then up the Rhine, through south Germany to Italy, via the Brenner and St Gotthard passes, with a subsidiary route through eastern France, via the Rhone valley, to Italy (Genoa) and Spain.[211] This growth in transcontinental trade was followed, it should be noted, by the decline and then cessation of the Italian galley fleets to north-west Europe. The last Florentine galleys came to England in 1478; the Venetian galleys, having sailed regularly for most of the fifteenth century, did not arrive in 1492, 1496–7, 1499, 1502, 1509–15, 1518, 1521–9, and 1531–2, and made their final voyage in 1533.[212]

As Jan Van Houtte had also demonstrated, the revival of that transcontinental route and the growth of Antwerp to become a truly 'world market' had been fuelled first by the expanding English cloth trade, and, from the 1460s, by the south German and Central European silver-copper mining boom, the expansion of south German trade in fustians, both of which were dominated by south German merchant-banking houses. The German merchants who brought the silver, copper, and fustians down the Rhine route to Antwerp sought out those English woollens and kerseys as their principal return cargo for Germany and Central Europe.[213]

That transcontinental trade soon, however, came to include significant quantities of Flemish says, certainly by the early sixteenth century. An analysis of the export markets for the Hondschoote says and similar textiles from that era lends much support to Van der Wee's transcontinental-trade model. First and foremost, the overwhelming bulk of those textiles went to the Mediterranean basin; and secondly, despite the supposed advantages of maritime trade and advances in naval technology, the overwhelming majority of says were shipped overland, on mule-trains, carriages, and river boats, by these very same routes.[214] The sixteenth-century Antwerp-based firms of Van der Molen, della Faille, and Van der Heyden used these overland routes exclusively in sending their Hondschoote says and other textiles to Italy.[215] Furthermore, the tax registers for a special one per cent levy on all goods exported from

the Habsburg Netherlands between February 1543 and September 1545 show that almost all exports to Mediterranean markets similarly went by these overland routes; and Wilfrid Brulez, after having examined all these tax registers and other documents on Antwerp's mid-sixteenth-century trade, concluded that maritime exports during this period were of quite 'minimal importance'.[216] Only in the seventeenth century, when chronic and widespread warfare (especially the Thirty Years War, 1618–48) made these continental routes unusable, were Flemish says sent to the Mediterranean by sea, chiefly via Amsterdam.[217]

Mediterranean Markets for Flemish Says in the Sixteenth Century

In the halcyon days of the sixteenth century, the largest single share of Flemish say exports went to Italy, and the next largest, to Spain.[218] The Iberian role is hardly surprising, since the Low Countries were then part of Habsburg Spain's vast empire, whose overseas tropical possessions certainly received some of these says; and Iberian merchants accounted for about 21 per cent of Antwerp's commerce by value, *c.*1560.[219] So did the Italian merchants (20 per cent), whose historic importance for the commerce of the Low Countries hardly requires elaboration.[220] But since Baltic German merchants accounted for another 20 per cent of Antwerp's trade and yet took very few says or other *draps légers*, other reasons were obviously important for this Mediterranean orientation.

First and foremost, of course, the Mediterranean region's warm climate again made it the most suitable market for these light and cheap textiles. Secondly, as already stressed, the later fifteenth and sixteenth centuries marked a sharp reversal of those adverse economic and demographic circumstances of the fourteenth century. The Mediterranean basin was again more densely populated, with especially rapid urbanization; and, quite possibly, a higher proportion of that larger population, especially the urbanized population, was more actively engaged in the market economy.[221]

These much larger, concentrated markets, with rapid turnovers, may have permitted some reductions in transaction costs, thus allowing the northern says to compete effectively once more with similar Mediterranean textiles. As Van der Wee has shown in his analysis of the Antwerp market and transcontinental trades in this era, even greater cost reductions probably resulted from numerous innovations, or the diffusion of improvements, in commercial and business organization,

marketing, financial institutions, and credit instruments (which contributed to a fall in interest rates from 20–25 per cent in 1450 to 9–10 per cent in 1550). Furthermore, 'the progress achieved by transport overland was even more remarkable': particularly with the development of specialized cartage firms, the Hesse carts, and organized postal services, which made the land route generally even speedier and more reliable than sea routes.[222] For the major advantage of this overland route in peacetime (ignored by most historians) was its short distance: from Venice to Antwerp or Bruges, no more than 1300 km., less than 20 per cent of the distance by sea.

As a prime example of the newly rising commission merchants, the Van der Molen firm utilized all of these commercial and transport innovations in trading with Italy.[223] Regrettably their correspondence does not reveal the cost of shipping says overland to Italy, but only the costs of buying says at Hondschoote and carting them to Antwerp (140 km.): about 4 per cent of the wholesale price, to which the Van der Molen firm added another 3 per cent for their commission—2.5 per cent for bulk shipments of 400 says, a difference that suggests some scale economies.[224] Within the Mediterranean itself, the distribution of cheap textiles undoubtedly benefited also from the greater security and advances in naval technology, especially the development of the large, heavily armed, speedy, fully-rigged carrack with square and lateen sails (600 tons or more); together these contributed to a 25 per cent reduction in freight rates from the 1420s to *c.*1500 (in Venetian-Syrian trade).[225]

If competition in such textile markets was amongst roughly similar products, say producers presumably had had to be cost-conscious price-takers. There is no evidence, however, that the Flemish *sayetteries* had experienced dramatic reductions in production costs from any technological or entrepreneurial innovations;[226] and savings on transaction costs were undoubtedly the much more important factor.[227] Relative production costs and pure price competition may have been of less concern for the northern *sayetteries*, moreover, if their marketing strategy had become one of emphasizing product differentiation, in terms of textile styles and quality. On this issue, the Van der Molen's correspondence is ambivalent, though the continuous oscillations in say prices does suggest more 'price-taking' than 'price-making'.[228] In response to complaints from Italy, the Van der Molen firm instructed its Hondschoote factors to select only those says with bright, rich colours, 'for it is the colours that sell the says, not their quality [*duecht*]'; but evidently they were unsuccessful in securing changes in say-dyeing.[229]

The Hondschoote *sayetterie* did not, in fact, become regulated with even minimal quality controls until 1534, and not fully until 1571–6, sometime after it had passed its apogee, and when it was encountering increasing competition, which may have made it focus on the more quality-conscious strata of the market.[230]

Because most of the very cheap, light worsted or semi-worsted textiles were, by their very nature, also unregulated in the thirteenth century, we cannot answer with absolute certainty the final question posed in the introduction: were the medieval and early modern says truly the same product? A detailed technical examination of such says strongly suggests that the early modern says and other *draps légers* were very similar in fundamentals to those of the twelfth and thirteenth centuries: as cheap, light, coarse textiles, though probably different in many particulars.[231] Textiles that retain the same name can certainly change in accidentals, if not in their true fundamentals, though there is no evidence that the Hondschoote says changed even in 'accidentals', from the thirteenth to sixteenth centuries. As an export-oriented producer of cheap, light, semi-worsted textiles, the early modern Flemish *sayetteries* were, in that sense, a 'resurrection' of an old medieval industry, as well as the progenitors of England's 'new draperies'.

Perhaps the mysteries of fashion changes also played some role in that 'resurrection'. But when we observe that demographic, commercial, and other economic conditions of the thirteenth and later fifteenth and sixteenth centuries resemble each other much more closely than those of the fourteenth century, how does one explain why that *deus ex machina* of textile fashions so conveniently followed suit?

AN APPENDIX ON SAYS

What similarities can be found between thirteenth- and sixteenth-century Flemish says and other products of the *draperies sèches* or *légères*?

I. *Relative Prices*

First and foremost, says were relatively cheap in both eras, as Tables 1–3, 5–6, and 8 indicate. That cheapness was very largely due to the low cost of their coarse wools, but possibly also to simpler production techniques.[232] In early fourteenth-century Flanders, single says at Bruges (Table 7: 1302–4) typically cost £4–£5 parisis = just 6*s.* 8*d.* to 8*s.* 4*d.* gros Flemish, a price identical to that

TABLE 7. *Prices of Flemish says and woollen broadcloths, 1304–1540, in pounds gros Flemish*

Year	A. Says (Flemish)	B. Woollens of the *nouvelles draperies*	C. Traditional broadcloths: Ghent, Bruges, Ypres, Mechelen	D. Scarlets	E. A/C as % A/B as %	
					Min.	Max.
1304	6*s.* 8*d.*– 8*s.* 4*d.*		£1 19*s.* 2*d.*– £2 12*s.* 2d	£5 0s 0d	13	17
1340	7*s.* 6*d.*		£3 5*s.* 0*d.*– £4 5*s.* 0*d*	£5 5s 0d– £6 4s 0d	9	12
1440	18*s.* 0*d*^{S}		£7 0*s.* 0*d.*– £8 0*s.* 0*d.*	£11 0s 0d	11^{S}	13^{S}
	£1 15*s.* 0*d*^{D}				22^{D}	25^{D}
		£2 2s 6d– £6 0s 0d			15^{S} 29^{D}	42^{S} 82^{D}
1540	17*s.* 7*d.*^{S}		£11 10*s.* 0*d.*– £17 0*s.* 0*d.*		5^{S}	8^{S}
	£2 0*s.* 4*d.*^{D}				12^{D}	18^{D}
		£2 15*s.* 0*d.*– £5 6*s.* 8*d.*			16^{S} 38^{D}	32^{S} 73^{D}

S = Single Hondschoote says: 18 ells by 5 quarter-ells.
D = Double Hondschoote says: 37.75 ells by 5 quarter-ells.

Sources: Textile purchases by the town governments, recorded in the stadsrekeningen (town accounts), in the Stadsarchieven of Bruges, Ghent, and Mechelen. See also the sources for Tables 1 and 7.

given by Derville for Saint-Omer says in 1321.[233] In contrast, again at Bruges in 1302–3, *yminghet lakenen* (*geminghede lakenen*, *draps mellés*) cost from £23 10*s.* 0*d.* to £31 6*s.* 8*d.* parisis = £1 19*s.* 2*d.* gros to £2 12*s.* 2*d.* gros Flemish. Around 1340, Ghistelles says were still selling for just £4 10*s.* 0*d.* parisis = 7*s.* 6*d.* gros Flemish apiece, while Ghent *gheminghede dickedinnen* woollens were now selling for £39 to £51 parisis = £3 5*s.* 0*d.* to £4 5*s.* 0*d.* gros Flemish apiece, and Ghent *scaerlakenen* (scarlets), for £5 5*s.* 0*d.* to £6 4*s.* 0*d.* gros.[234] For the fifteenth century some relative and relevant prices are given in Tables 1–2. The *dukers* (doucken) and *witkins* were the cheapest of all products of the *draperies sèches*, at just 11*s.* 3*d.* gros, compared to £1 15*s.* 0*d.* gros for a Hondschoote say (1430).[235] Far higher priced were a Wervik *fijn zwart laken* at £5 15*s.* 0*d.* gros; a Ghent *dickedinnen* at £7 0*s.* 0*d.*; a Bruges *breede zwartlaken* at £8 0*s.* 0*d.*; and an Ypres *scaerlaken* at £12 1*s.* 4*d.* gros. A century later, in the late 1530s, Hondschoote single says ranged in price from 15*s.* 8*d.* gros Flemish to 21*s.* 2*d.*, while Mechelen's black *rooslaken* (32 ells, made from fine English wools) cost £17 0*s.* 0*d.* gros (Table 8); and thus the says were relatively cheaper, or

TABLE 8. *Prices of fine woollen broadcloths of Ghent, Mechelen, and Leiden, and prices of Hondschoote says, compared with a master mason's daily wage at Antwerp, in pence and pounds gros Flemish, 1535–1545*

Year	Mason's daily wage[a]	Ghent dicke-dinnen[b]	Ghent helleman trauwen[b]	Mechelen black roos-laken[ac]	Leiden pair of halve-lakenen[d]	Hondschoote	
						Single says[e]	Double says[f]
	d. gros	£ gros	£ gros	£ gros	£ gros	£ gros	£ gros
1535	10.33	14.150	11.150	16.000	5.367		
1536	11.00	14.250	11.250	16.000	5.717		
1537	11.67	14.500	11.500	17.000	8.400		
1538	12.67	14.500	11.500	17.000	8.867	0.967	2.278
1539	12.67	15.000		17.000	6.329	0.945	2.184
1540	12.67		11.500	17.000	8.750	0.835	1.961
1541	12.67		12.000	17.000	9.100	0.879	2.015
1542	12.67			17.000		0.838	2.005
1543	14.00	14.000	11.000	17.000		0.783	1.775
1544	14.00	14.000	11.000	17.000		0.908	1.942
1545	15.00	14.500	11.500	17.000			

[a] Converted from Brabant groten: 1.5d Brabant groot = 1.0*d.* Flemish gros (groot).

[b] Ghent woollens (dickedinnen and helleman): 30 ells by 9.5 quarter ells (made from English March and Cotswolds wools).

[c] Mechelen woollens (Rooslaken): 30 ells by 10 quarter ells (March wools).

[d] Leiden woollens (halvelakenen): pair, each 16 ells by 9 quarter ells (made from English and Spanish wools, predominantly the former).

[e] Hondschoote single says: 18 ells by 5 quarter ells: Hondschoote price.

[f] Hondschoote double says: 36.75 ells by 5 quarter ells: Antwerp price.

Note that prices for Hondschoote says are all annual means of market transactions, with a large variance; the other prices are given only annually (Christmas, Easter, or August), when purchased by the town.

Sources: (1) Ghent, Mechelen, and Leiden cloth prices: Textile purchases recorded in the stadsrekeningen (town accounts), in the Stadsarchieven of Mechelen and Ghent; and in the Gemeente Archief of Leiden, for the years indicated.
(2) Hondschoote say prices: Edler (1936), 249–65.
(3) Antwerp masons' wages from Van der Wee (1963), vol. I: *Statistics*, Appendix 48, pp. 542–3.

conversely luxury woollens were relatively much more expensive than they had been in previous centuries.[236]

II. *Relative Weights*

Secondly, medieval documents indicate that says were 'light' cloths, with weights not much different from those of early modern says. Thus at Douai in 1305 says were regulated together with *biffes*, which earlier (*c.*1250) had been called part of the *legiere draperie*; and the latter had also been called *biffe legiere* at Arras (*c.*1300).[237] While the weights of these cloths are not given, industrial regulations at Valenciennes (1294–1302) for *biffes* and *renforchiés sans*

roies specify weights per square ell of finished cloth—0.46 lb. and 0.44 lb., respectively—that are virtually identical to those for finished says of three major towns: Ypres's *saye* (1284), at 0.43 lb.; Bruges's *dicke sayen* (1278), 0.47 lb.; and Arras's *saye endrappée* (*c.*1300), 0.46 lb. per square ell. Weights of other urban says, for the few that are specified, range from a low of 0.39 lb. per square ell for Bruges's *dinne saye* (1278) to a high of 0.51 lb. per square ell for Saint-Omer's *saye drappée* (1281).[238] In the sixteenth century, Hondschoote and Bergues-Saint-Winoc says weighed about 0.28 lb. per square ell (finished), but some perhaps as much as 0.35 lb. per square ell (Table 4).[239]

Better evidence in that era can be given for England's 'new draperies', whose products varied greatly in weight; a few indeed were heavier than the medieval Flemish urban says, though still lighter than broadcloths. The following weights are given for finished Essex 'new drapery' cloths (1579) in lb. per square ell, with the corresponding lb. per square yard in parentheses. The lightest were Essex 'broad says', at only 0.15 lb. (0.27 lb.); the heaviest were Coggeshall bays (Coxalls, Minkens), at 0.58 lb. (1.05 lb.) and 'silk says' at 0.50 lb. (0.90 lb.); in between were Colchester bays—singles at 0.36 lb. (0.65 lb.) and doubles at 0.34 lb. (0.61 lb.).[240]

Unfortunately we cannot compare the weights of thirteenth-century says and medieval Flemish quality woollens, with adequate evidence lacking for the latter.[241] For the sixteenth century, however, with more abundant evidence, the weight differences were clearly significant. The weights, noted earlier, are worth reiterating, this time in lb. per square ell, after fulling or finishing (Table 4): Armentières's *oultreffins*, 0.87 lb. per square ell—about double the weight of the above-listed medieval urban says; Mechelen's *gulden aeren*, 0.77 lb.; Ghent's *dickedinnen*, 0.72 lb. (and also in 1462); East Anglian broadcloths, 0.85 lb. (1.52 lb. per sq. yd.). By comparison, the heaviest modern woollen cloth, for men's overcoats, weighs about 0.62 lb. per sq. ell (1.12 lb. per sq. yd).[242]

III. *Fulling and Relative Shrinkages*

Patrick Chorley, in contending that thirteenth-century Flemish says 'were of a woollen rather than a worsted type', notes that they were quite 'heavily fulled: those of Arras, for example, shrunk by over a third in width.'[243] That observation about the Arras says, however, while perfectly correct, refers only to the width (with woollen wefts); but their length (with sayette warps) experienced very little reduction from fulling (from 52 to 50 ells), so that the overall shrinkage was only 36 per cent. The corresponding *total* loss in area from fulling says of Bruges (1278) and Saint-Omer (1281) was about the same, 34 per cent each.[244] The early modern Hondschoote says and many English 'new drapery' fabrics were also necessarily fulled, it must be remembered, similarly because of their woollen wefts. While the shrinkage undergone by the medieval urban says was admittedly greater than the 20 per cent reduction recorded in fulling

Hondschoote *smalle dobbele sayes* (1576),[245] it was still far less than the shrinkages in fulling the true heavy woollens. From the mid-fourteenth century, when a far stronger orientation towards luxury production had become more evident, and thus more regulated, fulling resulted in shrinkages of one half and more of total area, for the following: for Ypres's *dickedinnen* of *c.*1350, over 47 per cent;[246] for Bruges's *bellaerts* in 1458, 56 per cent;[247] for Armentières's *oultreffins* (1510), 58 per cent; for Ghent's *dickedinnen* (1456–62 and 1546), 61 per cent; and similarly for Mechelen's *gulden aeren* (1544), a 61 per cent shrinkage.[248] Furthermore, the thirteenth-century says required only one or two days fulling, compared to three to six days subsequently specified for luxury-quality woollens, at far higher fees.[249]

IV. *Warp Counts and Weft Mixtures*

The differences in these fulling shrinkages for the says and true woollens were, as noted, almost entirely in terms of the lengths, reflecting the significant differences between their warp yarns, which is the veritable key to the whole debate. The thirteenth-century says differed from both the contemporary and the later luxury woollens in having far higher warp counts or densities, which, furthermore, were roughly comparable to those of early modern says.[250] Thus, for example, Bruges's *Ghistelle saye* (1278) and *dicke saye* (1282) had 288 and 292 warps per quarter-ell (= 0.175 metre) of finished fabric, respectively, while an Arras *saye endrappée* (*c.*1300) had 375 warps per quarter-ell. Similarly high (or higher) warp counts can be found in the early modern says: Tournai says (1484), 343 (small fine) and 386 (*demi-fortes*) warps per quarter-ell;[251] Bergues-Saint-Winoc (1509–38), 350 for fine narrow says, but ranging from 286 warps (large says) to 450 (doubles);[252] Hondschoote (1534–76), 360 warps for fine small doubles, but ranging from 292 warps (simple doubles) to 427 (small 'enckele' or narrow says).[253] The highest were those for the purely worsted Lille says in the 1501 *keure*: 514 per quarter-ell; but the later *keure* of 1559 provided lower counts for new *sayes* and *ostades*: 489 and 467 warps.[254] Much lower warp counts are found in woollens, especially the medieval: Bruges's *gheminghede* woollen (1282) with only 173 warps per quarter-ell width of finished fabric; Ypres's plain and *gheminghede dickedinnen* woollens (*c.*1350), with just 148 to 156 warps per quarter-ell.[255] Not surprisingly, the later, more luxury-oriented, heavier woollens had somewhat higher warp-counts, though still lower than those for says: Bruges's *bellaerts* (1458), 216 warps per quarter-ell;[256] Brussels's *scaerlaken* (scarlets, 1466), 267 warps;[257] Armentières's *oultreffins* (1510), 225 warps; Ghent's *dickedinnen* (1462, 1546), 217 warps; and Bruges's *dobbel leeuwen* (1544), 236 warps per quarter-ell.[258]

This difference in warp-counts may seem paradoxical; but evidently the say's long-stapled 'dry' warps, both medieval and early modern, were spun to be much more tightly twisted, thinner, yet stronger than the short-stapled

greased woollen warps; and thus they underwent far less contraction in fulling.[259] The nature of this tightly twisted warp, which later came to be called *sayette*, may be the distinguishing characteristic of all cloths called 'says', whether or not they were woven with a worsted weft as well, with 'two warps', or with greased woollen wefts.[260]

Such a worsted-woollen mixture was itself almost commonplace. In the medieval West, the term 'serge' had evolved from denoting a fabric containing some silk to mean, first, a hard, twilled fabric, usually worsted, with diagonal patterns; and then more particularly and commonly such hybrid fabrics, including says.[261] Along with the medieval urban says (Bruges, Arras, Saint-Omer, Ypres) and later Hondschoote says—which Guicciardini (*c.*1560) called *sarges de Honscot*[262]—many other examples of cheap serge-type cloths can be cited from medieval times. Thus, in the thirteenth century, the *doucken* of Saint-Omer and the *biffes bastardes* of Douai were composed of dry (worsted) warps and greased (woollen) wefts, as were Douai's *adouchiés* of the fourteenth century; and in the previous century Douai had also made *tiretaines* with linen warps and woollen wefts.[263] As noted earlier, Tournai had authorized the production of cloths 'de secq estain et de traime ointe' in 1397 and in 1405, when the wefts were to be carded.[264] Brussels's *sargie-ambacht*, first mentioned in 1416 and regulated in 1466, similarly produced cloths with dry, combed warps and greased carded wefts.[265] Certainly there was nothing new about such warp-weft mixtures in later textiles.[266]

Nevertheless, some thirteenth-century urban says (Bruges, Saint-Omer, Arras) may have been more 'woollen' in their composition than those of contemporary or later rural *sayetteries* and *draperies sèches*: woven with more and much finer quality woollen wefts to broader dimensions; and much more heavily fulled, and then napped and shorn, though still much less so than regular woollens.[267] While these urban draperies were imitating rural says (e.g. Bruges's counterfeits of Ghistelles's says), they were evidently also producing a finer-quality product directed towards higher-priced levels in the cloth-market continuum—as the names *saye drappé*, *saye endrappé* would suggest.[268] The exact nature of thirteenth-century village says from Ghistelles, Diksmuide, Poperinge, and Hondschoote remain unknown to us; but Table 5 indicates considerable price variation even within this category, with Ghistelles's says priced far less than the Hondschoote says, the highest priced Flemish says in the Del Bene accounts (*c.*1320).

Were the says that Hondschoote sent to Italy in that era any different from those exported there in the 1550s? Some scholars may still be unwilling to describe the earlier Flemish says as worsted or semi-worsted cloths; but, the terms 'say' and 'serge' were certainly employed in medieval documents to mean worsted-type fabrics. Thus, for example, Pegolotti's *Pratica della Mercatura* calls Norfolk worsteds *saie di Norfolco*; and around the same time, in 1306, the Gallerani firm of Siena recorded the purchase of *sargie di Norfolco*.[269]

In England itself, the fourteenth-century English customs accounts frequently refer to their worsteds as *essaies de worsted*, *sarge de worsted*, *pannos de Worstede vocatos sargos*, *sargis de Worstede*, *Worsted sarge*.[270]

Finally, on the basis of textile finds in England, Scandinavia, the Baltic, Poland, and Russia, several scholars have contended that worsted-making in northern Europe had predominated over woollens before the twelfth century. Agnes Geijer, who personally examined the textile finds at Birka (Sweden), deposited *c.*860–1000 AD, states that 'the overwhelming majority of the Birka woollens were classifiable as worsted fabrics', a finding endorsed by Martha Hoffmann.[271] Adam Nahlik, in analysing the medieval Polish-Russian textile deposits, found that imports of 'worsted textiles', with a high warp density, woven from wools 'with coarse and long fibres', were 'frequent in [the period from] the 11th to mid-13th century, and [were] only occasional in the 14th and 15th centuries', when they were replaced by 'cloth made of English wool with fine and short fibres'.[272] Thus archaeology provides further evidence for the death of an ancient industry whose fifteenth-century resurrection would provide the progenitors of the early modern 'new draperies'.

NOTES

1. Pirenne (1951), 621–43.
2. See also Pirenne (1956), i. 353–5, 467–7. On the English cloth industry and trade see below, pp. 66–8 and nn. 118–20.
3. Pirenne (1951), 638–41: 'les étoffes fabriquées à Bergues, à Hondschoote, à Armentières constituèrent des genres jusqu'alors inconnus dans la draperie flamande'. And also: 'Moins soyeuse que la laine anglaise, la laine espagnole ne pouvait rivaliser avec elle dans la draperie fine. Mais elle convenait parfaitement pour les tissus légers, tels que les serges et les ostades'. See also Pirenne (1956), i. 467–72: 'La fabrication d'étoffes légères (saies) confectionnées en laine d'Espagne' (p. 470).
4. Coornaert (1930*a*); Coornaert (1950), 59–96, which unfortunately, unlike the earlier monograph, is frequently lacking in both clarity and historical accuracy. See also Derville (1972), 353–70, and Derville (1987), 715–24, for brief if not always convincing summaries.
5. For an explanation of these terms, of the wools required for this industry, and for the use of butter or oil in their manufacture, see below, pp. 45–8 and nn. 18–22.
6. In fact, from the 1560s, both Armentières and Neuve-Église (Nieuwkerke) took up or added on the manufacture of light says and bays; but Pirenne is certainly not referring to such additional *draperies* there. Documentation in De Sagher (1951–66), i, nos. 49–52, pp. 194–8, for Armentières [June 1567]; iii,

nos. 447–50, pp. 189–98, for Neuve-Église [June–August 1562]. For the meaning of the term *draperie sèche* and the wools required for it, see below, pp. 48–53 and n. 45.

7. Compare the industrial regulations for Armentières and Neuve-Église in De Sagher (1951–66), i. 93–228; iii. 99–323. Those for the Flemish, Brabantine, and Dutch (Leiden) draperies in Espinas and Pirenne (1906–24), i–iv; Joossen (1935); Posthumus (1910–22), i–ii. See also Munro (1988), 693–711; De Poerck (1951); and Weckerlin (1905). These *nouvelles draperies*, however, may have been more receptive to carding and the spinning-wheel than some of the older, more traditional draperies. See Munro (1988), 693–711; and nn. 53–5, 226 below.
8. Pirenne (1951), 631, also listing Neuve-Église. Coornaert (1950), 90–1: 'la draperie de la Lys aurait mérité le nom, courant à l'époque, de "nouvelle draperie" '. For documents on all these draperies, see De Sagher (1951–66), i–iii *passim*. See also Nicholas (1971), 76–116, for the Flemish rural draperies in the 14th cent.
9. For the wide range of English wool qualities and prices, see Munro (1978), 118–69; and Munro (1979*a*), 211–19.
10. See Coornaert (1950), 72–9. In some *smalle steden* like Aalst and Dendermonde, craftsmen's wages in the later 14th cent. were only about half those paid in Bruges: 5*d*. gros Flemish vs. 9*d*.–10*d*. gros. Wage data extracted from the annual *stadsrekeningen* (civic treasurer's accounts) of these towns in the Algemeen Rijksarchief (België), Rekenkamer: reg. nos. 31,412–31,481 (Aalst, 1395–1487); 37,973–38,057 (Dendermonde, 1377–1501); and, for Bruges, Stadsarchieven Brugge, 1360–1 to 1484–5. See also late 14th and 15th-cent. wage data for Bruges published in Sosson (1977), graphs 12–19, pp. 300–9; and for small towns and villages in eastern Flanders, in Verlinden, Craeybeckx, and Scholliers (1959–65), II. i, 411–29, 514–75; II. ii, 1244–99.
11. See tables on cloth-manufacturing costs in: Munro (1977), Table 13.2, p. 256; Munro (1983*a*), Table 3.12, p. 52; Table 3.9, p. 45. The labour costs are exclusive of those in producing and supplying the raw materials.
12. See below, as well, p. 58 and n. 78 for the real cost of a Wervik woollen in the 1360s.
13. Tables 1–3; and for other comparative cloth prices, including prices of scarlets (*scaerlakenen*) and other fine woollens of Kortrijk, Menin, and Wervik, compared with prices for Bruges's and Ypres's woollens, in the 14th and 15th cents., and also English cloth export prices, see: Munro (1977), Tables 13.3, pp. 257–63, and 13.5, pp. 265–7; Munro (1983*a*), Tables 3.8–3.11, pp. 44–51; Munro (1991*a*), Table 4.1, pp. 142–5. For scarlets, see Munro (1983*a*), 13–70. Made from the finest English wools, they were the most expensive of all woollens, essentially because of their costly insect-dyestuff *kermes*, known throughout the medieval world as *grain*, producing the vivid scarlet colour; but many scarlets were woven from blue-dyed wools—*moeder blau* ['mother-blue', dyed in woad]—to produce a variety of other colours as well. Unfortunately my

dictionary entry on 'Scarlet', in Munro (1988), 36–7, contains a serious and incomprehensible misstatement on dyeing 'in grain' that was arbitrarily inserted, without the editor's or author's knowledge, by an uninformed copy-editor.

14. See Lameere and Simont (1910), 272–83, for 1546; and Boone (1988), nos. 2 and 3, pp. 32–43, for the text of the Ghent drapery ordinances or *keuren* for 1456 and 4 Feb. 1462 (NS), which indicate that the Ghent *dickedinnen* manufactured in both periods were the same woollen. According to Weckerlin (1905), 30, *dickedinnen* cloths were woven with a twill weave on a three-treadle broadloom (triple-shed), a weave that facilitated felting during fulling. See also De Poerck (1951), iii. 29.
15. An even greater extent of shrinkage from fulling can be found in the Bruges *bellaert* of 1458. It was reduced, in length, from 43 ells on the loom to 30 ells after fulling (32.9 yds. to 23.0 yds.); and in width, from 4.0 to 2.5 ells (3.1 yds. to 1.9 yds.): and thus an overall shrinkage from 172 square ells on the loom to 75 square ells after fulling, or a total of 56 per cent in area. Delepierre and Willems (1842), 42–3.
16. Pirenne (1951), 631, n. 1, had admitted a qualified urban character for some of these draperies.
17. Nevertheless in many 15th-cent. *smalle steden* wages remained significantly lower, by a third or more, than in Bruges or Ghent. See n. 10 above; and Algemeen Rijksarchief België, Acquits de Lille, liasses nos. 936–7 (wage data from repairs to the Ghent mint).
18. See Munro (1988), 692–707. The first, essential step in fulling was degreasing: scouring the cloth to remove this butter; and *fuller's earth* (*floridin*, with hydrous aluminum silicates, especially *kaolinite*) combined with the butter to produce a cleansing soap. Both herring-fat and urine were banned; but the number of bans suggests that they were widely used (the former instead of the more expensive butter).
19. In the 13th cent., wools as fine as any of those from the Welsh Marches had been produced in several Cistercian monasteries within Wales itself (Margam, Neath, Grace Dieu, and Tintern abbeys, in Glamorgan and Monmouthshire); but from the early 14th cent. their production ceased. For absolute and relative prices for English wools from *c.*1270 to 1449, see Munro (1978), 119–69, and Munro (1979*a*), 211–19.
20. For evidence on such wool usage in the urban draperies of Flanders, Brabant, and Holland (Leiden), and for the relative prices of English wools, see Munro (1973), 3–8; Munro (1978), 118–69; and Munro (1979*a*), 211–19. Non-English wools were certainly used in manufacturing unsealed cloths for domestic consumption, by all drapery towns in the Low Countries. See, in Delepierre and Willems (1842), 42, the 14th-cent. Bruges drapery *keure*, reconfirmed in 1408, stipulating that: 'niemene en gheoorloft eenigher Bruchsche lakene te reedene danne van Ynghelscher wullen, ute ghedaen smalle lakene'. For a reference to the use of local Flemish, Scottish, and Spanish wools in the manufacture of such petty *smalle lakenen* at Bruges in 1434, see Vermaut (1988), 189–90, 200

(citing 'Renouvellement de la loi', register 1422–42, in Stadsarchief Brugge). See also, in Boone (1988), no. 2: i, p. 32, the Ghent drapery *keure* issued or reconfirmed in 1456: 'up dmaecken ende drapieren van den finen lakene, gheheeten dickedinnen, ende andere lakenen, die men drapiert ende maect binnen der stede van Ghendt .[I.] eerst zal men maken de voorseide lakenen van fijnder maertse ende middelmaertse wulle [from the 'Welsh Marches' of Shropshire and Herefordshire], fijne cootswale [Cotswolds, in Gloucestershire and Worcestershire] ende fine cootswale bartsiere [Cotswolds-Berkshire], ende van gheender andere'; and no. 3: xii (Feb. 1462), p. 42: 'anders de wardere ende ordonnantie van den smalle lakenen, die men maecken mach van plootwulle, lamwulle, ende schuerlinc, naer tinhouden van der lester ordonnantie'. [Reproduced here with punctuation, after examining the original in Stadsarchief Gent, reeks 93, reg. KK, fo. 103^{v}]. See also n. 14 above, and n. 35 below.

21. See n. 11 above.
22. In 1336, export taxes on English wools were increased from 6*s*. 8*d*. per sack (as set in 1275) to 26*s*. 8*d*., and were raised again to 46*s*. 8*d*. by 1342; by the 1370s, total wool-duties had reached 50*s*. per sack (60*s*. for aliens). See Munro (1977), Table 13.1, pp. 254–5; Ormrod (1990), Table 3, p. 206. On these adverse changes in the English wool trade, see also Power (1933), 39–90; Lloyd (1977), 193–256; and Munro (1978, 1979*a*, 1979*b*). For the latest analysis of the wool-export duties in the 1330s and 1340s, see Ormrod (1991), 167–83.
23. From 1360–9 to 1390–9 mean domestic values of Cotswolds and Midlands wools fell from £6.022 to £5.067 sterling a sack, while the Phelps Brown and Hopkins price-index fell from 140.70 to 107.15. See Munro (1977), Table 13.1, pp. 254–5; Munro (1984), Table B-4, pp. 102–3; analysis on pp. 48–53; Lloyd (1973), Table 1, pp. 38–43; Phelps Brown and Hopkins (1981), 28–9. In Flanders the extent of deflation from 1385–9 to 1395–9 was 30 per cent.
24. For Spanish wools of Roman Andalusia-Extramadura (Baetica), and their post-Roman disappearance, see Fear (1992), 151–5.
25. Gilliodts-Van Severen (1904–5), i, no. 14, p. 19 (1200); ii, no. 616, p. 225, for *c*.1300: wools of Navarre, Aragon, Leon, Castile, Galicia. In 1284, the Bruges drapery *keure* classed Spanish wools as follows: 'so wie die waterwulle minghet met ander wulle, jof spaensche wulle met andre wulle, jof spaensch garen met andren gaerne, jof vlocken met wullen, die hier jeghen dade his verbuerde tgoet'. Espinas and Pirenne (1906–24), i, no. 141, p. 400. See also Munro (1978), 115–19.
26. See the London Weavers Ordinances of 1299–1300 (28 Edw I), in Riley (1860), II. i, 125–6; and Riley (1862), iii. 547–50. Weavers were forbidden to mix Spanish with English wools in the same cloth, but permitted to weave cloths with one or the other wool by itself only; only Spanish wools could be dyed 'in blecche'; and cloths of Spanish wool were to weigh 11 lb. from the loom. For imports of Spanish wool into Sandwich (taxed by the 1303 New Custom), for Mich. 1304–Mich. 1305, see Gras (1918), no. 34, pp. 312–24. For cheap cloths

produced for export at London and elsewhere in eastern towns, see Chorley (1988), 1–10. See also n. 68 below.

27. See in particular Lopez (1953*a*), 161–8; Melis (1974), 241–51; Munro (1979*b*), 118–22. For the relationship between Marinid Morocco and Spain, see pp. 46–7. and n. 178 below. Only after the Battle of Rio Salado in 1340 would conditions have permitted the introduction of Marinid sheep into Spain.
28. See Rossini and Mazzaoui (1969–70), 47; Melis (1962*a*), i, no. 350, p. 488, pp. 536–7, 554; and Melis (1974), 241–51; Heers (1955), 194–5; Munro (1977), 239–40. Other citations, for 1393–5 (in the Datini papers), indicate that Spanish *San Matteo* wools then cost only 30–35 per cent as much as English Cotswolds wools.
29. The earliest recorded use is at Tournai, July 1407, for 'draps appelés vacques', a coarse, cheap woollen cloth, with a weft 'composée des grosses laines d'Espaigne et d'Alemaigne'. Dubois (1950), no. 175, p. 160; no. 248, p. 221. In the English Parliament of 1420, a petitioner complained that the Flemish, in permitting the use of Spanish wools, were violating a 'long-standing agreement' to use only English wools exclusively in return for English acquiescence in the Flemish ban against English woollen cloth imports. In *Rotuli Parliamentorum* (1767–77), iv. 126: 16, 146–7: 28. See Munro (1977), 238–40; nn. 20 above, 33 below.
30. On the Calais Staple bullion laws, see Munro (1973), 93–186; Munro (1979b), 110–22; Power (1933), 79–90; Lloyd (1977), 257–87. The following *nouvelles draperies* adopted Spanish wools between the 1420s and the 1480s: Poperinge, Dendermonde, Aalst, Oudenaarde, Kortrijk, Menin, Geraardsbergen, Comines, Warneton, Bailleul, Ninove, Tourcoing, Nieppe, Meteren, Godewaersvelde, Eecke, Flêtre, Eeklo, Armentières, Dranouter, Kemmel, Wulvergem, Wervik. Langemarck and Diksmuide may not have done so in this era. See Ropp (1876–92), iv, no. 444: 4, p. 312; De Sagher (1951–66), i–iii, *passim*.
31. Reports of June and Oct. and the edict of 16 Nov. 1463, in De Sagher (1951–66), iii, nos. 582–3, pp. 527–31; see also no. 577, pp. 520–1; and no. 586: 195, p. 564 (1477). See also Munro (1979*b*), 119–22.
32. In 1519, Leuven proposed a *keure* for manufacturing cloths from Spanish wools in the manner of those then produced at Ghent. Stadsarchief Leuven, no. 1526, fos. 203^{r}–10^{v}. The first extant Ghent *keuren* to regulate commercial cloth production using Spanish, Flemish, and other wools is from 1546, published in Lameere (1910), v. 272–83. See also the following note.
33. Marc Boone (1988) has published an important, hitherto unknown, and also undated Ghent drapery *keure* regulating cloth production from Spanish wools and Flemish wools, which he has attributed to 1456 (no. 1, pp. 22–38, commentary on pp. 1–8), the same year as the previously mentioned *keure* for the traditional Ghent drapery (in n. 14 above). This ordinance concerns only the production of *snyde lakenen* (*snijlaken*), *maerctlakenen*, and *halvekins*, which were generally small, cheap, coarse cloths for local consumption. Traditionally,

the *drie steden* were little concerned about the production and wool usages for such cheap cloths; and it is by no means inconceivable that this ordinance does pertain to the 1450s. (See n. 20 above.) Nevertheless, I cannot agree with Boone's conjectures for assigning it to this decade. This undated document is in a bound Cartularium in the Stadsarchief Ghent, reeks 93, register KK, fos. 88^{r}–103^{v}, which I have myself examined. Copied sometime in 1545–8, 'ghetrocken uut der originale ordonnantien van der draperye', with the distinctive handwriting of this era, and littered with that era's peculiar spelling for woollen cloth as *laecken* instead of *laken*, this document in many though by no means all respects resembles the above-mentioned drapery *keuren* for Ghent in 1546 and Leuven in 1519. Secondly, the copies of the other two, well-dated Ghent drapery *keuren* contained in this same Cartularium, for 1456 and 4 Feb. 1462 (NS), fail to reveal the existence of any other such Ghent drapery using Spanish wools (nos. 2 and 3, pp. 32–43); but the latter *keure* does refer to the cheaper, small cloths in saying: 'behouden dat elc drapier up zijnen eedt vervanghe datter gheen andere wulle inne en es dan [Inghelscher] tijtwulle, anders de wardere ende ordonnantie van den smalle lakenen die men maecken mach van plootwulle, lamwulle ende schuerlinc naer tinhouden van der lester ordonnantie' [art. XII, p. 42; see n. 20 above]. Thirdly, the 1456 ordinance had expressly and exclusively restricted the manufacture of Ghent's traditional sealed woollens, not only the *dickedinnen*, the finest, but *also* 'andere lakenen die men drapiert ende maect binnen der stede van Ghent', to only four types of English Staple wools: fine March, Middle-March, fine Cotswolds and fine Cotswold-Berkshires, forbidding all other wools from the drapery (art. I, p. 32). The 1462 ordinance relaxed this wool restriction only to permit Ghent drapers to use other shorn English wools ('alle Inghelsche tijdtswulle', presumably sack-wool as opposed to woolfells: after art. XIII, p. 42); but the 1546 *keure* makes clear that the former restriction still applied to first-quality *dickedinnen*. Fourthly, that undated ordinance on Spanish and Flemish wools (doc. no. 1) contains a significant clause (art. XXXIV, p. 27) concerning *hellemen* woollens ('tzij dickedinnen, hellemen, ofte snylakenen'), not found in the other two. Newer and second-order *dickedinnen* made from lesser quality English wools, the *hellemen* first appear in the annual purchases of woollens for Ghent's magistrates and other officials only from the civic-account of 1495–6, as the fifth most expensive cloth: in Stadsarchief Gent, reeks 400: 32(2), *stadsrekening* Aug. 1495–Aug. 1496, fos. 71^{r}–3^{r}; and they are regulated in the May 1546 *keure*, in Lameere (1910), v. 276–7. Just the same, another account that Boone has published (no. 4, pp. 43–52), on the tax or assize on 'Inghlescher ende Schotscher wullen, Spaensche balen, vliezen, hoetwullen, lamwullen and ghewasschen wulle', in 1467–8, certainly does indicate that Ghent did then provide a market for Spanish wools, presumably for the neighbouring Flemish *nouvelles draperies*. For the Leiden drapery's subsequent and negative experiences with Spanish merino wools, see below, p. 48 and n. 43.

34. Gilliodts-Van Severen (1879–80), no. 24, p. 272: 'la draperie qui se fait des laines Dangleterre'. In a letter concerning the Hanse, to the Dowager Queen of Hungary.
35. Rijksarchief West-Vlaanderen te Brugge [RAWV], Charters Blauwenummers [CB], no. 8321: accusation of the *deken* of the wool-weavers guild, before the college of civic *schepenen*, on 17 Nov. 1533, against a dyer-draper who had made some woollens from Flemish and Rhenish wools, 'contrarie t'inhouden vanden drientseventich [73rd] article vanden keure vanden voors. ambochte dat expresselic verbietende interdiceert eenighe Brugsche lakene te reedene dan van Inghelsche wulle, uuteghedaen smalle lakenen'. A similar case was heard on 19 Jan. 1534 (NS): RAWV Brugge, CB no. 8322.
36. RAWV Brugge, CB no. 8320: petitions dated 12 Nov. 1533, concerning the 'nieuwe draperie onlancx upghestelt ende beghonnen binnen der zelver stede van Spaensche wulle', to produce woollens in the style of Armentières for three years. See Gilliodts-Van Severen (1901), i. 296–7: contract between the Spanish merchant Alvere de Castro, in Bruges, and two Armentières drapers to establish themselves at his workshops in Bruges to produce woollens for his account for three years (8 Apr. 1532 NS). In 1536 de Castro requested renewal of the privilege, despite strong opposition from the Bruges shearers' guild.
37. The new drapery *keuren* (63 articles) of 20 Sept. 1544 are published in Willemsen (1921), 5–74: 'op te stellene een nieuwe draperie ende aldaer te drapierene ende reedene diveersche soorten van lakenen van Spaensche wulle [dobbel leeuwen, inkel leeuwen, ghecronde B, griffoen]'. In RAWV Brugge, CB nos. 8415–19, 8365, 8371–2 are other contemporary Bruges drapery ordinances (*tempore* Charles V) concerning 'eene nieuwe draperie' to produce 'diversche sorte van lakenen van Inghelsche ende Spaensche wulle' (CB no. 8414); and in others, ordinances for the production of *lammekins* and *effen* woollens: 'vander welke Spaensche wulle men sal moghen maken als hier ghemacet vander Yngelsche wulle' (CB no. 8419). On 7 July 1546, the Bruges *schepenen* ruled that, while the *nieuwe draperie* with Spanish wools would be regulated by the recent ordinances, the former *keuren* for the *oude draperie* with English wools were to remain in force (CB no. 8365). In June 1548 the drapers of the *oude draperie* stated that because of the great scarcity of English wools at Calais, and the imminent extinction of their drapery, they wished to secure the right to continue making their traditional woollens 'van Spaensche wulle' in the very same 'maniere als inhoudt ende verclaerst de keure vander ouder draperie vanden Inghelsche wulle' (in CB no. 8372).
38. In Diegerick (1853–60), v, app. S, pp. 305–12. Because of the destruction of the Ypres archives during the First World War, few drapery documents from Ypres now survive.
39. For Brussels's new *bellaerts*, see Stadsarchief Brussel, no. XVI, fo. 183^{r}; Favresse (1947), 144–6; and Favresse (1961), 59–75.
40. Stadsachief Leuven, no. 1524, fos. 287^{r}–9^{v}; also analysed in Van Uytven (1961), 361–9.

41. See Stadsarchief Leuven, no. 722, fos. 47^{v}–48^{v} (1481–1526), no. 2712, fo. 57^{r} (1513). The *nieuw draperie* of 1415 was regulated along with the other draperies in the general *keure* of 1467.
42. Willemsen (1910), 1–115.
43. See Brand (1993), 139–40. Edict of 1522 in Posthumus (1910–22), ii, no. 903, pp. 316–17. For complaints about rising English wool prices at the Staple, see nos. 867 (1518), 869 (1519), on pp. 194–5, 297–9, and also pp. 331–2. For prosecutions of those using non-English wools in the 15th cent., see ibid. i, nos. 115–16, pp. 131–3 (1434); no. 474, pp. 590–1 (1476). For the first reference to Spanish wools at Leiden, in 1479, see ibid. i, no. 440: 37, p. 503. See also Posthumus (1908), i. 206–15. Amsterdam and Gouda, however, having long sold much cheaper woollens, were then quite content to use Spanish wools.
44. Text in Warner (1926), 6: 'The woole of Spayne hit cometh not to presse. Hit is of lytelle valeue, trust unto me, wyth Englysshe wolle but if it menged [mixed] be'. That view is repeated a century later (*c.*1535), by Clement Armstrong, in the 'Treatise Concerninge the Staple', in Tawney and Power (1924), iii. 102: 'withowt the wolles of England be myxed with, it can make no clothe of it self for no durable weryng by cause it hath no staple'.
45. See Coornaert (1930*a*), 199–215; and Derville (1987), 718–19; Munro (1988), 693–711. In editing the Hondschoote documents, however, De Sagher (1951–66), ii. 343, evidently erred by confusing the two yarns: in stating that the warps (*chaines*) were greased and the wefts left 'dry'. See cloth dimensions before and after fulling in Table 3; and also the Appendix on says. It is impossible to ascertain whether or not the *draperies sèches* of the earlier era used long-stapled wools; but presumably even then they were tougher wools that did not require any protective lubricant beyond their own natural oils. For these wools, see also Chorley (1987), 375; and nn. 18 above, 46 below.
46. De Sagher (1951–66), ii, no. 287, pp. 346–86, esp. p. 369; no. 299, p. 415: for June 1585: Scottish, Frisian, Zealander, and Flemish wools 'onghemyngelt'; and Coornaert (1930*a*), 1–9, 189–98. For the Lille *sayetterie*, which used Scottish and 'Newcastle' (northern English) wools, both very coarse, and which also forbade any Spanish wools ('ne user de laisnes d'Espaignes'), see Vanhaeck (1910), ii, no. 10, pp. 42–3 [May 1527].
47. Comparisons per sq. m. of finished cloths. See pp. 89–90 and nn. 239–42 below.
48. The first refugees arrived in England in 1561, and a community settled at Sandwich in 1563; in Nov. 1565, thirty Flemish and Walloon craftsmen and their families were given letters patent to settle in Norwich 'to weave their outlandish commodities'. By 1571, over 3,900 had settled there. Allison (1960), 82; Allison (1961), 61. See also the following note.
49. For a very recent study on the pre-16th cent. worsted industry in Norwich, see Sutton (1989), 201–25. The most recent and exhaustive studies on the post-1560 industry are in Priestley (1985), 183–210, and Priestley (1990). See also the very lengthy discussion in Kerridge (1972), 27–30 and especially Kerridge (1985), chapters 4–7, pp. 89–120 in particular. He challenges the traditionally

assigned role of the Flemings in 'initiating' the 'new draperies', arguing that half-worsteds and 'stuffs' were already being produced in Norfolk by the 1550s. See also the earlier studies of Pilgrim (1959–60), 36–59; Coleman (1969), 418, 421–2; Wilson (1969), 94–113; and Allison (1961), 63–5. Allison states that the two main types of fabrics introduced into Norwich were: the caungeantry, or *changéants*, essentially worsteds, by the Walloons; and bays, by the Flemish, with worsted warps and woollen wefts. On these fabrics, see also Kerridge (1985), 89–108, and nn. 210, 214 below. Pilgrim (1959–60), 39, contends that in Essex 'all the new draperies were hybrids, partaking of the qualities of both woollen and worsted cloth'. Note that in both England and the Low Countries, some products called says were worsted in both warp and weft, some in warp alone, while some later English says contained silk and cotton, as did 17th-cent. Norwich Stuffs (in which silk yarns provided the warps or additional threads in warps and/or wefts). Priestley (1985), 183–4, who also states that 17th-cent. 'Norwich Stuffs were a specialist range of light-weight fabrics, usually of mixed composition', which were 'an elaboration of, not a departure from, the New Draperies'.

50. Coleman (1969), 419–21, based on Edler (1934), 147–426; see especially pp. 147 [*lana*], 324–30, 413–26; and also the following note.
51. For the quality of late-medieval Florentine woollens, see below, pp. 69–70. For the Florentine *Arte della Lana* regulations of 1317–19, see Agnoletti (1940), 86–7, 117, 121–2, 158; for the later-medieval industry see Hoshino (1980) and Hoshino (1983), 184–205; Doren (1901), i. 484–93; for the 16th cent. see De Roover (1974), 85–118. See also Munro (1988), 693–711, and nn. 144–6 below. For Leiden's textiles, see nn. 7 above, 54 below.
52. See Hoffmann (1974), 284–96; De Poerck (1951), i. 55–60; Malanima (1986), 115–28; Mazzaoui (1981), 73–86; Munro (1988), 693–711.
53. See the bilingual Franco-Flemish commentary on Bruges's crafts (*c.*1349) in Michelant (1875), 24–5: 'Mais le fil que on fila au rouwet [wiele] a trop du nues; et elle dist qu'elle waingne pluis à filer estain [werp] a le kenoulle [rocke], que à filer traime [wevele] au rouwet'. See also Munro (1988), 693–711; and Crowfoot, Pritchard, and Staniland (1992), 39, 45, stating that 'wheel-spun yarn was not as fine as that which could be spun with a drop spindle'; and further that using a Z-spun warp [with spindle] and an S-spun weft [with the wheel] 'gives a firmer cloth, particularly suitable for raising a nap and for other forms of finishing'.
54. See Munro (1988), 693–711. Brussels had long banned carding in all its woollen draperies; but the ordinances establishing the *nouvelle draperie*, in August 1441 and March 1444, finally and formally permitted carded wool in the manufacture of cheap grey and medley cloths (*graeuwe ende gemingde gecaerde lakenene*, with green selvages), while forbidding such wools in the new *bellaerts* as well as in the traditional luxury woollens (*lakenen van de drie staten*). See Favresse (1946), 191; Favresse (1947), 144–6; Favresse (1961), 59–60; Stadsarchief Brussel, no. XVI, fos. 182^{r}, 190^{v}. Subsequently, however, in its

revised general *keure* of January 1466, Brussels extended that concession explicitly to the manufacture of short broadcloths made from fine English wools, whether combed or carded: 'corte lakene vanden drie staten van allerande goeder Ingelschen wollen Caleysche packinge [March, Cotswolds, and Lindsey] het zij gekympt oft gecaert wesen', a provision repeated in the *keuren* of Nov. 1467 ['welke lakene men wel sal moegen kymmen oft caerden'] and 5 June 1497: Stadsarchief Brussel, no. 1435, fos. 1^{r-v}, 30^{v}; no. 1436, fo. 13^{v}. Carding may have been permitted only for the wefts; but a more logical reading of these documents (with references also to *gecaerde lakenen*) would include both yarns, warp as well as weft. The same observations apply to references to Mechelen's *gecaerde lakenen*, in its town account from the 1430s: they were priced as high as the previously listed first-quality woollens and as high as those from any other drapery. Stadsarchief Mechelen, Stadsrekeningen I: 110–28 (from Easter 1435). Leiden's quality woollen drapery stoutly maintained a ban on carding (and wheel-spinning) for all wools, weft as well as warp, until the mid-16th cent.: 'dat alle wol die men binnen Leyden drapeniert die sel men binnen Leyden kemmen ende niet kaerden', repeated from 1363 to 1538, when it was relaxed for *gemengede* and *gezoeden graeuwe wolle*. See Posthumus (1910–22), i, nos. 12: 128 [1363], 12: 182 [1396], pp. 10, 21; ii, nos. 1012 [Oct. 1538], pp. 406–7; 1034: 40, p. 449 [Keureboek V, 1541].

55. See Coornaert (1930*a*), 1–9, 199–210. His contention (on p. 200) that the warp (*fil de sayette*) was spun on the great-wheel 'comme dans la draperie', while the weft was spun on the 'rock' (*quenouille*), cannot be supported by the documentation for Hondschoote in De Sagher (1951–66), ii. 346–448; Coornaert may have reversed the warp and weft in these texts. Many other *sayetteries*, like those of Lille and Amiens, also used combed wools throughout, but understandably so, since they were pure worsted-type *draperies sèches*. See Coornaert (1930*b*), 59–63; Vanhaeck (1910), i. 15–19, 75–6, 230–9; ii, no. 10, pp. 42–3 [keure of May 1527]; Trenard (1970), i. 251–2; Maugis (1907), 74–7.
56. Coleman (1969), 421–3.
57. See Coleman (1969), 421: 'We hear little of the light, cheap, flimsy, rough, or poorer-quality fabrics in the great international trade routes of the later medieval textile industries'. For Roman origins, see Coornaert (1930*a*), 1–2: says or *sagi* woven by the Atrebates, Morins, and Menapiens; Flammermont (1897), 41; Drinkwater (1982), 111–28; Derville (1987), 718–19; Jørgensen (1992), 128–36, 141–50. According to Kerridge (1985), 6–7, the say was 'a fabric made in tops' with 'a distinct two-and-two twill with a single weft and a warp twisted from two or three threads'.
58. For documentation, see Espinas and Pirenne (1906–24), i–iv *passim*; Prims (1928), 105–49; Dubois (1950), 148–53; Doehaerd (1941), ii–iii *passim*; Derville (1972), 353–70; Reynolds (1929), 831–50; Krueger (1987), 722–50; Chorley (1987), 349–79.
59. Derville (1972), 366–7. Peak exports were reached about 1250.
60. See Verhulst (1972), 281–322; Van Uytven (1970), 5–16. For Irish wools in the

late 13th-cent. Bruges drapery, see Espinas and Pirenne (1906–24), i, no. 140: 67, p. 396 [1282]; no. 141 bis A, E, pp. 443–6 [1284], no. 144: 30, p. 470 [1294]); De Poerck (1951), i. 251. Irish wools ranked third, after English and Scottish wools, but above the domestic Flemish wools. Note: in Middel-Nederlandsch ('Flemish') *Hiersch* or *lersch* = Irish; but *Hierlandsche* = local. Earlier, Bruges had used pre-merino Spanish wools for *sarges* (*c.*1200); see n. 25 above. In 1298 Leuven was making its says from English wools ('de omni sayo ex bona lana Anglie'): in Prims (1928), 147. So, of course, did Norwich. Many northern English wools were very coarse. See also Munro (1978), 118–69; Munro (1979*a*), 211–19; and n. 72 below.

61. Krueger (1987), 744–7. See also Reynolds (1929), 831–50.
62. Chorley (1987), 359. He contends that the great Artesian drapery town of Arras chiefly manufactured cheap *stanforts*, along with some *biffes* and says, but evidently not much in the way of luxury woollens, in the 13th cent. He also argued (pp. 362–5) that Tournai, Saint-Omer, and Bruges specialized most strongly in says, and that 'it was only during the fourteenth century that Bruges entered the ranks of the quality producers'; and that 'none of [the remaining seventeen towns] produced cloth in the higher price bracket in any quantity—apart from Dixmude and probably Amiens and Abbeville'.
63. Chorley (1987), 360–1. Hoshino (1983), Table 11.2, p. 190, shows the same for the sale of textiles at Florence, in the early 14th cent.: from Caen, Orchies, Hondschoote, Arras, Paris, Poperinge, Saint-Denis, and Ghistelles. See below, p. 69 and nn. 142–3.
64. Chorley (1987), Table 9, p. 367. Of these Valenciennes's cheap textiles accounted for '53.5% by quantity and 44.5% by value'.
65. Chorley (1987), 367–8. From Genoese notarial documents, he also estimates that in the period *c.*1200–20, northern *stanforts* accounted for 20 per cent of transactions and Tournai says for another 15 per cent. He further notes that similar northern cloths (largely from Poperinge and Huy) accounted for 56 per cent of transactions by the Holzschüher firm of Nuremberg in 1304–5.
66. Chorley (1988), 1–5. For a somewhat different and not too convincing view of stamforts, or *stanforts*, *estanforts*, see Fryde von Stromer (1990), 8–13.
67. On scarlets, see n. 13 and Munro (1983*a*), 13–70; and Van Uytven (1983), 161–3, 167, 181. My calculation is based upon statistics from the English customs accounts in PRO, E.356/1–22 (enrolled accounts, from 1303 for alien cloth exports; from 1347 for denizen exports). See also Chorley (1988), 1–9.
68. *Ordinantiones Telariorum*, in Riley (1859–62), II. i. 125–6; and iii. 547–50. See Carus-Wilson (1954*b*), 234–5; Woodger (1981), 59–76, and also n. 26 above.
69. Many of the following arguments can also be found in Munro (1991*a*), 110–48; but this current essay, originally written first, in 1988, and now totally revised, contains much additional new evidence. For previous views, see Munro (1973), 1–8, and Munro (1979*b*), 110–22. See also Van der Wee (1975), 203–21, and Van der Wee (1988), 307–47, for another perspective on these structural changes from the 13th to 16th cents. See also below, pp. 74–83 and nn. 168–70.

70. For 1320–1400, see Liagre-De Sturler (1969), i–ii *passim*; and for 1400–40, Doehaerd and Kerremans (1952), *passim*. See also the following note.
71. For the cheap northern textiles in the 12th-cent. Genoese notarial accounts, see Krueger (1987) and Reynolds (1929). For the Genoese accounts themselves, from 1200 to 1320, see Doehaerd (1941), i–iii, with analysis in i. 189–228. The most frequently mentioned cheap cloths in these Genoese accounts are says (*salia*, *saga*, *sagia*, *sargia*) from Arras, Tournai, Saint-Omer, Bruges, Diksmuide, Ypres, Cambrai, Corbie; *biffes* from Provins, Châlons, Paris, Lagny, Arras, and Ypres; *faudeits* (or *faldatus*) from Diksmuide, Châlons, Provins, Montreuil, Ypres; *camelins* from Provins, Lille, Montreuil, Cambrai; various striped cloths, and especially *stanforts* (stamforts) from Arras, Ypres, etc.; and coarse linens from Champagne, Vitry, Liège, the Meuse Valley towns, and the Rhineland. During the period of Genoese domination of the Champagne Fairs, *c.*1260–1302, identification of textiles is more difficult, because most are referred to as *panni Francie*, *francigeni*—meaning cloths from France and the Low Countries; the term virtually disappears by 1330. See Doehaerd (1941), i. 192–5. After 1320, no *stanforts*, *biffes*, or *faudeits* are recorded, nor any textiles from Arras, Diksmuide, Amiens, Cambrai, St Quentin, Saint-Omer, Abbeville, Poperinge, Tournai, Bailleul, the Rhineland; but woollens from Bruges, Brussels, Mechelen, Beauvais, and Louviers, and England (from the 1380s) in particular are recorded more frequently. Recorded only after 1320 (and then relatively frequently) are woollens from Wervik, Kortrijk, and Comines. There is also a marked diminution in linen exports; and those from the Meuse and Rhine valley towns disappear entirely. See Liagre-De Sturler (1969), i–ii; and Doehaerd and Kerremans (1952). For cloths of the *nouvelles draperies* in the Mediterranean, see especially Melis (1962b), 219–43, and nn. 78–84. For says, see the next note.
72. The nature of the 'Irish says' remains a mystery: worsteds manufactured in England or elsewhere from Irish wools, or English worsteds manufactured in imitation of Irish worsteds, or worsteds made in Ireland itself? Kerridge (1985), 7–8, argues that within East Anglia the common terms 'Irlonde' wool or cloths, 'Irlondwever', 'Irlonder', terms that later became 'wurstedman', were derived from the Flemish word for the local wools from which their own says were made: *hierlandsche*. See n. 60 above. The English certainly made 'Irish friezes', especially in or near Bristol. For further references to Irish 'says' see nn. 73, 76, 82, 131–2, 170, and 195 below.
73. Some says are also recorded after 1320: but only 25 per cent as many as before, and, when identified, almost entirely so as 'Irish', except for one shipment from 'Champagne' in 1343. See Liagre-De Sturler (1969), i–ii *passim*. Chorley (1988), 7, notes a reference to Irish says in a Milan tariff of *c.*1330; and to English and Scottish says as well in a revision of *c.*1350. In the Genoese customs records of 1377, one entry records four bales of *sayarum* coming from Flanders, though these might also be Irish says transshipped by Bruges: Day (1963), i. 353–4. See nn. 72 above and 270 below.

74. Chorley (1988), 5–10. For his interpretation, see below nn. 114, 118.
75. Pegolotti (1936), 279–86; also pp. 158, 246. Curiously the Hondschoote says are classed as 'saie bianche *piene*' (combed) and 'saie *cardate* bianche' (carded); and the latter may be the hybrid worsted-woollen fabrics. Also mentioned are Florentine says; but those of Saint-Omer and Arras are not listed. The *Pratica* is a compilation of many different writings of varying provenance, chiefly undated, but using sources from *c.*1290–*c.*1330. For their dating, see Munro (1978), 129–35.
76. See Sapori (1932), 80–5, 91–7; appendices I–II, pp. 272–303. The Del Bene accounts for 1322–3 do list some says of unspecified origin, which may be Italian. The Caen says in the Alberti accounts are dated 1317; and the Covoni accounts do list a say, but again unidentified. See Chorley (1987), Table 4, p. 356; and Chorley (1988), 8–9. For the Alberti accounts of 1348–58, see Goldthwaite, Settesoldi, and Spallanzani (1995), vol. i, pp. 3, 64, 96, 125, 150, 161, 217 ('saia di Irlanda'); and vol. ii, pp. 352, 365 ('saia di Schotto').
77. Melis (1959), Tables I, V, VI, X, pp. 326–7, 342–3, 347, 363–4. Table X confirms that only a single Hondschoote say was then sold.
78. The Florentine florin was then worth 3*s.* 0*d.* sterling: Spufford (1986), 200–1. For wages, see Phelps-Brown and Hopkins (1981), 1–11, esp. fig. 2. An average of 5*d.* sterling daily for craftsmen in southern England, though Rogers (1866), i–ii, indicates a daily wage of 6*d.* for most masons in Oxford colleges, from 1362.
79. Melis (1959), Tables I, V, VI, X, pp. 326–7, 342–3, 347, 363–4. For cloth dimensions, see pp. 325–9, nn. 12–15 and p. 353, no. 56: Flemish-Brabantine cloths were 12.5 canne long by 0.67 canna wide (= 25.84 m. = 36.9 Flemish ells = 27.5 English cloth yds. in length); and Irish says, 6.25 canne (1 braccio or 0.25 canna wide). The English cloth yard was 37 in.
80. Melis (1959), Table I, pp. 326–7. For English woollens, mainly small Essex dozens and straits (12 yds. by 1 yd.), see nn. 82, 84 below.
81. Ashtor (1988), 227–33. According to Bresc (1986), i. 476–86 (esp. Table 117B), Sicily experienced a rapid growth of Flemish cloth imports by Genoese merchants after 1360, principally in Wervik woollens, accounting for 98 per cent of Flemish cloths and 58 per cent of all cloths sold at Palermo *c.*1360–99. He incorrectly calls them 'sayes de Wervicq', referring also to 'les saies de la "nouvelle draperie" flamande'.
82. Ashtor (1978), 312–74: on pp. 349–51, he notes a few Irish says shipped from Marseilles to Rhodes, Beirut, and Alexandria in 1380–3, and some other evidence for occasional Irish says sold at Damascus in 1379 and 1394, at prices from 3.6 to 6.3 Venetian ducats (= 10*s.* 10*d.* to 18*s.* 9*d.* sterling). See also Ashtor (1983), 152–5, and Ashtor (1975), 584–5. In the latter, he states that important shipments of Irish says came only from the first half of the 15th cent., with a major expansion (along with 'serges') only in the second half of that century. See also Table C, Appendix 4.1 in Munro (1991), 145–6.
83. See Verlinden (1936), 5–20; Verlinden (1937), 21–36; Verlinden (1966),

235–61. The 13th-cent. ordinances list *tiritaynas* from various places; *bifas* from Arras, Paris, Saint-Denis; *ensay* (*saye*) from Tournai, Bruges, Ypres, Ghent; *frisa* from Étampes and Chateaudun; *camelines* from Ghent, Lille, Blois; *estanfortes* (described as more expensive) from Saint-Omer, Arras, Valenciennes, Bruges, Tournai, Caen, Rouen, Chartres, Parthenay, and Montreuil—none of which appears in the 14th-cent. records. See a similar analysis in Heers (1971), 1107–17.

84. Cloth sales in Barcelona, Valencia, and Majorca by the Datini firm of Prato. See Melis (1962*b*), Table IV, p. 229. The Florentine woollens were then also about 40 per cent longer than the Flemish Lys valley cloths: 18.875 canne vs. 13.33 canne. Melis (1962*b*), 231. 1 canna = 4 braccia = 2.067 m.
85. For Florentine woollens, see below, pp. 69–70 and nn. 144–6.
86. Wyrozumski (1983), 252–5; and Carter (1988), 23–31. 'Arras' cloths (*harras, arrasch*), which may be a generic term, are listed in 1396, 1417, 1470, at 3 groszes per ell, vs. 30 g. per ell for Bruges cloths, and 14 g. to 24 g. per ell for English woollens. Wyrozumski (p. 254) observes that 'cloth of Polish make [at 2 g.–3 g. per ell] was destined for a different market, for mass demand, whereas imported cloth was sought by the élite, by the upper classes'. Sold in larger numbers were, however, cheaper textiles from closer regions: various Saxon and Bohemian cloths, ranging from 5.8 to 11.7 florins. On the sale of 'Arras' cloths in the Baltic during this era, see Chorley (1993), 156, and Abraham-Thisse (1993), 167–206, neither of whom provides adequate statistical evidence to gauge their actual importance. For Tienen's woollens, see also Peeters (1988), 165–74.
87. Prims (1928), 147: also indicating (pp. 145–9) that Antwerp's cloth industry did not survive through the 14th cent.
88. Van Uytven (1971), 4–5; also Van Uytven (1976), 85–97; and Van Uytven (1981), 283–94. For the 16th-cent. revival of fulling mills in the cheaper woollen draperies, see De Sagher (1951–66), i–iii *passim*; Van Uytven (1971), 5–14; Munro (1988), 693–711; Munro (1994), 377–88.
89. See Doehaerd (1941), i–iii *passim*; and Liagre-De Sturler (1969), i–ii *passim*; and n. 71 above.
90. See Espinas and Pirenne (1906–24), iii. 453–83; no. 756, pp. 471–2 [for Ypres]; i. 348–553, nos. 137, 139–41, 143–4, 151; and iv, nos. 912–13, pp. 2–5 [for Bruges, 1260–*c.*1300]. For Bruges's *sayetteries*, see also Gilliodts-Van Severen (1899), i. 460–1; and De Poerck (1951), i. 114–15, 251–4. See n. 98 for Saint-Omer.
91. Wyffels and De Smet (1965), i. 210–72, for 1290–9. In searching all the subsequent *stadsrekeningen* (town accounts) in the Stadsarchief Brugge, I could find no further references to this *sayetterie ambacht*.
92. Espinas and Pirenne (1906–24), i, no. 151, p. 553: 'up de Ghistelsaye die men maken zal binden schependoeme als der buten'. There are no further references to these says that Bruges had much earlier made in imitation of those of Ghistelles (Gistel). Ghistelles's own *sayen* were purchased periodically by the

Bruges town government, until 1341, as noted in the *stadsrekeningen*, Stadsarchief Brugge. See n. 233 below and Tables 5–6. Some references to *saeyen* and *zaercken* can be found at Bruges in the 15th cent., but these were evidently for local consumption. See Delepierre and Willems (1842), 8, 88.

93. Des Marez and De Sagher (1909–13), i, no. 15, pp. 149–50, no. 26, p. 506. In 1304, no rentals for 'saies taintes' or 'afforchiés', though still rentals for 'estanfors' stalls; for Nov. 1314–Nov. 1315: 'Des saies taintes, nient; mais des cambres louwés pour mettre demi dras, £14 [parisis]'; ii, no. 36, pp. 425–6: Oct. 1324–Oct. 1325: 'Des saies, nient; des dras afforchiés, nient; des estanfors en le semaine, nient; dras tains, £185 12s 0d par.; dras bleus, £228 0s 0d. par.'. In the late 13th cent., the Ypres cloth hall had been renting 14 stalls to those 'qui faciunt sagis', 36 for 'pannis enforciatis', out of a total of 185; i, no. 3B, pp. 23–5, no. 3B; and Espinas and Pirenne (1906–24), iii, no. 871, pp. 705–7.
94. Espinas (1931), no. 375, p. 221. The last reference to any similar industry, the *sargerie* (evidently producing for local consumption) is found in the 1344 wool *keure*, in ibid., no. 438, p. 274. See also references to *sargeurs* at Valenciennes, *c.*1302 (using 'aingnelins tondut de mortes biestes') in ibid., no. 48, p. 74.
95. Devillers (1881–92), iii, no. 923, pp. 294–6, Nov. 1406: 'que nawairs aulcuns leurs manans se acoursoient de en icelle labourer et faire oeuvre de sayetterie, toutte sus comme en pluisieurs bonnes villes comme Arras'. Duke William of Bavaria, Count of Hainaut, granted the petition.
96. Espinas and Pirenne (1906–24), iv, 50–1, no. 930. The 1305 *keure* was chiefly for *biffes*: a reissue of earlier *keures* from 1250–75, for 'biffes u roiés u autre legiere [*sic*] draperie', in ibid. iv, nos. 928–9, pp. 49–51.
97. Espinas and Pirenne (1906–24), ii, no. 389, pp. 342–3. The 1403 ordinance annulled a previous ban 'qu'il ne soit aucuns qui puis le jour d'ui en avant, faire labeurs sur laines pour convertir au fait de le saiterie, ou pooir et eschevinnage de ce ceste vile, sur le fourfait de 10 lb. et estre banis de le vile. Chilz articles est mis au nient. Et poront toutes personnez saieter et faire saiette, excepté les drappiers'. Earlier, more recent ordinances of Sept. 1390 had limited the prohibition against say-making to drapers and others engaged in the cloth trade (ibid., ii, no. 371: 20, pp. 299–301); and, in 1394, town ordinances had prohibited drapers from using English wools to make *adouchiés*, with dry warps and greased wefts (ibid. ii, no. 374, pp. 307–8).
98. As noted above, on p. 54 and n. 59, Saint-Omer had exported about 60,000 says annually *c.*1250. Espinas and Pirenne (1906–24), iii. 229–33, esp. no. 651, pp. 229–71; Derville (1972), 363–8. Excises were then collected directly, but produced only 22*s.* to 95*s.* [tournois] a term, compared to £13 6*s.* 8*d.* in the recent past. As Derville also noted, says are not mentioned in the excise tariff of *c.*1318: in Espinas and Pirenne (1906–24), iii, no. 668, p. 286.
99. For Tournai says in the earlier period, see Krueger (1987), 738; Chorley (1987), 350–71; Doehaerd (1941), ii–iii *passim*; Dubois (1950), nos. 17, 27, 85, pp. 148–53; 'faire saies de ii estains [warps]', *c.*1300.
100. Dubois (1950), no. 143, p. 158 (1397); no. 244, p. 220 (1405). In 1377, however,

Tournai had authorized 'iii drapiers de seq pour warder le secque draperie et ii drapiers d'oint pour warder le pignie draperie' (ibid., no. 106, p. 155); and in 1380, Tournai had also authorized the production of *draps velus*, a type of fustian, with linen or wool warps (ibid., nos. 46–50, pp. 150–1). See p. 92 and n. 264 below.

101. Dubois (1950), nos. 272–6, pp. 222–3 [1410]; nos. 364–8, p. 229 [1484]). The *grandes et fortes sayes* were 44.5 ells by 4.67 quarters (1,800 warps); the *petites*, 23 ells by 3.5 quarters (1,200 warps), 'composées de fine sayette et non d'autre'.
102. Coornaert (1930*a*), 21–4.
103. See Espinas and Pirenne (1906–24), i, no. 58, pp. 141–2; no. 73, pp. 189; no. 90, pp. 213–14; De Poerck (1951), i. 243–5.
104. See above, n. 71 for the Genoese accounts; and n. 86 for very cheap *harras*, *arrasch* (possibly Arras) cloth in Poland.
105. Espinas and Pirenne (1906–24), i, no. 63: 40–1, p. 161 [1366]; no. 66, pp. 166–78 [1377]: complaining that 'le dicte drapperie [est] grandement amenriée et ainsi que près que toute destruite et annullée'. For the earlier *keures* for both *sayes* and *biffes* together, see ibid., i, no. 97, pp. 223–5 and no. 101, pp. 235–8 [*c.*1300–10]. See also Chorley (1993), 155–7.
106. See n. 95 above; and Chorley (1993), 156–7.
107. For Lille, see the temporary charter granted by Archduke Maximilian, 21 Dec. 1480, reconfirmed and made permanent on 25 Mar. 1481, in Vanhaeck (1910), ii, no. 1, pp. 1–3; no. 2, pp. 3–4; see also the Lille *sayetterie keure* of March 1501 in ibid., ii, no. 3, pp. 6–18; and also ibid., i. 12–64. Marquant (1940), 163–4, notes evidence of say-making in Lille in 1430 and 1450, but admits that the Arras refugees provided the major impetus for industrial growth. See also Trenard (1970), 251–2; Coornaert (1930*a*), 158; Deyon and Lottin (1967), 23–34; Flammermont (1897), 9–10, 48–59; DuPlessis and Howell (1982), 63–78; and esp. Clauzel and Calonne (1990), 531–73, who state that, 'installée à Lille, la sayetterie ne connut ses heures de gloire qu'à la fin du quinzième siècle et à l'époque moderne' (p. 551); but they also note (p. 550) that some form of a *draperie sèche* had evidently been established there from about 1405. In 1575, the Lille *sayetterie* utilized over 2,000 looms and the related *bourgetterie* (making linen-woollen fustians) another 1,000 looms, employing over half of Lille's ±30,000 population. For Amiens and its *sayetterie* charter of 4 June 1480, see Maugis (1907), 1–115; for Mons and its 1481 charter, see Chorley (1993), 162–4.
108. Sapori (1932), 82–99, 282–303. A building craftsmen in southern England then earned 4*d.* sterling a day. Phelps-Brown and Hopkins (1981), 11. Prices for these says, from 40 to 48 ells in size, ranged from 8.4 florins to 18.4 florins (£1.39 to £3.07 stg.); those for Flemish luxury woollens of 35 ells averaged 65 florins (£9.75 stg.); and for scarlets 100 florins (£15.00 stg.). Prices per ell for says ranged from 0.175 florin to 0.383 florin, while Flemish woollen prices averaged 1.857 florins per ell. See Table 5 above.

109. See above, nn. 76–7 and Melis (1959), 363, Table X and p. 343.
110. Espinas and Pirenne (1906–24), ii, no. 590, pp. 703–6 [7 Mar. 1374]; De Sagher (1951–66), ii, no. 310, p. 513 [3 Jan. 1408]; Coornaert (1930*a*), 235–8.
111. Espinas and Pirenne (1906–24), i, no. 4, p. 9 [Aire, 1358–9]; no. 19, p. 44 [Aalst, after 1321]; no. 181, pp. 610–11 [Cassel, 1318]; no. 182, pp. 612–15 [Cassel, 1378]; iii, no. 622, p. 73 [Oudenbourg, undated 14th cent.]; Espinas (1923), ii. 847–50. There is no evidence that Ghistelles's *sayetterie*, mentioned by Pegolotti, survived the 14th cent. (see n. 75 above).
112. See Nicholas (1971), 76–116, 203–21; Coornaert (1950), 59–96; Van Werveke (1954), 237–45.
113. Texts in De Pauw (1899), 1–180; and a condensed version in Espinas and Pirenne (1906–24), iii, no. 649, pp. 168–222. The Poperinge drapers, however, did not mention Wervik, Langemarck, Neuve-Église, or Estaires amongst those that had switched from the *droghe draperie* to the *ghesmoutte draperie*. Coornaert (1930*b*), 30, 46–7, contends that Bergues-Saint-Winoc and Furnes had similarly switched their cloth production by the early 14th cent.; and Espinas (1923), ii. 838, contends that in the 13th cent. Estaires had made only *sayes* and *cauches*. For Diksmuide, see Espinas and Pirenne (1906–24), ii. 85–6. Wervik, in 1397, forbade its weavers to make any serge-type cloths: 'dat gheen wever die vri wever es niet moet weven saergsen noch siegsen anders danne Wervicshe lakene'. De Sagher (1951–66), iii, no. 554: 104, p. 465. Ypres had in fact introduced a *niewe gaernine lakenen*, a *draperie sèche* product, in the early 14th cent.; but its *keure* was annulled around the mid-century. Espinas and Pirenne (1906–24), iii, no. 782, pp. 591–3. It should be noted that the *strijptelaken* of Bruges, Ypres, and Ghent were fully *gesmoutte lakenen*, some of which were priced in the upper range of the luxury woollens, and some of them were also made into scarlets. See the *keuren* in Espinas and Pirenne (1906–24), i–iv; and some cloth prices in Munro (1983*a*), 13–70. See also n. 151 below.
114. See Chorley (1988), 8–10, and n. 74 above. For the literature of that urban industrial decline—in London, York, Lincoln, Stamford, Beverley, Winchester, Oxford, Nottingham, Leicester, Gloucester, Exeter, Coventry, and Norwich—see Lipson (1921), 11–13; Salzman (1923), 197–203; Lipson (1937), i. 449–53; Carus-Wilson (1954*b*), 183–210; Carus-Wilson (1954*c*), 211–38; Miller (1965), 64–82; Bolton (1980), 153–9; Carus-Wilson (1987), 667–73; Munro (1995), 37–40. Bridbury in (1962), 70–82, and in (1982), 27–36, 62–85, disputes the thesis of general urban decline, though not the evidence for a post-1300 decline in some of the formerly major textile towns. For York, see also Bartlett (1959–60), 17–33. For new and more substantial evidence about decline in the Essex textile towns, see Gervers (1989), 34–73.
115. See above, p. 56 and n. 68.
116. See Carus-Wilson (1954*c*), 211–38; and Miller (1965), 64–85; Harvey (1976), 369–75.
117. See below, pp. 76–7 and nn. 171–4.

118. Unfortunately space does not permit an examination of all these theses. Woodger (1981), 59–76, has speculated, without any evidence, that the Flemish had gained a decisive advantage in introducing a 'new' horizontal loom *c.*1250–75 (p. 71); but such a late date for its introduction seems highly improbable. Chorley (1988), 8–10, speculates, conversely, that the virtual disappearance of cheap English textiles from Mediterranean markets in this period was the *consequence* of the English urban-industrial crisis; and it may be impossible to disentangle causes and consequences. On fulling mills and rural industries in England, see Carus-Wilson (1954*b*), 183–210; Carus-Wilson (1987), 667–90; Miller (1964), 64–85; Bridbury (1982), 16–26; Munro (1994), 377–88; Munro (1995), 37–60.
119. The aulnage accounts for the mid- to late 14th cent., which are evidently far more reliable indicators than those of the 15th cent., which Carus-Wilson (1954*a*), 279–91, had condemned as largely spurious, suggest that over half the sealed cloth production was then urban. See Gray (1924), Apps. I–II, pp. 34–5; Bridbury (1962), 31–6; Bridbury (1982), 47–85; Bartlett (1959–60), 20–7; Heaton (1965), 45–88; Ramsay (1965), 1–30; Ponting (1971), 13–30; Britnell (1986), 78–85; Munro (1994), 377–88; Munro (1995), 37–60; and n. 118 above.
120. For the customs and subsidies on wool exports, see above, p. 46 and n. 22. Native or 'denizen' merchants were first taxed on their woollen exports only in 1347, at 1*s.* 2*d.* sterling per cloth (averaging about £2 stg.), while the Hanse merchants continued to pay only the 1303 New Custom of 1*s.* 0*d.* a cloth; other aliens, however, paid 2*s.* 9*d.* per broadcloth. In 1373 the crown also imposed a 5 per cent poundage levy on exported woollens; but it was collected only sporadically, and only from non-Hanse aliens after 1410. See Gras (1918), 66, 72–3, 81–3; Munro (1977), 231–2. For cloth prices, see ibid., Table 13.5, pp. 266–7; n. 13 above; nn. 131, 137 below.
121. See above, p. 45 and nn. 20, 22. For the earlier Bruges drapery *keuren*, of 1284 *et seq.*, see documents in Espinas and Pirenne (1906–24), i, no. 140: 67, p. 396: seals of three crosses for English wools, two for Scottish, one for Irish, and a half cross for domestic Flemish wools.
122. See above, pp. 45–8 and nn. 20, 31–5.
123. For the Leiden drapery, see documents on urban legislation specifically forbidding Irish, Scottish, Newcastle, 'or any wools not belonging to the Staple', and requiring fine March or fine Cotswolds for *puiklakens* and nothing less than Lincolnshire wools for *voirwollen* and other cloths: in Posthumus (1910–22), i. 74, 132, 150, 156, 191. See also Posthumus (1908), i. 15–45, 48–50, 183–4; and Brand (1993), 121–49.
124. See above, pp. 47–8 and nn. 29–31.
125. Single worsteds were evidently 15 yds. by 1.25 yds.; and broadcloths, 24 yds. by 1.75 yds., after finishing. Exports calculated from the customs accounts in PRO, E.356/7, m. 7 (for Mich. 1347–8 to Mich. 1351–2). Worsted exports thereafter are difficult to compute, because so many important ports, especially Yarmouth in Norfolk, had their customs farmed, and because the

Hanse periodically refused to pay the custom on worsteds. See Carus-Wilson and Coleman (1963), 199–200; and esp. Lloyd (1991), 74–108.

126. See above, pp. 57–9 and nn. 73–4, 76, 80–2.
127. See Lloyd (1991), 50–108.
128. Allison (1960), 73: 'thereafter the overseas market was slowly lost to the growing native industry on the continent'. See also Holderness in Ch. 7. Norwich is generally considered to be one of those many traditional eastern textile-towns 'in crisis' by the 1320s. See n. 114 above.
129. Carus-Wilson and Coleman (1963), App. V, pp. 199–200. They converted worsteds to broadcloths on the basis of the relative export duties: 1*d.* per single worsted, 14*d.* per broadcloth. That conversion considerably understates the physical volume of worsted exports, but not necessarily their relative value. See also Crowfoot, Pritchard, and Staniland (1992), 39. On English trade with the Baltic, see Postan (1933), 91–153; Jansma (1960), 5–18; Munro (1973), chs. 3–5; Munro (1995), 44–50; and esp. Lloyd (1991), 50–172, 368–77, who states that 'English trade with the Baltic peaked in the late fourteenth or early fifteenth century and declined thereafter' (p. 376), especially because of 'chronic insecurity in overseas trade, brought on by piracy and warfare' (p. 157). He also notes that the Hanse had virtually ceased handling worsteds by the later 14th cent. (p. 78). For the significance of warfare and piracy for the international cloth trade, see below, pp. 74–83 and n. 165.
130. See Carus-Wilson (1954*d*), 250 n. 2, 263–4; Lloyd (1991), 77–9. Kerseys, much smaller than broadcloths, typically 18 yds. long by 4 qtrs. (with 38 lb. of wool), ranged in weight from 1.11 lb. to 1.41 lb. per sq. yd., compared to a range of 1.27 lb. to 1.52 lb. per sq. yd. for short broadcloths (24 yds. by 7 qtrs.), and 0.37 lb. per sq. yd. for narrow worsteds (15 yds. by 5 qtrs.). See Statute 5–6 Ed. VI, c. 6 in *Statutes of the Realm*, IV: 1, 136–7; Usher (1920), 200. See also Tables 2 and 3.
131. PRO, E. 101/409/2. Later, *c.*1510, at Alexandria (Egypt), English kerseys sold for 10–11 Venetian ducats (= £2 10*s.* 3*d.* sterling), vs. 14–20 ducats for Wiltshire-Hampshire ('Southampton') woollens, but only 2.5–6.0 ducats for 'Irish says'. Ashtor (1978), 345–6.
132. Munro (1977), 235–6, 238–41. For port taxes on English and Irish says and serges or *zarken* at Bruges, in the Anglo-Hanse treaty of July 1360, see Höhlbaum *et al.* (1876–1939), iii, no. 497: 5, p. 265; and n. 270 below.
133. In Feb. 1400, Sluis, the Flemish outport of Bruges, was granted a concession in dyeing *sayes Dengleterre* and *draps manteaulx d'Irelande*. Gilliodts-Van Severen (1871–8), iii, no. 867, pp. 427–34.
134. In 1495–8, kerseys accounted for 20 per cent of total English cloth imports (by number of pieces) into the Brabant Fairs: 11,115 out 55,868 cloths. Algemeen Rijksarchief België, Rekenkamer, registers nos. 23,250–1 and 49,850–5 (Sint-Andries Gulden Toll). According to Edler (1936–7), 58, English kerseys (Winchcombe and northern) were being sold at Antwerp, in the 1550s, for 30*s.* to 48*s.* gros Flemish apiece: 'three kerseys cost about one-half to four-sevenths

of the price of one broadcloth'; but kerseys were less than half the size of short broadcloths (18 sq. yds. vs. 42 sq. yds.). See similar information in Endrei (1974), 90–9, with weights of 1.16 lb. to 1.22 lb. per sq. yd.

135. See Carrère (1967), 423–528, and Carrère (1976), 475–510; Riu (1983), 205–29: 25 m. (26.6 English cloth yds.) by 1.5 m., weighing about 50 lb.; priced at 10 to 15 florins = £1 10*s*. 0*d*. to £2 4*s*. 0*d*. sterling (*c*.1360).
136. Melis (1959), Table I, pp. 326–7 and Table X, pp. 362–3. But English and Catalan cloths accounted for only 3.8 per cent and 2.2 per cent, respectively, of the Sancasciano Company's sales transactions in this period.
137. See Table 3. By volume, 35.2 per cent of sales. See Melis (1962*b*), Table IV, p. 229. Perpignan woollens sold there for an average price of 13.6 florins (£2.05 sterling); the average value of all Catalan cloths sold was 11.86 florins. The Datini sold very few English cloths in Spain (0.36 per cent of sales). Even at Pisa in 1354–71, Perpignan woollens were priced as high as 28.0 florins (£4.20 stg.), though in the 1390s, Perpignan woollens were selling in Pisa at an average price of 19.21 florins (£2.88 stg.). See Melis (1959), Table I, pp. 326–7; Table X, pp. 362–3. At Damascus, in the 1390s, *panni di Perpignano alla francesca* were selling for 17 to 17.5 ducats or florins (£2.60 stg.); those of Villafranca, from 14 to 16.5 ducats. English woollens (excluding kerseys and streits) sold at Damascus *c*.1410–25, for 14 to 28 ducats (£2.33 to £4.67 stg.). See Ashtor (1978), 331–3, 341–3. The average value of English cloth exports from London in 1389–90 was £1.90 stg., from Southampton (chiefly to the Mediterranean) in 1403–4, £1.65 stg.; in 1424–5, £2.41 stg. From 'particulars' customs books, in PRO, E.122/71/13, 139/4, 141/4. Decennial average f.o.b. values for short broadcloth exports from all ports were £1.67 stg. in 1400–9; £2.00 stg. in 1420–9; and £2.66 stg. in 1430–9.
138. See Melis (1959), Melis (1962*b*), Ashtor (1978), Ashtor (1983).
139. Ashtor (1988), 239–50. Bresc (1986), i. 477, 487–92, states that English cloths began appearing in significant numbers in Sicily only after 1430, when, however, Catalan cloths from Perpignan, Barcelona, and Valencia, and Girona had already gained dominance. See also Riu (1983), 215–17; Carrère (1976), 475–510; and the following note.
140. Ashtor (1988), Table 3, p. 249. For other cloth sales in Sicily, Ashtor provides the following market shares for 1443–59 (p. 241): Iberian, 85.9 per cent; Italian, 0.6 per cent; French, 1.1 per cent; Flemish, 6.8 per cent; English, 5.8 per cent. With the florin now at 3*s*. 8*d*. sterling, Catalan woollen cloth prices ranged from 10.7 florins or £1.96 stg. to 38.6 florins or £7.08 stg., for Majorcan *cordellati*. Wervik woollens sold there from 21.5 florins (£3.94 stg.) to 25.75 florins (£4.72 stg.). See also Bresc (1986), i. 447–92. Utilizing Sicilian cloth inventories (p. 447 n. 80), Bresc produced a table for the period 1440–57, indicating that Catalonian woollens accounted for 24 per cent of textile consumption (vs. 14 per cent in 1340–99), Florentine woollens for 34 per cent (vs. 49 per cent in 1340–99), and English woollens for 12 per cent (vs. 2 per cent in 1340–99), chiefly Essex straits and dozens.

141. See Epstein (1989), 141–83, with very meagre evidence about Sicilian textile production in the 14th and 15th cents., much of it conjecture, since 'we lack detailed documentation of any local manufacture' (p. 165). He believes that local linen and fustian manufactures were probably more important than wool-based textiles (p. 166). In discussing the earlier, conference version of my paper (1988), he seriously misconstrued my arguments concerning the Mediterranean textile trades, confusing the essential chronology, while ignoring the evidence of Krueger (1987) and Chorley (1987, 1988) on Mediterranean trade in cheaper northern textiles (p. 149). See also Epstein (1991), 3–50; and Bresc (1986), i. 493–4.
142. See Table 5 and especially Hoshino (1983), 189–91, Tables 11.1–2; and n. 75 above.
143. See Sapori (1932); Chorley (1987), 349–87; Hoshino (1983), 183–91.
144. Hoshino (1980); and Hoshino (1983), 184–204. See also Lopez (1964), 445–69; Heers (1971), 1093–117.
145. For Pisa in 1391–7, see Melis (1959), Tables I, pp. 326–7, and Table X, pp. 263–4. For Spain in 1394–1410, with cloth sales at Barcelona, Valencia, Majorca, by the Datini firm, see Melis (1962*b*), Table IV, p. 229. The mean value of Italian woollens was 62.6 florins (from Florence, Genoa, Prato).
146. For the Levant, see Ashtor (1978), 312–16, 338–43; and Ashtor (1983), 152–4. Between 1386 and 1402, at Damascus and Alexandria, prices for Florentine woollens ranged from 35 to 54 ducats or florins (£5.25 to £8.10 sterling). Mechelen woollens (1395), at 38.5 ducats (£5.78 stg.); Wervik woollens (1395), for 19.2 ducats (£2.84 stg.); English woollens (1410–20), for 14–28 ducats (£2.33 to £4.67 stg.). Cloths were of roughly comparable sizes (about 35 ells long); but the Florentine woollens were probably 20 per cent longer. For a length of 35 ells, Florentine woollens sold for 32 florins or £4.81 stg. in Poland in the 1390s. Wyrozumski (1983), 256; Carter (1988), 27–32. See also Hoshino (1983), 200–4; Hoshino and Mazzaoui (1985–6), pp. 17–31.
147. Mazzaoui (1981), chs. 3, 5–7, esp. pp. 59, 129.
148. Mazzaoui (1981), 129–53; Kellenbenz (1983), 259–76; Stromer (1978); Ashtor (1983), 93.
149. Kellenbenz (1983), 264–76; Coornaert (1930*a*), 236–54.
150. One possible though dubious exception is Languedoc, whose textile industries require much more study. Its woollens appear, however, to be of the same type, weight, and were in roughly the same price range as the Catalan; they certainly were not says or serges. See nn. 137–40 above.
151. That may also have been true in the 16th cent., when Hondschoote says were exported to Italy, where aristocratic households were amongst the chief customers, buying says for similar reasons. See below, pp. 86–9 and nn. 223–4, 228–9. The Poperinge drapers, in their 1373 legal suit with Ypres (in n. 113 above), suggested that their drapery had switched from the *draperie sèche* to the *draperie ointe*, in the 1320s, because of rising living standards, which

presumably favoured the sale of higher-priced cloths; but for the reasons that follow, this particular argument cannot be taken too seriously, especially when referring to changes that had taken place a half-century earlier.

152. The most recent contribution is a collection of essays in Campbell (1991): by Richard Smith, Mavis Mate, John Munro, William Ormrod, and Mark Bailey, with a very cautious and reasoned introduction by Barbara Harvey.
153. Perroy (1949), 167–82; Strayer (1977), 291. Gascony was returned to Edward I in 1303.
154. See Prestwich (1972), and Prestwich (1980), chs. 1, 2, and 9; Maddicott (1975); Miller (1975), 11–32. Their views, however, have been disputed by Bridbury (1976), 80–95 and (1977), 393–410, though not persuasively; and his earlier article (1973), 557–92, is based on a premise of massive over-population before the Black Death. On the consequences of war financing, see also Fryde (1962), 1168–87; and Fryde (1979), 824–60.
155. See Kershaw (1973), 3–50; Poos (1985), 515–30; Day (1987), 185–8. For war-induced depopulation in Provence (especially Marseilles), see Lesage (1950), doc. no. 6, p. 184: letter of Robert d'Anjou, 21 Oct. 1331. In Tuscany, Prato's urban population indices fell by 29.6 per cent from 1300 to 1339; for the rural population, by 38.7 per cent; in rural Pistoia, from 1244 to 1344, the depopulation was 36.3 per cent. Herlihy and Klapisch-Zuber (1985), 60–92; Herlihy (1967), 55–77.
156. For the best and most recent discussion, see Smith (1991), 25–78. See also Postan (1973*a*), 186–213; Postan (1973*b*), 1–27; Razi (1980), 27–98; Razi (1981), 3–36; Campbell (1984), 87–134. For a more optimistic view of continued population growth, up to the Black Death, see Harvey (1966), 23–42; but somewhat less optimistic in Harvey (1991), 1–24. For Italy, see Herlihy (1967), 102–47; Herlihy and Klapisch-Zuber (1985), 60–92.
157. Douglass North and Robert Thomas (1973), 78–9, have also cogently commented: 'It is not clear therefore whether the potential gains inherent in higher agricultural productivity were realized by the populace during the later Middle Ages. The decline of population, coupled with war, confiscation, pillage, and revolution reduced the volume of trade and stimulated a trend towards local self-sufficiency. The losses to society due to the decline in specialization and reduced division of labor argue against a rise in the standard of living.' See also the following notes.
158. For the consequences of warfare and war-financing, see Perroy (1959), 114–211; Contamine (1972); Contamine (1984), 119–72, 238–49; Prestwich (1980), 245–300. For income effects and concentration of wealth, see Lopez (1953*b*), 19–32; Lopez and Miskimin (1962), 408–26; Miskimin (1975), chs. 2–4, esp. pp. 132–63; Herlihy (1967), chs. 3–8, esp. pp. 180–97; Herlihy and Klapisch-Zuber (1985), 93–130; Kedar (1976), 21–117; Van der Wee and Peeters (1970), 100–28; Mollat and Wolff (1973), chs. 3–4; Mollat (1978), chs. 9–12; Cazelles (1966), 83–105, 251–78; Perroy (1949), 167–82; Perroy (1964), 237–46; and Unger (1980), 192–5. For the Low Countries in particular, see

Munro (1983*b*), 235–50; and for a somewhat different view, though one still indicating wealth disparities, see Van Uytven (1961*a*), 281–318.

159. Wage data drawn from: Stadsarchief Brugge, stadsrekeningen (1350–1470); Stadsarchief Gent, stadsrekeningen, Reeks 400: 2–15 (1326–1438); Stadsarchief Mechelen, stadsrekeningen nos. 38–105 (1360–1430); Algemeen Rijksarchief België, Rekenkamer, reg. nos. 31,412–81 (Aalst), 37,973–38,057 (Dendermonde), 34,536–628 (Vuerne); Corporation of London Record Office, Bridge Master's Account Rolls (1381–98) and Weekly Payments, First Series (1404–45); British Library of Political and Economic Science, Archives, Beveridge Collection, boxes A.30–4, D.3–4, F.1, F.5, G.4, G.10–5, H.3–8, H.13–14, J.16, P.10, W.1–9; Phelps Brown and Hopkins (1981*a*), 1–12 and (1981*b*), 13–31; Rogers (1866), i–ii; Beveridge (1936–7), 22–43; Beveridge (1955–6), 18–35; Farmer (1991), 467–525. See also Bridbury (1973), 557–92, for real-wage trends; and the previous note. In England, the Phelps Brown and Hopkins price-level (mean of 1450–74 = 100) rose from 100.2 in 1345–9 to 149.5 in 1365–9; in Flanders, where inflation was prolonged by debasements, the comparable price index rose from 58.6 in 1350–4 to 126.4 in 1385–9. Thereafter, in England, the price index fell from 144.2 in 1370–4 to 100.8 in 1400–4; in Flanders, it fell from 126.4 in 1385–9 to 88.3 in 1400–4. Munro (1984), Table B-4, pp. 102–3.
160. Herlihy (1967), 145; for price and other statistical data, see pp. 122–55. See also Herlihy and Klapisch-Zuber (1985), 93–130; Kedar (1976), 21–117.
161. Perroy (1964), 237–48: 'In spite of a great fall in the number of men, the magnitude of the recession kept wages low all through our period. Wages were low because trade and industry were in decadence' (p. 245). See also Mollat and Wolff (1973), chs. 3–4; Mollat (1978), chs. 9–12; and Cazelles (1966), 83–105, 251–78; and n. 157 above.
162. For English evidence on rising living standards in this era, see Penn (1987), 1–14; Dyer (1988), 21–38; Dyer (1989*a*), 305–27; Dyer (1989), 188–233; Penn and Dyer (1990), 356–76; Farmer (1991), 490–525. See n. 159 above.
163. See above, p. 58 and n. 78.
164. For wage sources, see n. 159 above; for cloth prices, see Tables 1–3; n. 13 above; and Munro (1977), Table 13.3, pp. 257–60.
165. For a detailed analysis of overland transport costs in medieval Europe, especially including taxes and tolls, see Postan (1987), 182–204, emphasizing that 'local taxation, war and piracy became more disturbing and more difficult to circumvent as the Middle Ages drew to their close' (p. 204). For 13th-cent. transport costs, see nn. 205, 208–9 below.
166. See North and Thomas (1973), 79–85, 89, 93–4, 134–8; Reed (1973), 177–90, but esp. pp. 180–6; North (1981), chs. 1–5; North (1984), 255–64. In his more recent writings, North (1981, 1984, 1985) has given added emphasis to the 'immense resources devoted to promulgating codes of conduct' (ideological attitudes concerning property rights and contracts). North's most recent article (1985), 558, offers a narrower definition of transaction costs than the

one employed here: 'the costs of specifying and enforcing the contracts that underlie all exchange'. See also n. 170 below.

167. Hoshino (1983), 185.
168. A producer would maximize profits at that output where marginal cost = marginal revenue; and that equals the market price under perfect competition. In such circumstances, the producer's supply curve is that portion of the marginal cost curve rising above the average variable cost curve; i.e. the producer will not sell at a price below the intersection of the AVC and MC curves.
169. See above, p. 57 and n. 75.
170. Textiles entering into long-distance commerce would range in price upwards from a 'floor-price' sufficient to cover current production and predicted transaction costs. For some evidence on periodic trade in northern cheap textiles, principally 'Irish says', see Day (1963), i. 353–4; Verlinden (1966), 240–8; Ashtor (1978), 349–50; Ashtor (1983), 155–6; Baratier-Reynaud (1951), end-piece table, for 1380–2; and nn. 72–3, 82, 131 above, 195 below. See also Epstein (1989), 141–83. Lombard fustians continued to be exported to the Levant.
171. For costs and prices of the better English wools, after Edward I's *maltôte* (66*s.* 8*d.* per sack) and wool seizures in 1294, see Munro (1978), 126–9; see also Prestwich (1972), 196–9; Fryde (1962), 1178–82; and Lloyd (1977), 75–9.
172. See Chorley (1987), 349–66; Strayer (1977), 269–91; Prestwich (1972); Prestwich (1980), chs. 1, 2, and 9; Pirenne (1956), i. 237–56, 297–310; Bautier (1970), 42–63; TeBrake (1993), 108–38; and nn. 62, 70–1 above. Bautier provides other reasons as well for the decline of the Fairs, most notably 'Italian industrialization'. But, according to Hoshino (1980) and (1983), 184–204, the new Florentine woollen industry grew only from the 1320s, after the rapid decline of the Champagne Fairs. He conversely attributes the rise of this Florentine industry to the Flemish industrial-commercial crises. On Florence, see nn. 144–6 above.
173. Van der Wee and Peeters (1970), 100–28.
174. Doehaerd (1941), iii, no. 1869, p. 1156: 'Nec per terra ire potuit communiter propter guerras que presentaliter occurentes inter Januinos guelfos et guibelines'.
175. The following on Italy and the Catalans in the Byzantine Empire is based upon Mollat (1963), 67–228; Baratier and Reynaud (1951), 23–40, 304–13; Caggese (1958), 49–77; Previté-Orton (1937), 80–104, 325–62, 404–10; Bresc (1980), i. 751–7; Pryor (1983), 179–216; Lewis and Runyan (1985), 69–80.
176. For depopulation indices, see n. 155 above.
177. See sources cited in n. 175.
178. See Dufourcq (1966), 193–587; Dufourcq-Dalché (1976); Laroui (1977), 193–218; Previté-Orton (1937), 152–60 and 363–74; Lewis and Runyan (1985), 55–8; and Pryor (1983), 179–216.
179. This discussion of eastern Mediterranean (Levant) trade is based principally upon Ashtor (1976), 533–50; Ashtor (1983), chs. 1–2, esp. pp. 1–62; Heyd

(1923), i. 470–604; ii. 3–253; Depping (1830), i. 149–311; ii. 170–250; Baratier and Reynaud (1951), 207–24; Kedar (1976), 1–57; Lopez (1987), 379–401; Sayous (1935), 476–8; Lewis and Runyan (1985), 55–9; Abulafia (1987), 459–62; Abulafia (1993); and Malanima (1987), 335–56, who also stresses the vital role of western textiles in this Levantine trade, from a trickle in the twelfth century to become 'a mighty river' by the 1290s (pp. 339, 350–2).

180. See n. 175 above. Genoa and Venice, the predominant Mediterranean commercial powers, fought two more brutal wars in the 14th cent., in 1350–5 and 1378–81 (war of Chioggia), until Venice, though also bloodied by many wars on the Italian peninsula, finally emerged the victor.
181. Ashtor (1983), 17–38; reiterated by Malanima (1987), 335: that trade continued 'on a smaller scale than before', and that 'the loss of eastern markets' was a major factor in Pisa's commercial decline (p. 356).
182. Ashtor (1983), 44–63. See Malanima (1987), 350, for heavy fines paid by Pisan merchants in 1320, 'for absolution for the sin' of trading with Egypt.
183. Italian trade had become very important in these Mongol-ruled areas; and this warfare marked the initial crumbling of the famed 'Pax Mongolica'. In Persia, the end of the Ilkhanid dynasty in 1335 was followed by a 'long period of anarchy'. Western merchants also utilized Crete, Cyprus, and Lajazzo (Cilicia or 'Lesser Armenia') as intermediaries to conduct trade with the Muslim Levant, but paid a higher price in doing so. Lajazzo was conquered by the Mamluks in 1347. See Heyd (1923), i. 470–604; ii. 64–140, 156–215; Ashtor (1983), 54–86; Kedar (1976), 28–32; Abulafia (1987), 459–62; Lopez (1987), 386–9; Vasiliev (1958), ii. 29–40, 207–24; Malanima (1987), 345–50.
184. See Ashtor (1983), 64–88, 270–7.
185. See Katele (1988), 865–89; Bresc (1980), 751–7; Bresc (1986), i. 338–43; ii. 787–97; Pryor (1983), 179–216; Dufourcq (1966), 369–499, 544–65; Lewis and Runyan (1985), 55–9; Baratier (1951), 36–7; Sayous (1935), 476–83; Lane (1963*a*), 48–50; Lane (1963*b*), 179–205; Lane (1969), 161–72; Lane (1973), 120–34; Kedar (1976), 28–31.
186. Katele (1988), 865–72: the 'establishment of "Captain of the Gulf" convoys', for 'counter-piracy and assault'. She states that 'robbery on the seas increased markedly as new adversaries edged their way onto the naval stage with greater intensity after 1300'.
187. Lane (1963*a*), 48–50; Lane (1963*b*), 179–205; Lane (1969), 161–8; Lane (1973), 120–34; and his comments on Lopez (1964), 467–8; Cipolla (1965), 75–6, on naval guns.
188. Lane (1973), 119–34 (quotation on p. 125); Lane (1934), 6–26, 36–46, 129–34; Lane (1963*b*), 179–205. See also Tenenti and Vivanti (1961), 83–6; Cipolla (1965), 75–9; Unger (1980), 176–82; Unger (1981), 238–48; Pryor (1988), 57–86. Great-galleys were built in the state-operated Arsenal (quadrupling in size from 1303 to 1325); and became fully state-owned and operated by the 1330s. They could carry 140–150 tons (250 tons by 1450), while traditional one-masted 'light galleys' had only a 50 ton capacity and so served primarily

as warships. The square-rigged northern cogs, though slower than galleys, were faster and more efficient than lateen-rigged round boats, requiring only half as many sailors; but that labour economy was offset by the increasing number of bowmen required. See also n. 207 below and Fryde (1974), 355; Fryde (1976), 348, 357–8, for evidence that freight rates on galleys were far higher than on cogs (and the subsequent full-rigged carracks) in the 15th-cent. trade between Italy and north-west Europe. Insurance charges, however, were much lower for galleys.

189. One of the earliest extant maritime insurance contracts, for 1350, required an 18 per cent insurance premium for one shipment of wheat from Messina (Sicily) to Tunis. Heers (1959), 8. He found no evidence of any insurance contracts for land transport. See also Kedar (1976), 62–3, 123–4; Sayous (1935), 469–94.
190. Dufourcq (1966), 534–42: shipping costs ranged from £200 Barcelonese for small ships (30–40 sailors) to £400 for galleys (80–120 rowers and 100–50 sailors); and monthly costs of arming such ships against corsairs ranged from an additional £50 to £100. For Sicily, see Bresc (1986), i. 350–2.
191. Kedar (1976), 28–9, 49 (Table 2), 62–3, 123–4, 191. For Marseilles, see Sayous (1935), 469–94, esp. pp. 483–4.
192. Kedar (1976), 18–20 and fig. 1; App. 3, pp. 139–41; and notes on pp. 174–5. Calculated in terms of silver contents rather than in nominal debased coinage, the fall is 67 per cent: Lopez (1964), 451–3; Lopez (1987), 383, fig. 2. The data for 1293 and 1334 (with none in between) come, however, from different sources.
193. Ashtor (1983), 36–7. Five-year means were: 1305–9 = 904.8 florins; 1310–14 = 276.6 fl.; 1315–19 = 181.6 fl.; 1320–4 = 512.6 fl.; 1325–7 = 144.7 fl.
194. Sicilian wheat exports averaged only 4,068 hectolitres per year from 1320 to 1370 (compared to an annual average of 12,229 hl. in the 1270s, and one of 27,374 hl. from 1400 to 1459). Bresc (1986), i, Graph 12, p. 287; and tables nos. 67, 69, 130, 138, pp. 317, 326, 534, 549.
195. Baratier and Reynaud (1951), 99–102, 244–5, 304–16. The graphs, however, are somewhat misleading in that no data are available between 1264 and 1301. From 1264 to 1331, tax-farms for *fer et casses* (on most ship cargoes) fell by 57 per cent; for *poids du Lauret* (cereals), by 39 per cent; for leather and hides, by 69 per cent. See also the endpiece pullout table, listing cargoes in 40 expeditions from 1379 to 1408, including some Irish says, but only in the years 1380–2. Dufourcq (1966), 578, also records a marked drop in Majorcan sailings to North Africa in the early 14th cent.
196. Baratier and Reynaud (1951), 244–5, 304–16.
197. Lesage (1950), no. 6, p. 184: letter of Robert d'Anjou (King of Naples), dated 21 Oct. 1331, concerning the serious depopulation of Marseille.
198. Text in Lesage (1950), doc. no. 7, pp. 184–6: 'quod deterioratio et diminutio dictorum reddituum provenit propter diminucionem boni status civitatis Massilie, nam sicut civitas in personis et divitiis a tempore quo perdita fuit

Acon et propter perdicionem ipsius et propter guerras quas habuerent ipsi Massilienses et sicut omnes redditus quos civitas ipsa habeat in communi et successive habuit domnus noster Rex et precessores sui diminuti sunt et reducti ad minorem quantitatem'. (I wish to thank Joseph Shatzmiller for this reference.) See also Baratier and Reynaud (1951), 38–40, 207–28, 304–13; and n. 174 above.

199. The fall in the bimetallic ratio may have been due to both declining silver outputs from Bohemian mines and increasing supplies of West African (Sudanese) and Hungarian gold. See especially Lane (1977), 52–9; Spufford (1986), Graph 3 and Table II, pp. li–lxiii; Spufford (1988), 267–88 (on 'the victory of gold'), 340–2. Spufford's dates have been adjusted by those of Lane.
200. Lane (1977), 52–9.
201. Munro (1984), 48–9, 96–9 (Tables B-1-2), 102–3 (Table B-4); Ames (1965), 496–522; Mayhew (1974), 1–15; Prestwich (1977), 45–8.
202. Hunt (1994), 212–42; Miskimin (1975), 151–3.
203. See Van der Wee and Peeters (1970), 100–28.
204. For Atlantic naval warfare and piracy and shipping costs in the 14th cent., see Lewis and Runyan (1985), 121–8.
205. Melis (1962*b*), 233–4, n. 30. Letter of Gulgielmo Barberi to the Datini Co. in Barcelona, 10 May 1398: for transporting a Wervik woollen cloth, worth 23 gold francs (or about 22 gold florins): by land, 5 francs; by sea, 3.5 francs. Earlier, on 28 May 1397, the Alberti firm in Bruges informed the Datini Company in Barcelona that only high-priced cloths could be shipped overland: 'perch' e panni di grande pregio possono meglio che que' di piccoli pregi [sopportare il viaggio terrestre]; anzi, lo possono e gli altri non'. Ibid. 233–4, n. 30. See also Fryde (1974), 310; Fryde (1976), 348. For the coinages, see Spufford (1986), 179, 191.
206. Tenenti and Vivanti (1961), pull-out chart. No Venetian galley fleets were sent to north-west Europe in 1333, 1337–46, 1348–56, 1359–73, 1377–83, 1388, 1391; i.e. in only sixteen years from 1333 to 1390 did galleys go to Bruges. Their galley fleets usually operated in the Mediterranean, but not at all in 1351–4 and 1378–81, during the wars with Genoa. For the Florentines, see also Fryde (1974), 321–6.
207. Wools shipped to Venice, at £2 in shipping costs per sack purchased for £8 sterling; other charges raised total marketing costs to £6 11*s.* 0*d.* sterling per sack (81.9 per cent). British Library, 'Noumbre of Weyghtes', also cited in Fryde (1972), 355. The Genoese usually employed cheaper carracks; and Fryde (1974), 309–10, states that Genoese freight rates for wool were only 5.16 per cent of the price (8*s.* 3*d.* per sack); those for alum and woad, about 8 per cent of their prices. See Fryde (1976), 357–8; Ashtor (1988), 249–50. But other shipping costs were much higher, according to Unger (1980), 169: shipping salt from Portugal to Bruges accounted for 85 per cent of the landed price; and shipping Baltic grain from Danzig to Bruges, about 50 per cent of the landed price, *c.*1400.

208. The cost of river transport was about one-sixth of land conveyance. Thorold Rogers (1866), i. 650–66; ii. 600–5; and Masschaele (1989) and (1993), to which I owe these references. He has found that such costs fell to 1*d.* per 3 ton-miles with larger loads; and that the cost of carting wheat 25 miles (from Weston, Herts. to London) in 1292–3 was less than 5 per cent of the grain price. Four centuries later, in the 1690s, the relative transport cost for grain was unchanged.
209. Sapori (1932), 97–9: 1.01 florin per say in transporting 133 says; but total marketing costs amounted to 2.20 florins per say (19.2 per cent). In another account, total marketing costs for 64 Caen says were 2.41 fl. per say, or 9.5 per cent more per say in the smaller shipment. Caen says were the most expensive sold. See also Chorley (1987), 369. Comparing relative values is difficult, except to note that the early 14th cent. was a period of inflation; the late 14th cent., one of deflation.
210. By the 1560s, *sayetteries* and related *draperies sèches* (producing serges, bays, ostades, etc.) were also operating in: Neuve-Église, Bailleul, Béthune, Orchies, Diksmuide, Poperinge, Menen, Halluin, Oudenburg, Lo, Douai, Mons, Beauvais, Montreuil, Cambrai, Saint-Quentin, Aubenton, Huy, Péronne, Reims, and Abbeville. Clearly this industry had become essentially urban. See Coornaert (1930*a*), 13–14, 81–2, 214–15; Coornaert (1930*b*); Vanhaeck (1910), i. 46 *et seq*; Maugis (1907); Pirenne (1951), 621–43; De Sagher (1951–66), i. 192–8, 225; ii. 223, 562, 663–6; iii. 194–7; Chorley (1993), 151–66; Vermaut (1988), 187–92; and nn. 57–60 above.
211. See Van der Wee (1963), ii, chs. 1–5; Van der Wee and Peeters (1970), 112–28; Van der Wee and Materné (1993), 19–31; Coornaert (1930*a*), 236–54; Edler (1936), 249–56. On the revival of the Rhone route from the 1430s, see also Baratier and Reynaud (1951), 563–604.
212. After Venice's loss of the spice trade to Portugal and Antwerp, the heavily-manned galleys had become uneconomic, especially in competition with the now fully evolved, full-rigged carracks (square and lateen sails), armed with heavy cannons. But Fryde also notes that, by the 1480s, the Genoese carrack trade was 'in catastrophic decline'. See Fryde (1974), 331; Fryde (1976), 362; Lane (1934), 26–28; Tenenti and Vivanti (1961), pull-out chart.
213. Flemish protectionism diverted English woollens from their most natural port, Bruges, to Antwerp, which no longer had an indigenous cloth industry to protect (see n. 87 above). See Van Houtte (1940), 87–126; Van Houtte (1952), 89–108; Van Houtte (1961), 248–78; Van der Wee (1963), ii. 45–103; Munro (1966), 1137–59; Munro (1977), 247–53; Munro (1991*b*), 119–73 (on the south German silver-copper mining boom and the metal flows to the Low Countries, from the 1460s).
214. See Coornaert (1930*a*), 244–55; Edler (1936), 249–56; Coleman (1969), 421, 423–4. English kerseys were also shipped by this route. Edler (1936–7), 57–62.
215. Coornaert (1930*a*), 252–3; Brulez (1959*a*); Brulez (1959*b*), 461–91; Brulez

(1962), 123–84. When the Cologne route was temporarily blocked by the French–Habsburg war in 1542–3, some Flemish says and English kerseys were sent instead via the higher-cost Luxemburg–Lorraine route. Edler (1936), 258–60, 266; Edler (1936–7), 61 and n. 2, noting that the sea-route to Italy was then unsafe because of French attacks.

216. Algemeen Rijksarchief België, Rekenkamer, registers nos. 23,357–64 (10 Feb. 1543–24 Sept. 1545: five accounts in 8 vols.): in particular detailing exports from Antwerp by land and sea. Other Rekenkamer accounts related to this export tax: nos. 23,365–430. Also analysed by Goris (1925); Brulez (1959*b*), 461–91 (with whom I concur). The only major exception, in exports destined for the Mediterranean, was the sea-transport of 280 wagues of lead from Veere to Genoa in Oct. 1544.
217. Coornaert (1930*a*), 247.
218. See Luigi Guicciardini, 'Description de Tous les Pais-Bas' (*c.*1560), 1581 edn., in Tawney and Power (1924), iii. 149–73, especially pp. 162–9: stating that 'sarges de Honscot, de Lille, d'Arras, de Valenciennes, de Montz, des ostades et demy ostades' were the most prominent of the Low Countries' textile exports sent to the Mediterranean, though 'draps d'Armentières' and linens were also still important. See also Coornaert (1930*a*), 249–54, contending that during the 16th cent. 'jamais de difficultés politiques graves n'entravèrent de commerce' with the Mediterranean (p. 251); Brulez (1968), 1205–21; Edler (1936), 249–65; and, for textiles sold on the Antwerp market, Thijs (1990), 76–86, esp. pp. 84–5.
219. For 4.684 million florins out of a total of 22.539 million florins (Habsburg money-of-account = 40*d.* gros Flemish) in imports, *c.*1560: cited in Brulez (1968), 1212. Coornaert (1930*a*), 251 n. 11 cites a document for the re-export of says 'aux Indes' in 1576. See n. 218 above.
220. For 4.500 million florins of 40*d.* gros Flemish: cited in Brulez (1968), 1212. See also n. 218 above.
221. See Helleiner (1967), 20–40, esp. Tables 4–10 (for Naples, Sicily, Sardinia, Castile, Navarre, Aragon, Portugal). Some eastern Mediterranean regions, however, had cold winter climates that made them receptive markets for heavy woollens. See Sella (1968), 88–105, and Davis (1961), 117–26, for Venetian and English cloth exports to the Ottoman Empire (Turkey) and Persia during the 16th and 17th cents.
222. Van der Wee (1963), ii. 325–64; Van der Wee and Materné (1993), 19–31. In business and commercial organization: the development of centralized firms, commission companies which 'made cheap buying and selling on distant markets possible', share-companies pooling capitals and risks; in marketing: fairs with permanent trading facilities and warehouses, spread of double-entry bookkeeping, printed price and commodity lists; in financial institutions and credit: barter clearances, debt assignments, revolving credit by tally and current account; negotiable and discountable bills of exchange and promissory notes. See also McCusker and Gravesteijn (1991). On credit

innovations, see Van der Wee (1977), 290–357; Van der Wee (1991), 1157–73; and Munro (1991*c*), 47–80.

223. Edler (1936), 249–65; Edler (1936–7), 57–62.

224. For each single say purchased (with an average price of 17*s.* 6*d.* gros Flemish), the Hondschoote factor received 2*d.* gros; 4*d.* was charged for transport and tolls; and 2*d.* for transporting and handling the cash. Edler (1936), 255–6.

225. Also improved cartography and navigation. Lane (1934), 45–6 and app. V, p. 262: on the shipment of cotton and alum from Syria to Venice. See also Unger (1980), 183–95.

226. The major technical advance of this era was the spread of the so-called Saxony wheel, first adopted in Italy, subsequently spreading to the Low Countries. Though well suited to linen and worsted spinning, there is no evidence that it was adopted by Hondschoote or any neighbouring *sayetterie*. See Munro (1988), 699–706; and nn. 46–7, 55 above. In the later 16th cent., however, some northern producers may have benefited from the economic difficulties then plaguing the north Italian textile industries, especially rising taxes and labour costs. See Davis (1961), 122–33; Sella (1968), 106–26; and Cipolla (1968), 127–45.

227. See Reed (1973), 180–4: demonstrating that if 20 per cent of the cereal price was attributable to transaction costs (and 80 per cent to production), and if 70 per cent of cereals were bought in the market (30 per cent home produced), a 10 per cent reduction in transaction costs could produce a 3.6 per cent real income gain, compared to a 1.7 per cent gain from a 10 per cent fall in production costs. See n. 166 above.

228. See Table 8 and Edler (1936), 249–65, with appendices on prices. Between 1538 and 1544, prices of single says fluctuated between 16*s.* 0*d.* gros Flemish and 22*s.* 0*d.* gros; of double says, between 37*s.* 6*d.* and 51*s.* 0*d.* But in the same period, prices of Ghent *dickedinnen* (£14 10*s.* 0*d.* gros to £15 0*s.* 0*d.*) and Mechelen luxury woollens were very stable. Compare the cloth prices given in Tables 1, 3, 6, 8; note that, while the Hondschoote say prices are arithmetic means of prices that fluctuated over the year, the others are stable prices per year.

229. Edler (1936), 254, 259: 'Ick bidde U wilt bovenal altijts naer die scoen colueren sien, want de coluer doet 't saij vercopen ende niet de duecht'.

230. See Table 6. For the first industrial *keure* of April 1534, see De Sagher (1951–66), ii, no. 287, pp. 346–60; for 1571, no. 290, pp. 363–78; for 1576, no. 291, pp. 379–86; and Coornaert (1930*a*), 199–220.

231. See Appendix on says.

232. The low cost of wool is the principal argument given by both Derville (1972), 363–6, and Chorley (1987), 373–5. This seems incontestable, since wool was the chief component of production costs in most draperies, even the cheapest. If wools accounted for up to 75 per cent of the wholesale price of the best 15th-cent. Flemish woollens (see n. 11 above), cheaper Spanish wools accounted for 39 per cent of the pre-finishing manufacturing costs of Florentine woollens in 1558; and coarse English wools for 45 per cent of such costs of an

Essex worsted say in 1759. See De Roover (1974), 118; and Burley (1958), 289–301. The evidence for simpler production techniques is harder to adduce, though certainly fulling and finishing were much simpler. Since a luxury woollen broadcloth took up to two weeks to weave, Bruges's limitation of 800 Ghistelles says to be sold by any one draper a year, or 30 per market day, imposed in 1314 (vs. the 1284 limitation of no more than 500 says per year), indicates that a draper could manufacture these much more quickly. Espinas and Pirenne (1906–24), i, no. 141, pp. 407–12; no. 151, p. 553. See also Van Uytven (1981), 283–94; and Munro (1988), 693–711.

233. Bruges say prices, given in Stadsarchief Brugge, Stadsrekeningen, 1302–3, fo. 61^{r}; and 1303–4, fo. 85^{r}; for Saint-Omer, see Derville (1972), 364.
234. See Table 6. For Ghistelles says at Bruges: Stadsarchief Brugge, Stadsrekening 1340–1, fo. 62. For Ghent cloth prices, Stadsarchief Gent, no. 400:6, Stadsrekeningen 1336–7 to 1344–5.
235. Coornaert (1930*a*), 224–6.
236. Edler (1936), annexe II, pp. 264–6. These are undyed single says purchased by the Van der Molen firm at Hondschoote; Antwerp prices were about a shilling higher. See Table 8: a Ghent *dickedinnen* broadcloth then cost £14 10*s*. 0*d*. gros Flemish to £15 0*s*. 0*d*.; a Ghent *helleman*, £11 10*s* 0*d*. gros; a Leiden black *halvelaken* (16 ells), about £4 4*s*. 0*d*. gros, or £8 8*s*. 0*d*. to £8 17*s*. 4*d*., for an equivalent whole cloth. The average price of English short broadcloths (24 yards long) exported from London in 1513–14 (the last year of usable prices in the customs accounts) had been £3 2*s*. 2*d*. sterling = about £5 5*s*. 0*d*. gros (PRO, E.122/83/2). Cloths of Armentières *c*.1550 had ranged from £2 15*s*. 0*d*. to £5 6*s*. 8*d*. gros. See Coornaert (1930*a*), 224–6. 1 Flemish ell = 0.70 m.
237. Espinas and Pirenne (1906–24), iv, no. 929, pp. 49–50: 'biffes u roiés u autre legiere [*sic*] draperie'; no. 930, p. 51 [27 Sept. 1305]. The Arras *biffes*, 40 ells long finished [28 m.], were to weigh just 30 lb., but the width is not given; and *couvretures d'estanfort*, 25 ells long, were to weigh 16 lb. Ibid. i, no. 97, pp. 223–5.
238. 1 square ell = 0.49 sq. m. = 0.555 sq. yd. (English cloth measure, 37 ins.). The Bruges pound weighed 464 g., or 2 per cent more than the lb. avoirdupois (454 g.) From Espinas and Pirenne (1906–24): [a] Arras, *c*.1300: i, no. 101, p. 238; [b] Bruges, 1277–94: i, nos. 137, pp. 348–62; no. 139, pp. 369–73; no. 141, p. 391; no. 144, pp. 465–81; [c] Saint-Omer, 1281: iii, no. 651: 148–9, p. 254, no. 651: 166, p. 471; [d] Ypres, 1284: iii, no. 756: 4–11, pp. 471–2; Espinas (1931), no. 354, p. 209; no. 296, pp. 182–3 [Valenciennes, 1294–1302]); Espinas (1923), ii, pp. 290–2, and app., Table 2; De Poerck (1951), i. 199–200; on says, see pp. 114–15, 216–31, 251–3. Patrick Chorley (1987), 372, provides a similar range: from 0.42 to 0.47 lb. per sq. ell, including Tournai *demi-draps*.
239. Bergues-Saint-Winoc says, 40 ells by 4 quarters, weighed 11 lb. De Sagher (1951–66), i, no. 163, pp. 530–1; no. 165, p. 538; Coornaert (1930*b*), 61. Hondschoote says, exported to Ferrara in the 1530s, size unspecified, but probably single says, weighed on average 10 lb. See Edler (1936), 255–6. The

Burghley papers of 1578 ascribe a weight of 16 lb. to Flemish says of 27 yds. = 36.25 ells, the length of Hondschoote double-says; see Usher (1920), 200. If their width was 6.5 quarter-ells, their weight per square ell would have been 0.27 lb. (= 0.49 lb./sq. yd.); if only 5 quarters, the width of the new *smalle dobbel sayes* (1576), then a weight of 0.35 lb. per sq. ell (0.64 lb./sq. yd.). See De Sagher (1951–66), ii, nos. 290–1, pp. 362–81.

240. In terms of the English cloth yard of 37 ins.: see Pilgrim (1959–60), 41–4. Usher (1920), 200, gives more cloth weights, though evidently less reliable ones, from the Burghley papers of 1578, in terms of lb. per sq. yd., with lb. per sq. ell (= 0.555 sq. yd.) in parentheses: double bays, 0.65 lb. (0.36 lb.); single bays, 0.40 lb. (0.22 lb.); narrow worsteds, 0.46 lb. (0.26 lb.); Norwich grograines, 0.36 lb. (0.20 lb.); double mockadoes, 0.28 lb. (0.16 lb.); plommetts, 0.42 lb. (0.23 lb.); fustians of Naples, 0.42 lb. (0.23 lb.); rasse or staminett, 1.16 lb. (0.64 lb.).
241. Chorley (1987), 361, 372–3, doubts that the differences were then that great, arguing, as does Derville (1972), 364–5, that in the 13th cent. these cheap cloths were essentially woollens. Chorley correctly notes that the weight of Arras *grands draps* was within the same limits given for the cheap 'light' cloths. The Arras *grant drap* of *c.*1300 (52 ells by 7 quarters, up to 2800 warps, similar to Arras says) had a weight of 0.44 lb. per sq. ell; that of 1333 (50 ells by 7.5 quarters), a weight of 0.48–0.50 lb. per sq. ell. See Espinas and Pirenne (1906–24), i, no. 101, p. 235; no. 99, p. 227. But these woollens were not those regarded in the luxury class; and Chorley has also emphasized Arras's concentration on *stanforts* and says during this era. See n. 250 below.
242. In terms of the English cloth yard of 37 ins. See Mann (1971), 312–15, with 17th-cent. English cloth weights. For the Ghent *dickedinnen* weight in 1462, see Boone (1988), no. 3: v, p. 40.
243. Chorley (1987), 372.
244. For Arras says, from 52 ells and 12 quarters (= 156 sq. ells) to 50 ells and 8 quarters (= 100 sq. ells); for Bruges and Saint-Omer says, from 42 ells and 11 quarters (= 115.5 sq. ells) to 38 ells and 8 qtrs. (= 76.0 sq. ells). See the *keuren* in Espinas and Pirenne (1906–24), i, no. 101, p. 238 [Arras]; nos. 137–141, pp. 348–440 [Bruges, 1277–84]; iii, no. 651, pp. 246–52 [Saint-Omer].
245. De Sagher (1951–66), ii, no. 291, p. 382 (Oct. 1576): from 40 ells by 5.75 quarters on the loom (57.5 sq. ells) to 36.75 ells by 5.0 quarters after fulling, 'dicke ghevult synde' (45.94 sq. ells).
246. Evidently from 43 ells by 14 quarters (150.5 sq. ells) to 32 ells by 10 quarters (80 sq. ells). Espinas and Pirenne (1906–24), iii, nos. 768–78, pp. 511–83.
247. Delepierre and Willems (1842), 42–60: from 43 ells by 16 quarters (= 172 sq. ells) to 30 ells and 10 quarters (= 75 sq. ells).
248. See Tables 4A-B; Boone (1988), nos. 2–3, pp. 32–43.
249. See documents in Espinas and Pirenne (1906–24), i–iv. For Bruges in 1303: i, no. 149, pp. 533–4: one day only for *dukers* (33 ells), *snytsaye*, and *weveline saye*; two days for *Ghistelsayen*, *dicke warpinne saye*, and *Sint-Omars saien*, and

langhe garnine strypte; three days for *pleine cuerlakene*, *alle ghegrainde ende gheminghede plaine lakene* (scarlets and medleys), and *dickedinne*. See also De Poerck (1951), i. 252–3; and especially Delepierre and Willems (1842), 43, for the Bruges fullers' *keure* of October 1434: requiring six days fulling for *fijne Brughschelaken* in winter, five in summer. Fullers' fees for says were invariably much lower than for *draps oints*: e.g. at Bruges in 1282, 2*s*. 7*d*. parisis for *faudeiden*, 4*s*. 2*d*. for Saint-Omer says, and 6*s*. 2*d*. for *ghesmouten lakenen*; in 1294, 4*s*. 7*d*. for a *dicken saye*, 4*s*. 6*d*. for a Saint-Omer *saye*; 6*s*. 0*d*. for a short *wulleblawen strijpte laken*; 10*s*. 0*d*. par. for *lakenen* of two mixed [dyed] wools. Espinas and Pirenne (1906–24), i, no. 139: 117, p. 385; no. 144, pp. 489–90.

250. Chorley (1987), 372, also noted the much higher warp counts for medieval says, 'which suggests that the warp yarn was closer to a worsted'. But see also Chorley in n. 241 above; and De Poerck (1951), i. 216–30.
251. Dubois (1950), nos. 364–8, pp. 229–30. See nn. 58, 99–101 above, 260 below.
252. De Sagher (1951–66), i, nos. 163–7, pp. 530–44; Coornaert (1930*b*), 59–63.
253. De Sagher (1951–66), ii, nos. 287, 290–1, pp. 346–81; Coornaert (1930*a*), 218.
254. Vanhaeck (1910), ii, no. 3, pp. 6–18; no. 9, pp. 28–9; no. 23, p. 61: 1,800 warps for 3.5 quarter-ells (1501); 2,100 warps for 4.5 quarters (1559).
255. Espinas and Pirenne (1906–24), i, nos. 768–78, pp. 511–83.
256. Delepierre and Willems (1842), 42–60: 2,160 warps in 10 ells, finished.
257. Stadsarchief Brussel, no. 1435.
258. These all are warp counts after fulling: warp-counts on the loom per quarter-ell width were 142 for a Ghent *dickedinnen*, 150 for an Armentières *oultreffins*, and 144 for a Bruges *dobbel leeuwen*. Warp-counts for Mechelen's *gulden aeren*, made from the very finest English 'Leominster' March wools were, however, much higher: 195 per quarter-ell on the loom; 312 after fulling. See Table 3.
259. See De Poerck (1951), i. 219–22; Coornaert (1930*a*), 193–215; Derville (1972), 364–6. De Poerck and Derville contend, however, that Saint-Omer says were made entirely from greased wools. But the text cited, in Espinas and Pirenne (1906–24), iii, no. 651: 172, p. 253, *c*.1280–1300, seems instead to distinguish the 'ointe' or greased drapery from the others: 'Toutes les saies et tout li drap, soient blanc, soient d'estainfort, soien[t] de laine ointe.'
260. The term *sayette* is first documented, ambiguously, in early 14th-cent. Arras: De Poerck (1951), i. 219–22; ii. 182; Espinas and Pirenne (1906–24), i, no. 192: 25–6. See the Tournai *keure* of 1484: 'que les petite sayes soyent composées de fine sayette et non d'autre'. Dubois (1950), no. 368, p. 229. Tournai's says were described as being 'saies de ii estains', *c*.1300; and again in 1410, with the restored *sayetterie*: 'faittes de deux estains sans mollet'. Ibid., no. 17, p. 148 [*c*.1300] and no. 272, pp. 222–3 [1410].
261. *Oxford English Dictionary* (1971), 2736: 494: 'The name now denotes a very durable twilled cloth of worsted, or with the warp of worsted and the weft of wool'. See also Beck (1882), 295, also providing an alternative origin: from the Low Germanic *sargia*, a covering. For Flemish 'serges', see esp. Favresse (1961*b*), 85–6.

262. See n. 217 above.
263. For Douai: (a) 'biffe bastarde, dont li traime soit ointe et le estains de moles' (1305), in Espinas and Pirenne (1906–24), iv, no. 930, p. 51; (b) 'adouchiés, de quoy li estains soit secs et le traime soit ointe' (1394), in ibid. ii, no. 374, pp. 307–8; (c) 'tiretainnes de lin: facent faire l'estain de lin u de caneve, et le traime facent faire de laine' (*c.*1250), in Espinas (1913), iii, no. 289, p. 235; and (d) 'pieches de tiretaine de lin et de laine' (1298), in Espinas and Pirenne (1906–24), ii, no. 315, pp. 170–1. These *tiretaines* also ceased to be made (or exported) in the 14th cent. See also Espinas (1923), ii. 307–8, 263–4; De Poerck (1951), i. 232–3. For Saint-Omer, which also produced *tiretaines* in the 13th cent., see Espinas (1923), ii. 263–4; Espinas and Pirenne (1906–24), iii, nos. 651–65, pp. 227–84; De Poerck (1951), i. 232–3, 274–9.
264. See p. 62 and n. 100 above. In 1405: cloths of 28 ells by 8.25 quarters, 'de secq estain [et] li traime de tous boins aignelins nostrés et de boins pelis gardées et burées [carded and greased] ensemble.' Dubois (1950), no. 143, p. 158; no. 244, p. 220.
265. 'Vanden laken metten roeden egge: van lampwolle, peelwollen op droege werpte sal dit gewant gesegelt zijn metten caerden'; to be warped as low 'als men wilt', but to be 7.5 quarters finished. Stadsarchief Brussel, no. 1435, fo. 8^{v}. See also Favresse (1961*a*), 59–74; Favresse (1961*b*), 75–84.
266. For Hondschoote says, see Coornaert (1930*a*), 199–215. Other Flemish says from both eras, however, and some early modern English says were purely worsted products of the true *draperies sèches* and thus utilized dry combed wools for both warp and weft. For 16th-cent. Lille and Amiens says, see n. 55 above. In 1568, the Amiens sayetteurs complained that weavers were making a new type of cloth called *bayes*, with a warp of dry wool and weft of greased wool, while their ordinances permitted only dry, ungreased wools. Maugis (1907), 76–7 n. 4.
267. These says were shorn much more lightly (dry-shorn only, usually only once, on one side): De Poerck (1951), i. 216–32. At Bruges in 1284, shearers were paid 1*s.* 8*d.* parisis for Saint-Omer *sayes*, vs. 3*s.* 8*d.* par. for *wulleblaeuwen lange strijpte laken* (which was supposedly a cheaper woollen). Espinas and Pirenne (1906–24), i, no. 141, pp. 418–19. The 13th-cent. urban says were woven on broadlooms with 11 to 12 quarter-ells, reduced to 7.5 to 8 quarters after fulling, according to the *keuren* in Espinas and Pirenne (1906–24), i–iv. In the 16th cent., Hondschoote says were woven more narrowly: to widths of 4.0 to 7.25 quarters, reduced by less than one quarter-ell during fulling. Some says 'moghen ghevult zijn ter optie van den coopman ende drapier'. De Sagher (1951–66), ii, no. 296, p. 393 [1618]. Though fulled, these says were not napped and shorn. See ibid. ii. 346–402; Coornaert (1930*a*), 199–215.
268. See the Bruges ordinances for *Ghistelsayen* in Espinas and Pirenne (1906–24), i, no. 137, p. 360; no. 151, p. 553; for Arras *sayes endrappées*, in ibid. i, no. 101, p. 238; and for Saint-Omer *sayes drappées*, in ibid. iii, no. 651, pp. 246–52.
269. Pegolotti (1936), 246; Bigwood and Grunzweig (1961), i, no. 384, p. 109.

270. Gras (1918), 277, for 1303; PRO, E.356/7, m. 7 (London: 1353–4), E.356/9, m. 34^{v} (London: 1361–2); E.356/9, m. 35^{v} (London: 1366); E.356/9, m. 36^{v} (London: 1375); E.356/17, m.^{v} 27 (Southampton, 1410–11). In so far as Hondschoote-type says or serges required fulling, it is instructive to note that another English customs account (1392–3) refers to 'xx pec. ffulled worsted, valent lxxiii s. iiii d.,' i.e. at 3*s.* 8*d.* sterling each. In PRO, E.122/149/28, fo. 2^{v}. A Flemish variant of serge is *zark*; and Flanders's treaty with the Hanse of June 1360 specifies a tax of 1/3*d.* gros (= 1 *esterlin* or *ingelschen* = 8 *mites*) on English, Irish, and Arras serges imported into Bruges: 'voort zo en sal men niet meer gheven van Inghelschen zarken no Atrachtsen no Yrschen dan van elken sticke eenen Inghelschen'. Höhlbaum *et al.* (1876–1939), iii, no. 497: 151, p. 265. Allison (1961), 68, also notes that 'a type of say had been numbered among the traditional [Norfolk] worsteds'; and that 'the New Draperies had many similarities to the traditional Norfolk worsteds'.

271. Geijer (1983), 82. These textiles are characterized by the broken 2/2 lozenge twill and 'the tightness of threads per centimetre in the warp' with a warp : weft ratio of 2 : 1 to 3 : 1. See also Hoffman (1974), 227–57; and Jørgensen (1992), 27 (Anglo-Saxon England: 32.3 per cent of finds in 2/2 twill z/z in warp and weft); pp. 68–9 (Germany and Low Countries, *c.*650–1000: 59.9 per cent in broken diamond twill z/s—z-spun warps and s-spun wefts); pp. 93–9 (Finland, 1050–1150: 32 per cent in 2/2 twills, 10 per cent in 2/1 twills z/s); pp. 138–40 (Birka: majority in diamond z/z twills, which she believes were made in Norway); pp. 142–3 (North Sea area, to *c.*1000: diamond herringbone twills z/s: probably the renowned *pallium fresonicum*); Crowfoot, Pritchard, and Staniland (1992), 17, 28–30: worsted-type fabrics with higher warp-yarn densities were predominant in England 'until around the late 11th or 12th century', when heavily-finished woollens were introduced.

272. Nahlik (1974), 369–77, esp. p. 377; and Nahlik (1971), 1279–90.

4

ONE THEORY, TWO DRAPERIES, THREE PROVINCES, AND A MULTITUDE OF FABRICS: THE NEW DRAPERY OF FRENCH FLANDERS, HAINAUT, AND THE TOURNAISIS, *c.*1500–*c.*1800

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By the end of the Middle Ages, woollen cloth production had long been established in Francophone or Walloon Flanders. Lille and Douai, the two largest cities, were textile centres, but so were many smaller towns and villages, particularly along the Lys river: as elsewhere in the Low Countries and England, rural cloth-making seems to have been nearly as old as urban. A wide variety of fabrics was woven, ranging from heavy traditional drapery to lighter goods, notably says, known in the area since at least the twelfth century. The taste for innovation that, as Professor Van der Wee has demonstrated, was a hallmark of the Low Countries' textile industry, was also in evidence. Woollens producers accepted new techniques, employed local as well as imported wools, and developed or adopted new types of fabrics in response to competition and changing consumer preferences.

Different locations in French Flanders had prospered at different times—the twelfth and thirteenth centuries proving on the whole more favourable to cities, the fourteenth and early fifteenth to village producers. But by about 1450 rural and urban centres alike were in the grip of a severe depression, though the onset of hard times and the degree of distress varied according to many factors, including competition, the types of cloth produced, and the effects of war. Unbeknownst to contemporaries, however, the downturn was destined soon to be reversed, for seeds of new growth were germinating, notably in the lighter woollens trades, heralding a new phase in the drapery industry.[1]

Much less is known about the cloth trades of Hainaut and the Tournaisis. It is clear, however, that textiles were less important to the

medieval economy of these predominantly agrarian provinces than to that of their neighbour to the west. Still, in their heyday in the twelfth and thirteenth centuries Valenciennes and Tournai had been leading drapery producers, exporting goods across western Europe from the Baltic to the Mediterranean. According to Maurice Arnould, at least three rural areas and nineteen of the twenty-two *bonnes villes* of Hainaut still participated in some form of drapery production in the later Middle Ages, although by the end of the fifteenth century the woollens industry was in as parlous a state in Hainaut and the Tournaisis as in French Flanders. By about 1500, only 2,000–3,000 pieces of cloth were being made each year in Tournai, compared with 8,000 annually when the industry had been at its height in the thirteenth century. Yet in these regions, too, a switch to lighter fabrics held promise of renewed prosperity.[2]

In this essay I shall trace the changing fortunes of the new draperies that resuscitated and extended the woollen textile industries of French Flanders, Hainaut, and the Tournaisis between the end of the fifteenth and the later eighteenth centuries—from, that is, the revival that began in about 1500 to the eve of factory industrialization. The early modern history of the new draperies in these regions falls into two broad yet distinct secular periods divided by a harsh crisis (or, in some places, crises). The first period (the subject of Part I), which lasted from 1500–20 to about 1620, saw the flowering and definitive decline of one type of new drapery as well as the rapid rise of says and other kinds of very light woollens and mixed fabrics directed largely to foreign markets. In this long sixteenth century, both urban and rural crafts underwent expansion; similarly, the seventeenth-century crisis or crises struck hard at countryside as well as at city.

During the second period (Part II), extending from the mid- or later seventeenth century to the late 1780s, the production of light woollens for export became concentrated in northern French Flanders. Output progressed smartly in several large villages and their surroundings, whereas Lille, although remaining an important centre, lost ground both absolutely and relatively. Some areas in the Spanish (after 1713 Austrian) part of Hainaut and the Tournaisis saw the continuation or even rebirth of new drapery, though now mainly for local and regional consumers. At the same time, both they and other districts whose once-flourishing woollens crafts sank into insignificance turned to linen manufactures—an industry that even made inroads into the new drapery heartland of northern French Flanders. In Part III, I consider

my findings in relation to hypotheses about proto-industrialization and suggest how the patterns of development revealed in these areas support and extend revisionary accounts.

Before embarking upon our study, it may be helpful to specify both the regions and the types of textiles under consideration. By French Flanders, I am referring to that largely French-speaking area detached from the County of Flanders between 1305 and 1369 to be administered directly by the French crown, which upon its return to Burgundian rule remained a separate political entity known formally as the Estates of Lille, Douai, and Orchies and commonly as 'la Flandre wallonne'. The region, conquered by France in 1667–8, forms the central quarter or so of the present-day Département du Nord. The County of Hainaut was divided between France and the Spanish Netherlands by the Peace of the Pyrénées (1659); I shall discuss both portions, which retained many, if often antagonistic, economic ties. Tournai and the Tournaisis, the city and its small hinterland, lay between French Flanders and Hainaut. Originally a French possession (and from 1513 to 1518 briefly under English control), it was incorporated into the Habsburg dominions in 1521, reconquered by France in 1667–8, then ceded to the now Austrian Netherlands by the Treaty of Utrecht (1713).

Defining the term 'new draperies' is a difficult if not impossible task. Included under that rubric is a bewildering variety of fabrics characterized by confusing similarities and differences in nomenclature and technique, the whole further complicated by translation and change over time. In Professor Coleman's account, the products of the *old drapery* are defined as pure woollens woven from carded, short-staple wool, while *new drapery* comprises a more amorphous category of 'technical mixtures', including pure worsteds of combed long-staple wool, half-worsteds, and fabrics combining wool and other raw materials such as linen, goat and camel hair, silk, and cotton. All new draperies represented innovative combinations of traditional methods, or even involved technological retrogression, but all were—and were recognized by contemporaries to be—new products.[3]

Scholars of Low Countries textiles often distinguish three kinds of drapery, based not on length of staple nor on whether the wool was carded or combed—not, in other words, on the distinction between woollens and worsteds—but on the quality of wool employed and the number and complexity of the manufacturing processes. According to Professor Van der Wee, traditional or *old drapery* consisted of high-quality, expensive cloth woven largely from the best English wool,

whereas *new drapery* producers used cheaper wool (commonly from Spain), and simplified processes, thereby turning out fabrics that resembled old drapery but sold for a good deal less. Finally, *light drapery* was made of unoiled, lower-quality wool, typically of local origin or from nearby areas of the continent, often mixed with other fibres. Shearing was usually eliminated and other processes further simplified, yielding cloth of inferior quality but even lower prices. The cloth was fulled and calendered, albeit briefly, so light drapery was not entirely unlike either the old or the new.[4] Thus Van der Wee considers Hondschoote serges part of the 'spectacular' development of light drapery, while to Coleman Hondschoote says were 'one of the many varieties of new draperies'.[5]

In this essay, I cast my net widely, discussing both new and light drapery in the Low Countries sense. I do not distinguish between wool staples and include fabrics like *molleton* (molton) that employed carded wool.[6] What emerges is a picture of repeated locational change and product imitation and innovation, processes that both represented the continuation of long-established patterns and constituted new departures.

I

Thanks to expanding demand, numerous drapery centres in French Flanders prospered once again starting in the later fifteenth century. To be sure, not all prior-existing manufactures revived. In Bousbecque, for example, a village on the Lys between Comines and Halluin that had been a substantial new drapery producer from at least the fourteenth century, only two looms were reported in regular operation in 1505 and 1544, turning out 90–100 cloths a year, and by 1549 no textile making at all was reported.[7] But as Table 9 reveals, something of a new drapery renaissance transpired in a number of cities, towns, and villages during the opening decades of the sixteenth century.

In Lille, output began to increase no later than 1530, with rapid expansion ensuing after 1540. Thanks largely to the adoption of several new types (most notably *flourettes* and *estamettes*), more than 10,000 cloths were sealed in 1550, and that level was maintained for more than two decades.[8] Douai's new drapery likewise revived. Fragmentary records indicate that several thousand pieces were sealed there each year in the 1540s (an unknown proportion of them woven outside the

TABLE 9. *New drapery in French Flanders during the sixteenth and seventeenth centuries*

Locality	1505		1549		1593		1611	
	(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)
Lille				8,488	119	1,137	42	*c.*1,000[a]
Halluin	5–6	60	20[b]	1,000[c]				
Comines	28–30[d]		30	6–800[e]				
Tourcoing		1,950[f]			6			
Armentières	60–80	2,500	6–700	25,000	399[g]	16,192	359	—[h]
Haubourdin				1,459	87		150	*c.*1,000[i]
Bondues					80	*c.*1,215[j]	125	1,872[k]
Houplines					42		70	1–2,000[l]

(A) = number of looms.
(B) = annual output.

[a] Lille was purportedly capable of turning out 4,000 pieces per year; in addition, another 128 looms in the suburbs could produce 7,500 pieces.

[b] 1544.

[c] This figure comes from De Sagher (1951–66), ii. 295 n. 4. According to ADN, B3763, 2,000 *demi-draps* were made annually.

[d] 15–16 operated daily.

[e] 200 sealed draps, 400–600 unsealed *petits draps*.

[f] 'L'on peut faire [this number] chacun an'.

[g] Another 11 looms were found in the parish of Armentières on lands exempt from aldermanic jurisdiction.

[h] Armentières was said to be capable of turning out 22,600 *estamettes*, *draps*, and *bacques* each year.

[i] Haubourdin's potential annual production was estimated at 10,000 *draps* and *estamettes*.

[j] Calculated from the eight-year total (1 May 1593–30 April 1601) of 9,727.5 pieces.

[k] Bondues's possible yearly output was calculated at 6,000 *estamettes*.

[l] Houplines' potential annual output was estimated at 6,900 *estamettes* and *draps*.

Sources: ADN, B3762 (1505), B3763 (1549, save Lille and Halluin); AM Lille, Reg. 16,283, 16,327, 16,348 (Lille output, 1549, 1593, 1611); De Sagher (1951–66), i. 435–49, 466, 643–6 (looms and output in Armentières in 1593, looms in Bondues in 1593), ii. 319–22, 325, 617, 619 (Haubourdin looms in 1593 and output in 1549 and 1593, Houplines looms in 1593 and output in 1611), iii. 421, 604 (looms in Tourcoing in 1593, looms in 1593 and output in 1611 in Bondues); De Sagher (1937), 479 (Lille looms, 1593); AM Lille, Affaires génèrales, Carton 1220, d. 10 (1611 loom totals and estimated possible production as in notes a, f, h, i, k, and l).

city), while 159 new drapers registered in that decade, 141 in the years 1540–3 alone.[9] Equally dramatic was the rebirth of Halluin's industry, which from near-extinction around 1500 had by 1549 regained the level of 1,000 cloths per year found during its prime in 1450–75.[10] At Armentières, output and the number of looms grew tenfold between 1505 and 1549.

This striking expansion was not destined to last for long. At Lille, decline set in after 1575, gaining speed from the mid-1580s. By 1593 average output (about 1,000 cloths a year) was back to the level of the early part of the century. At Douai, downturn arrived a few years earlier, but

it followed much the same path. The group of masters, numbering some seventy-one in 1555, had shrunk to thirty-four in the early seventeenth century. Of these, four had charge of the guild, eight wove regularly, four others turned out a piece every three or four weeks, a widow and a draper's son had just taken up the craft, and the remaining sixteen had abandoned the trade. In 1593 the city's production was too minor to justify inclusion in the new drapery survey. It was suggested at the time that artisans be brought from Lille and Armentières to teach skills Douaisiens had forgotten and that sloppy enforcement of regulations be tightened; in addition, the weaving of additional types of inexpensive fabrics was authorized. But nothing seems to have availed: by 1611 the city's textile makers were said to be in 'extreme need and poverty'.[11]

When queried in that year about the way to restore the drapery of the southern Netherlands, both Lille and Douai strongly urged that imports of foreign—notably English—cloth be entirely cut off.[12] The suggestion pointed to a significant problem. The exodus of artisans from the Low Countries before and especially during the Dutch Revolt and ensuing repression had stimulated production abroad that not only ate into the critical Baltic and Mediterranean markets but also began to undersell Low Countries' cloth at home.[13] In places like Halluin and Comines, which sustained both massive damage during military operations and emigration, the drapery industries had virtually disappeared.[14] But the effects of the Revolt were not the only factors at work. To judge by the nearly simultaneous decline of kerseys in England,[15] new drapery was also feeling competition from the cheaper light draperies, whose fortunes we shall chart below.

Still, as the right-hand columns of Table 9 show, the outlook for new drapery was not entirely bleak in late sixteenth-century French Flanders. In Armentières, which in 1572 had reported just 300 looms currently in even partial operation, more peaceful conditions and concentration on *estamettes* and other newer fabrics brought an upturn. Some 400 looms were counted in 1593, though output remained well below the mid-century peak.[16] Haubourdin's new drapery, reborn around 1530, found that repeated imitation of Armentières as well as of Lille bore fruit. In 1593, the village tallied 87 looms, which gave work to some 2,300 people throughout the environs; by 1611 the number of looms had nearly doubled. The new drapery of Bondues, unknown before the 1593 survey, flourished between that date and 1611, and sustained annual production of about 2,000 cloths from 1605–6 until 1621–2. Strong growth likewise occurred in Houplines, where in 1590

recently arrived new drapery weavers received statutes decreed by the Privy Council in Brussels, which disregarded objections from Lille, Armentières, and several other nearby centres.[17] Tourcoing, which all but abandoned new drapery weaving, nevertheless benefited from the revival, for while there were only six *drap* and *estamette* looms in the village in 1593, 121 people were reported making *estamette* warps for sale in Armentières, Haubourdin, Bondues, and additional nearby towns and villages.[18]

This mini-boom at the beginning of the seventeenth century proved the last hurrah of French Flanders' new drapery. Although 359 looms were counted in Armentières in 1611, the industry took a sharp turn for the worse shortly thereafter. In 1618, despairing of the possibilities of new drapery, the magistrates provided subventions so that drapers could buy wool and thread to weave says, though in the event a couple of hundred pieces of new drapery continued to be made each year in Armentières until the 1730s.[19] In Bondues and Houplines, too, decline set in from the early 1620s. From the 1640s through the mid-1660s, when the records end, Bondues's weavers could count themselves fortunate to turn out 600 cloths a year. Aside from a sharp but short-lived upturn at the end of the 1630s, Houplines normally made just 200–300 pieces annually across the same period.[20] Only Haubourdin retained any importance—as late as the 1680s output averaged 1,000 pieces a year—but its survival could hardly compensate for the collapse of the craft everywhere else in the province.[21]

From all indications—which are very scanty—new drapery played a minor role in Tournai and Hainaut's early modern economy. Admittedly, the craft was practised in at least a few places. In 1518 Ath's new drapery won authorization to weave doublures, and seven years later a new fulling mill was built. Yet regulations were also enacted in 1518 to force weavers to work steadily, to compel drapers to supply weavers with sufficient good-quality thread, and to prohibit the employment of weavers and fullers outside Ath when townspeople were available. Hence sanctioning doublures and constructing a mill seem not so much signs of prosperity as attempts to revive an industry in difficulty. In any event, new drapery was definitely in a bad way in 1550, when the fulling mill had shut down for lack of work. By 1600, the historian of Ath's drapery tells us, the industry had 'virtually disappeared'.[22]

If inclusion in the 1611 survey soliciting advice as to how to restore the industry is any guide, new drapery also survived—or had until recently—in and around Tournai, Mons, and Valenciennes. Like several

other towns, Mons blamed the recent 'guerres intestines' for provoking emigration of artisans and merchants to 'more peaceful' lands. But it pointed as well to competition from Thuin and other producers in the nearby Bishopric of Liège. Because of lower taxes and cheaper food, they turned out *petits draps* for the 'common people' more cheaply than Mons could, though some unnamed villages in Hainaut reputedly managed to make similar low-cost cloth. Valenciennes and Tournai agreed that the departure of many skilled artisans had been a grievous blow and called for measures to discourage thread exports, anticipating that such a measure would stimulate weaving and lure back *émigrés* in search of jobs. Both cities also urged that quality be improved, Valenciennes claiming that much of the decline of drapery had resulted from weavers' ability to ignore existing ordinances and regulations with impunity.[23] Little was done, however, and the trade continued to regress. A document from autumn 1651 found just twenty-five *drap* looms in the homes of fourteen master weavers of Mons; another document from the same year claimed that all but two masters worked 'bien rarement', due as before to competition from Thuin and village producers in Hainaut.[24]

Table 9 shows that at least in French Flanders new drapery output was far from negligible in the sixteenth century. But the most renowned woollens produced in that area, as well as in Hainaut and the Tournaisis, were light draperies, often referred to generically as *sayetterie*. Although large quantities of says had been exported from these regions in the twelfth and thirteenth centuries, John Munro has shown that the light cloth crafts all but vanished between the early fourteenth and later fifteenth centuries.[25] Around 1500, however, freshly granted corporate charters and newly imposed taxes attest that light drapery was revitalized or even reborn in the larger towns. Thanks to conflicts between rural and urban producers and privileges, their presence can also be discerned in villages before mid-century.

Let us look first at French Flanders. *Sayetterie*-making had had a chequered career in medieval Douai,[26] but it only becomes possible to discern the quantitative dimensions of the industry from the early sixteenth century. Chartered (or rechartered) in 1499, the *sayetterie* corporation included 400–500 looms by 1527. Average yearly output was 10,000–20,000 pieces of say and satin in the late 1530s, 7,000–14,000 in the 1540s (the only years for which tax records exist). In a deposition from 1564, the deans of the guild claimed that the members of the craft

made 8,000–10,000 cloths annually, while six years later there were said to be 500 masters and an unspecified number of workers. Velveteen-makers (also referred to as *bourgetteurs* and *hautelisseurs*), who formed a much smaller group of weavers—twenty to thirty in 1570, twenty to twenty-four in 1578—turned out between 500 and 1,500 light woollens per year in the 1537–47 period.

Corporate leaders confidently asserted in 1564 that its fine colours made Douai's light drapery so sought after that double or triple the current output would easily find buyers. Yet from the very next year there is evidence of repeated problems with thread, including fraudulent mixing of different types and illegal export of the better-quality skeins. Whether or not raw material troubles damaged the city's *sayetterie*, it seems to have suffered rapid and profound decline. Less than 100 pieces of say were inspected and sealed in 1586, and the municipal treasurer wrote of 'temps calamiteux et cessation du mestier de saicterie'. The following year, no one bid for the farm of the seal, which in any event had not been paid for the previous half-decade. By 1603 the city government was pleading for access to Lille's light cloth finishing facilities on the grounds that Douai could not support any of her own, and two years later weavers were said to be begging in order to survive. Just fifty-four masters and one mistress were listed as weaving says in 1615; during the past year, they had taken on only two apprentices, received one new master into their ranks, and seen not even one worker immigrate.[27]

Lille's light drapery reappeared virtually simultaneously with Douai's—initial *bourgetterie* statutes were promulgated in 1496, *sayetterie* four years later—but it enjoyed much greater and more durable success in markets in France, central Europe, Italy (whence some was re-exported to the Levant), Iberia, and Spain's empire in the New World.[28] Says were the first light woollens to experience pronounced growth, joined in the 1520s by woollen satins and in the following decade by *changéants*, a kind of cheap camlet that soon became the mainstay of Lille's light drapery. As early as 1553, Lille's municipal government testified that the city was home to more than 2,000 *sayetterie* masters and in excess of 300 *bourgetterie* masters.[29] By the early 1580s, when it stabilized, output of says, satins, and *changéants* by *sayetteurs* had reached a level about five times above that of the years before 1520. Production by *bourgetteurs*, who also wove *changéants* as well as velveteens and several minor fabrics, similarly began to swell in the first half of the sixteenth century, continuing until about 1620. At that point, velveteen output stood five and a half times above its level in

1540 (the first year for which we have records), while *changéants* woven by *bourgetteurs* had multiplied an astounding eighty-four times.[30]

Lille's light drapery was at its zenith in the early seventeenth century. *Sayetteurs*' output—doubtless buoyed principally by *changéants*—maintained the high levels reached around 1580 up until 1608–9. *Bourgetteurs*' fabrics attained their apex ten years later. But as Table 10 makes clear, the European-wide textile crisis that began in about 1620 struck hard at both crafts,[31] and despite temporary upturns in the 1620s and 1630s, the entire period of the Thirty Years War was difficult for Lille's light woollens industry. The 2,000 or more say looms operating in the later sixteenth century had been reduced to about 1,100 in 1638, date of the first surviving loom census, and their number had fallen to 818 in 1647.[32] As Table 10 shows, in 1641–50 taxes on fabrics woven by *sayetteurs* returned just 42 per cent of their yield during the peak decade 1601–10; levies on *bourgetterie* had dropped by nearly half from their 1611–20 level.

TABLE 10. *Average annual tax income from light drapery in Lille, from 1521–30 to 1641–50 (in livres parisis)*

Decade	*Sayetterie*	*Bourgetterie*
1521–30[a]	1,911.1	—
1531–40[b]	2,947.8	—
1541–50	3,648.1	169.6
1551–60	4,065.4	155.8
1561–70	4,612.8	306.6
1571–80[c]	5,612.9	701.9
1581–90	5,727.6	967.6
1591–1600	5,645.2	1,779.7
1601–10	5,754.7	2,989.4
1611–20	4,240.9	4,061.4
1621–30[d]	4,115.3	3,699.2
1631–40	4,149.1	2,948.2
1641–50	2,425.3	2,201.4

[a] 1529 missing.
[b] 1539 missing.
[c] 1575 missing for *sayetterie* only.
[d] 1625 missing.

Source: Deyon and Lottin (1967), 30–2.

During the sixteenth and early seventeenth centuries, numerous villages attempted with various degrees of success to start weaving light drapery. Lille, joined by nearby Tournai, bitterly opposed the appearance of light drapery in the countryside, fearing both competition in woven goods and decreased supplies of cheap thread for urban industry.[33] But some villages already possessed drapery-making privileges and, perhaps more important, enjoyed the protection of powerful seigneurs: for example, Philippe de Lannoy, lord of Tourcoing, was *grand maître d'hôtel* for the regent Mary of Hungary. Hence while the towns managed to gain and maintain say and *changéant* monopolies, villages gradually won permission to weave rougher and often mixed fabrics—velveteens, *bourats*, and fustians being the most common.[34]

The rise of rural light drapery in French Flanders across the 'long sixteenth century' is indicated by Table 11, though the magnitude and timing of the expansion is doubtless somewhat distorted. The 1535 and 1548 figures represent the number of looms authorized by central government decrees rather than actual loom counts, and even loom counts themselves do not necessarily correlate with actual production.

Taken together, Tables 10 and 11 show that in northern French Flanders both city and village light drapery prospered for many decades across the sixteenth and early seventeenth centuries. The Dutch Revolt

TABLE 11. *Light drapery looms in rural French Flanders, 1535–1608*

Locality	1535	1548	1608[a]
Tourcoing	25	50	48
Roubaix	—	50	166
Leers	—	25	73
Toufflers	—	12	8
Wattrelos	—	—	171
Mouvaux	—	—	64

[a] Besides the 530 looms listed below, another 190 were found in 13 additional villages. Significant concentrations were found in Hem (35), Lys (31), Saint-André (27), Wasquehal (26), and Croix (22). Of the 720 total looms, 497 made velveteen, 181 were for *bourat*, and 26 for fustian.

Sources: AM Lille, Aff. gén. C. 1161, d. 4 (1535); Vanhaeck (1910), i. 272–3 (1548); AM Lille, Aff. gén., C. 1164 (1608).

may have caused some disruption in the countryside—the extant sources simply do not allow us to say—but in sharp contrast to new drapery, any damage suffered by light woollens was not permanent, even though many people from the area emigrated to Leiden and England.[35] Further, fragmentary output statistics from Roubaix—the sole series available for the countryside—indicate that rural light drapery, like Lille's, contracted sharply and for a protracted period starting in the second decade of the seventeenth century. Annual production, commonly several thousand pieces around 1610, dropped to several hundred at most from *c.*1620 to the early 1630s, when the records give out for more than two decades.[36]

In the first period, in sum, the light drapery centred in northern French Flanders formed in effect a single industry with two parts. A larger urban sector primarily produced says and *changéants*, while a rural one, as yet smaller, specialized in mixed cloths, not to mention some of the thread consumed in the city. Both sectors exhibited similar histories of growth and contraction. From this point on, however, their fates began to diverge considerably. As we shall see, Lille outperformed Roubaix across most of the seventeenth century, but in the course of the eighteenth rural producers came to overshadow their urban counterparts both quantitatively and in terms of dynamism.

Destruction of archives makes it difficult to trace the history of light drapery in Hainaut, but scattered information indicates that it appeared as early as in French Flanders and had an analogous production history during the long sixteenth century. In Valenciennes, says had been woven as far back as the twelfth century, and Lodovico Guicciardini cited them as central to the city's economy in the mid-sixteenth century.[37] Yet in 1611 Valenciennes reported that the '1600–1700 masters operating shops and practising the craft of *sayetterie*' at some unspecified date in the past ('cydevant') had dwindled to just 150. This circumstance was attributed in large part (as was the decline of new drapery) to unrestricted thread exports and the non-enforcement of existing quality regulations, a charge that gains some support from contemporary corporation records.[38]

Even less is known about Mons, where *sayetterie* statutes were promulgated in 1494. Light drapery was clearly thriving in the mid-1560s, when the tax on *sayetterie* fabrics was farmed out at a rate that implied output of between 16,000 and 32,000 pieces a year.[39] Say and other light drapery continued to be made in 1651, but a demand made that year to bar immigrants from weaving any cloth containing say thread suggests

a craft on the defensive.[40] We know virtually nothing about light drapery in Hainaut villages before the end of the seventeenth century, apart from the fact that *sayetterie* appeared (or perhaps reappeared) in Maubeuge in the later fifteenth century, supplanting a nearly defunct drapery industry, and received corporate statutes in 1517.[41]

Like most cities examined here, Tournai had exported says in the twelfth and thirteenth centuries, only to see the industry collapse thereafter. Re-established about 1400, the craft was endowed with amended statutes in 1484, joining an already existing corporation of *hautelisseurs* or *bourgetteurs* said to have had 500 masters at some point in the fifteenth century and as many as 600 looms around 1520.[42] Beginning in 1522, shortly after the city's incorporation into Charles V's dominions, payments for tax farms on cloth and raw materials make it possible to outline the evolution of the city's light drapery and to a lesser extent that of the countryside. According to these figures, output grew strongly up to the late 1570s. The farm on *bourgettes* increased thirteenfold between 1522–30 and 1571–80, while the tax on *sayette* thread multiplied seven times across the same period. Unfortunately, civil strife, a siege mounted successfully by the Prince of Parma to capture Tournai for Philip II, subsequent repression and emigration, and bad harvests all ravaged the light cloth industry during most of the 1580s. The *bourgette* farm fell to below 30 per cent of its level in the previous decade, that for *sayette* thread to less than half. Little wonder that all remaining *sayetterie*, drapery, and fulling workers were granted mastership in 1582, that in 1585 apprenticeship and masterpiece requirements were waived for immigrants, or that access to corporations was opened up once again three years later. From 1589, however, rapid recovery set in. By the time it reached its peak in 1611–20, the *bourgette* tax yielded 50 per cent more than in the 1570s, while at its apex during the 1630s the *sayette* thread farm was two-thirds higher, very likely driven up and sustained by demand from rural weavers, who bought thread in the city, and probably also from wool-stocking weavers in the city itself. Then, like its counterpart in French Flanders, Tournai's light drapery went into decline, but at a slower rate, for by the mid-seventeenth century the *bourgette* farm was down just a third from its high point, say thread less than an eighth.[43]

The long sixteenth century formed an extended period of substantial woollen textile advance across much of French Flanders, Hainaut, and the Tournaisis, striking evidence of the acceptance that cheap southern

Netherlands cloth won in many markets. Demand was sufficiently vigorous, in fact, that some long-established new drapery crafts, as well as a handful of recent imitators, enjoyed a remarkable burst of prosperity. Even in 1611 at least 862 new drapery looms were to be found in the villages of the castelry of Lille, outnumbering the 720 light drapery looms counted just three years before.[44] When urban production is taken into account, however, it becomes clear that light drapery was already far more important. And indeed the future belonged to light woollens—though not, as the example of Douai had already demonstrated, to all the centres that had emerged over the past century. Beginning around 1620, an increasingly deep crisis greatly diminished the woollens industry in many places, promoted concentration of weaving into a small number of centres, and issued in new intra- and inter-regional specializations and divisions of labour.

II

French Flanders' urban light drapery managed to survive the seventeenth-century depressions, which in some places persisted into the eighteenth, and even to prosper on occasion. That production of *sayetterie*-type fabrics continued in Douai—at what level, we cannot say—is indicated by repeated (and uniformly rebuffed) attempts to gain permission to use Lille's finishing facilities.[45] At some point in the late seventeenth or early eighteenth century, a sizeable camlet manufacture was set up in Douai, which at one time purportedly employed 217 looms and provided work to some 500 townspeople. It seems, however, to have failed by 1762, when masters of Lille's *sayetterie* corporation, using money provided by the municipal government, began to buy 173 looms for camlets, *baracans*, and similar cloth from Douai to keep them out of the hands of rural producers.[46] Apparently, this sale ended any substantial woollens production in Douai. In 1782 the municipal Bureau de Charité did seek to establish manufactures of camlets and like fabrics to give work to the town poor, but little result can be seen. Prefect Dieudonné, reporting on conditions in 1789, mentioned only 'several looms' operating in one quarter of Douai without giving any other details, and indeed precious little textile work of any sort was to be found in the city.[47]

For Lille's light drapery, as Table 12 shows, the second half of the seventeenth century was a period of stagnation or slight recovery.

TABLE 12. *Average annual light drapery output in Lille from 1641–50 to 1691–1700 (in livres parisis)*

Decade	*Sayetterie*	*Bourgetterie*	*Grands changéants*[a]
1641–50	2,425.3	2,201.4	18,560
1651–60	2,539.4	2,316.5	18,000
1661–70	2,724.0	2,218.4	19,600
1671–80[c]	2,754.0	2,397.1	—
1681–90	—	2,838.9	—
1691–1700	—	2,474.7	18,272

[a] Levy on all textile products exported by merchants. This information was not recorded before 1634.

[c] 1678 is missing.

Source: Deyon and Lottin (1967), 32–3.

Although output never approached levels attained earlier in the century, copying Valenciennes-style *baracans* and immigration from Hondschoote helped to offset the loss of some traditional customers after the French conquest in 1667.[48] Yearly figures, as well as scattered loom censuses, disclose that output fluctuated considerably over the short run. Taxes on says, for example, rose from 2,114 livres parisis in 1659 to 2,946 the following year, but were back down to 2,638 by 1662; those on *bourgetterie* went from 1,876 livres parisis in 1680 to 3,119 (1681) to 2,503 (1684). Similarly, 1,102 *sayetterie* looms were found in 1638, 937 in 1650, 1,192 in 1681. In 1638, 357 master *sayetteurs* operated shops, as against 336 in 1650, 393 in 1661, and 387 in 1675.[49]

As the end of the century approached, however, the situation soured once more. The number of *sayetterie* looms in operation, declining slowly between 1681 (1,192) and 1687 (1,019), suddenly fell precipitously: to 904 in 1688, 812 in 1691, 785 the next year, 717 in 1693, just 562 in 1694.[50] Output dropped equally quickly and steeply. According to figures provided by municipal officials, 60,000–65,000 fabrics were made each year between 1685/6 and 1687/8, but just 36,445 in 1689/90, and output was running at an abysmal annual rate of about 31,000 to 32,000 pieces in the first nine months of 1693–4.[51]

Nor, despite a brief rally that put eighty more *sayetterie* guild looms back to work by 1696, were the woes besetting Lille's light drapery at an end. A revival that began with the new century, bringing the *sayetterie*

loom total back up to 692 in 1706, was in turn aborted by the Dutch invasion and occupation (1708–13), prolonged by the existence of large stocks of cheap English and Dutch cloth remaining in Lille even after the foreign troops had left. In 1716 just 371 *sayetterie* looms were in operation while another 800 gathered dust; 600 masters were unemployed or found what work they could in the employ of their more fortunate fellows. Others had emigrated.[52] Admittedly, the fortunes of the light cloth weaving industry did improve for a few years thereafter. The number of *sayetterie* seals, which had sunk as low as 29,000 in 1714, rose as high as 61,000 in 1722. Once again, however—though at an undeterminable date—decline set in: in 1735, according to corporate records, only 35,000 *sayetterie* pieces were sealed. By the 1740s, the total was lower, though the available documents are not of sufficiently high quality to clarify either the severity or the precise dating of the deterioration. Perhaps English competition was partly to blame, for the 1730s and 1740s saw high levels of exports from that country, 'largely due to improved sales of woollen cloth', while 1729–51 has been characterized as 'one of the major periods of growth' for the West Riding textile trades.[53]

At Lille, the decades around mid-century apparently saw some stabilization. Table 13 indicates that output remained about level between *c.*1740 and *c.*1770, while the number of *sayetterie* looms in operation, some 866 in 1764, stood at 846 in 1769. But in the 1770s the trend turned down yet again.[54]

Yet Lille remained a major light cloth centre up to the French Revolution. The last extant *sayetterie* census, which dates from 1782, listed 610 looms. Prefect Dieudonné credited the city with 800 of the province's 830 camlet looms in 1789, producing cloth for export throughout western Europe and the Americas.[55]

The decline of light drapery weaving in Lille harmed the urban combing trade that prepared wool to be spun into *sayette* thread on the small wheel. The rise of rural combing, which accompanied the renewed expansion of village light cloth weaving, also contributed strongly to the decay of the urban craft. It was hurt, too, by mercantilist actions taken simultaneously by the government of the Austrian Netherlands, culminating in a measure of 1756 that quadrupled the export duty on raw wool while eliminating all levies on combed wool. As a result, by 1778 much of the wool woven in French Flanders was being combed in nearby Austrian Flanders, Hainaut, and the Tournaisis, often by French workers who commuted across the border from frontier

TABLE 13. *Average annual number of pieces of light drapery sealed in Lille, 1673–1708 to 1771–5*

Period	*Sayetterie* (1)	*Sayetterie* (2)	*Bourgetterie*
1673–1708	47,664	—	116,700
1708–30	—	—	56,151
1708–40	30,000	—	—
1730–55	—	—	24,184
1740–50	23,600	31,200[a]	—
1750–68	22,388	31,420	—
1755–71	—	—	20,816
1768–75	17,860	27,750	—
1771–75	—	—	17,080

[a] 1741–50.

Sources: *Sayetterie* (1) and *bourgetterie* are taken from a document written by the *sayetterie* corporation, 17–29 Nov. 1775, in Vanhaeck, (1910), ii. 355, doc. 165. The grouping into periods is that found in the document; no reasons are given for the divisions. *Sayetterie* (2) is calculated from accounts of scals per year, which according to Vanhaeck give, 'at least approximately, the number of pieces made'; ibid. i. 284, n. 2.

villages. Corporate records, which have survived only for the eighteenth century, indicate that the number of masters and workers combing in Lille dropped by 70 per cent between 1711 and 1761 before staging something of a come-back across the next two decades, perhaps the result of increasing consumption by hosiers or rural weavers. Even so, the trade contracted again in the 1780s. The 140 or so combers in Lille in 1789 cut a poor figure compared with the 1,600 in and around Tourcoing, the leading rural centre in French Flanders, not to mention the unknown numbers across the border.[56]

In contrast to the long, though by no means unbroken, decay of Lille's light drapery across the eighteenth century, cheap carded woollens staged something of a come-back in the city, led by recent creations such as *pinchinats* (a rough *drap*), *ras*, and *couvertures*, as well as *molletons*, woven from a woof of waste wool and a linen warp. The revival dated at least to 1686, when a prominent merchant and alderman, with the aid of municipal subventions, started up an enterprise to make Dutch and English-style drapery. The initiative quickly prospered: the 24 looms counted in 1688 had become more than 200 by 1701, helped in large part by heavy tariffs on cloth from England and the Netherlands.

Like light drapery, these woollen trades were badly damaged by the Dutch occupation, but renewed protection brought the number of looms back to 48 in 1733. In 1789, 24 manufacturers owned 120 looms with an annual output of 5,300 pieces of *drap* and *pinchinat* for sale to the peasantry, working class, and religious houses of French Flanders and nearby provinces of France and the Austrian Netherlands. At that point, Lille also had 150 of the 622 *molleton* looms found in northern French Flanders and eleven *couverture* looms; these cloths too were sold primarily in France and the Low Countries.[57] Neither in quantity nor in market orientation, however, did these crafts compensate for the waning of the city's light drapery.

Much of the seventeenth century was no kinder to village than to city light drapery. If anything, in fact, Lille's trades fared better during this time than Roubaix's. For while an upturn occurred in both centres around mid-century, in Lille it continued through the middle of the 1680s (Table 12), whereas in Roubaix production dropped abruptly once more from *c.*1660 and remained low until *c.*1685. At that point, the conjuncture reversed in each. Lille's light drapery suddenly collapsed, while Roubaix's reached a level of output (in excess of 1,000 pieces a year) not attained since the beginning of the century and then maintained it for a decade. In the mid-1690s, both changed direction once again, as Lille underwent a short-lived revival while Roubaix fell off steeply. For a brief moment at the start of the eighteenth century, light drapery in town and village alike moved upward, and both saw their prosperity sabotaged by the Dutch occupation. But from then on, their paths diverged for good. At Roubaix, recovery came quickly and proved durable. Despite brief cyclical downturns every ten years or so, and a more prolonged but still moderate contraction from *c.*1755 until the early 1760s, its light woollen output consistently expanded across the eighteenth century. In 1701–10, annual output averaged 5,500 pieces; by the 1730s, nearly 20,000 pieces; in the 1780s, more than 41,000 cloths. Lille's long-term trend, as we have seen, was downward.[58]

In the mid-eighteenth century, Roubaix's woollens, perhaps aided by rising wage rates across the Channel, were besting English goods in Spain, the Levant, and the Indies. They were also sold in France, Holland, and the Austrian Netherlands.[59] By 1771, 140 manufacturers (*fabricants*) were said to give work to some 10,000 people in Roubaix and twenty-three surrounding hamlets.[60] Most were engaged in making *calamandes*, a generic name for fabrics (including, according to Dieudonné, *bourats*, *baracans*, serges, damasks, *prunelles*, and many others)

woven of *sayette* thread spun from wool coming from Holland, northern France (French Flanders, Hainaut, the Cambrésis, and Artois), and nearby provinces of the Austrian Netherlands, combined with local flax and imported silk and goat hair.[61] Only the aftermath of the Eden Treaty of 1786, which by lowering tariffs unleashed a flood of English goods into France, ended the secular upsurge that peaked at 52,466 pieces in 1787.[62]

In the sixteenth century, the light drapery of Lille and Roubaix had grown concomitantly, though with urban far overshadowing rural trades, and both had suffered sharp reverses from about 1620. But beginning in the mid-seventeenth century, their histories rarely ran parallel. During the second half of that century, Lille had done relatively better than Roubaix, probably reflecting the advantages of an urban location and trading contacts during the French conquest and the subsequent commercial readjustments that it necessitated. But from *c.*1715 town and village exchanged places for good: Roubaix rather steadily advanced while Lille—though with more pauses—declined. By the second half of the eighteenth century, village produced more light drapery than city.

Table 14, which hints at Roubaix's late seventeenth-century light drapery troubles as well as its outstanding eighteenth-century success,[63] also indicates that adjacent Tourcoing largely abandoned light

TABLE 14. *Light drapery looms in Roubaix and Tourcoing, 1671, 1693, 1789*

Year	Roubaix	Tourcoing
1671	551	—
1693	*c.*500[a]	*c.*500[b]
1789	1,608[c]	142[d]

[a] All *calamandes*.
[b] 380 made *bourats*, the rest made other sorts of *calamandes*.
[c] 1600 made *calamandes*; 8 made camlets.
[d] 120 wove *calamandes*, 22 made camlets.

Sources: For 1671, Rousseau (1969), 77; for 1693, Lottin (1986*a*), 85, Lottin (1968), 54 (same material in tabular form); for 1789, Dieudonné (1804), ii. 436–45. A document from 1780, which counted 1,600 looms in Roubaix (Rousseau (1969: 77)) indicates that Dieudonné's figures were probably correct.

drapery weaving across this period. This latter village did not, however, give up cheap woollens production but switched to *molletons*. Reputedly invented by a local man in the early eighteenth century, these stuffs were used in jackets and linings sold to peasants and the urban *bas peuple* throughout France. Soon after their appearance, Lille's *bourgetteurs* and *sayetteurs* claimed sole right to them by virtue of several seventeenth-century decrees. Yet although between 1732 and 1777 rural *molleton* weaving was outlawed—and the prohibitions enforced by seizure of village *molletons* whenever they appeared in Lille and at least once on the Tourcoing market—Tourcoing's craft survived. In 1748, 2,000 people in the village were said to be employed just in making *molletons*, women and girls spinning the linen warp, men and boys carding and spinning the woollen woof and weaving the cloth.[64] According to later testimony, output reached its apogee during the era of the American Revolution, as colonists spurning English goods provided enough demand to keep 600 looms and 6,000 workers busy.[65] And though the end of the Revolution and later the Eden Treaty provoked a downturn, according to Dieudonné 360 of the region's 622 *molleton* looms were to be found at Tourcoing in 1789.[66]

At the same time, Tourcoing became the leading regional centre for preparing wool. In the 1720s, if not earlier, thread was spun there for use across the border in the Austrian Netherlands as well as locally. A report of 1790 noted that spinning employed 8,000 people (4,500 women, 3,000 children, 500 men) in Tourcoing and nearby villages.[67] Despite the emergence of competing businesses across the frontier, Tourcoing also turned into a major producer of combed wool. Its 1,600 workers comprised four-fifths of the future Département du Nord's total in 1789, supplying weavers and hosiers in the region, in Artois, and as far away as Amiens, Rouen, and Paris.[68]

Both the same ability to adapt to changing conditions and some degree of specialization were likewise to be seen in the smaller *bourgs* and villages of northern French Flanders. Once an old drapery centre, Lannoy had switched to velveteens at some point in the sixteenth century. It continued to make them well into the eighteenth century, when the development of wallpaper all but obliterated the market for this fabric. Thereafter, some weavers switched to making *ras* and *pinchinats*, others made *calamandes*, while the majority took up *molletons* (to the extent of 85 looms in 1789).[69] Wattrelos, the largest of the village light cloth centres in 1608, when it too specialized in velveteens, also subsequently turned to *molletons*: in 1750, 80–100 weavers of the fabric

were said to be located there.[70] And while it is not possible to cite them in detail, a least a dozen other villages and hamlets likewise were engaged in light cloth spinning, combing, and weaving—often, it appears, under the tutelage of increasingly powerful entrepreneurs from Tourcoing and Roubaix.[71]

In some respects, the evolution of the light woollens trades of Hainaut and the Tournaisis during the second early modern period resembled that of French Flanders, though on a smaller scale. While records are few, they indicate a similarly prolonged depression across much of the seventeenth century, followed by an eighteenth-century revival resulting in a tendency to specialization in particular villages and districts. In addition, light draperies all but disappeared from one urban centre, despite a last attempt at survival by the adoption of new types of fabrics. In contrast to Lille, however, at Tournai, Mons, and Valenciennes light drapery output failed to stabilize in the later seventeenth century after an initial retreat earlier in the century. And in contrast to French Flanders as a whole, where camlets and *calamandes* were destined for external even more than internal markets, the cheap woollens woven in eighteenth-century Hainaut and the Tournaisis were directed almost exclusively at local consumers or those in neighbouring provinces, such as Flanders. Combers and spinners too produced mainly for nearby customers, even if at times these lay across the border that from 1667–8 separated areas long united politically and economically.

At Tournai, light drapery output had undergone a gradual decline from the early seventeenth century, but following the French conquest in 1667 the pace accelerated. Here, in contradistinction to Lille, an urban setting proved no boon to light woollens under conditions of war, conquest, and economic reorientation. By 1671–80, *bourgetterie* production and sales of *sayette* thread had been reduced to less than 40 per cent of their peak levels, and by 1717, after the Tournaisis was reintegrated into the Austrian Netherlands, both were virtually extinct.[72] At least one effort was made in 1699 to provide employment for 'a great number of poor townspeople' by opening a new textile manufacture, but it soon came to naught, victim of a siege in 1709 that disrupted deliveries and delayed payment for large amounts of cloth purchased by the army.[73]

In the event, neither the dwindling away of *sayetterie* and *bourgetterie* nor this failed attempt spelled the end of Tournai's woollens industry, though it is unclear how long the trades remained at a very reduced level. By 1751, date of our next information, the city's weavers were

credited with turning out camlets, *calamandes*, *croisées*, serges, and *molletons*, although no quantitative details were provided. It was also noted that while Lille's 'manufactures et fabriques' were prospering, Tournai's had 'degenerated' after being cut off from France. Documents from 1762 and 1764 mention 33 *molleton* masters employing 80 urban workers, along with one substantial camlet enterprise with 30 looms, 62 workers in Tournai, and an annual output of 1,000 pieces of fabric. Also named were two smaller camlet producers each with three or four looms and ten or so workers, two serge weavers, and numerous combers.

Government intervention seems to have played a role in stimulating development, for the large camlet *fabrique* had been established in 1756 with the aid of a concession (*octroi*). The expressed hope was to take advantage of lower wages to undersell Lille, though it was acknowledged that the beginnings of the enterprise had proven difficult due to insufficiently skilled and hard-working weavers, problems with obtaining sufficient wool (Lille merchants tended to secure it first), and the lack of a dye-works in Tournai. Whatever the eventual success of the endeavour—I have seen no subsequent survey—the number of looms making light woollens and mixed stuffs, certainly less than 100 in the mid-1760s, was far below Lille's (more than 800 for *sayetterie* goods alone). And whereas in the previous century Tournai's says and other cloths had been exported to Seville, and thence doubtless to the Americas, by the 1750s if not earlier its woollen goods were being sold exclusively in the Austrian Netherlands and, to a lesser extent, in France. It was linens, which busied more looms than woollens, that formed the basis of Tournai's export trade in the eighteenth century, sending goods to France, Spain, Portugal, Germany, England, and Holland as well as to other parts of the southern Netherlands.[74]

In 1676, Mons's municipal government amalgamated the previously separate say and *drap* corporations and suspended all fees, apprenticeship, and mastership requirements for any master from elsewhere who would come to the city.[75] But the evidently troubled industry survived. Fifteen masters were present at a meeting of the corporation in 1713; in 1738 eleven guild masters employed some 700 workers, all but 100 of whom were probably spinners in the countryside, and in 1749 thirteen *fabricants* controlled a total of 67 looms and one manufacturer of flannels had seven.[76] By 1764, eight entrepreneurs belonged to the drapery guild, practising a craft said to have been established in the city for nearly 150 years. They employed 104 looms to weave local wool into

about 4,700 pieces (some 220,000 ells) of *drap*, serge, *molletons*, *carisées*, *calamandes*, camlets, and other woollens each year for sale around Mons and in neighbouring Flanders. About 1,200 workers were said to be employed in town and country, the great majority of them peasant women spinners. Some manufacturers, it was reported, specialized in only a few varieties of cloth, but others made every kind, 'setting their looms to work sometimes on one type, sometimes on another'. Another sixteen looms, in four *fabriques* run by Frenchmen who had come to Mons eight years earlier, gave work to 100 people making 360 *pannes* or plush (21,360 ells) annually. Combers, carders, and spinners also lived in the city, which housed as well two dye-works and had several fulleries right outside the walls.

The year 1764 seems to have been a high point for members of the drapery corporation, for between 1766 and 1769 the number of their looms operating sank to between 58 and 61. Even in 1776 (time of the next and last survey), an upturn had only brought the number of looms back to 77, producing just 100,000 ells. Plush-making did somewhat better: ten *fabriques* had 50 looms in 1767 and 49 looms two years later. But in 1776 their number had fallen to 30 (plus another five weaving *pannes sur poil* in an establishment begun during the last year) and between them all the looms accounted for only 15,000 ells of *panne*. So while cheap woollens production continued in Mons, it provided only about 250–300 urban jobs even in 1764, while the 5,000 pieces turned out that year were just one third the number woven two centuries before. Like Tournai, Mons did become something of a linen centre, with 120 looms counted in 1764 (date of the only report we have). In contrast to Tournai's, however, the linens of Mons were sold primarily in the city itself and its neighbourhood. Mons also had a cotton industry, though after 1764 this trade seems to have fallen prey to the same kind of downturn as woollens, plummeting from 107 looms in that year to 67 in 1769 and just 33 in 1776.[77] In the eighteenth century, in short, not even the addition of non-woollen textiles enabled Mons to regain her earlier status as a major production centre of textiles for export.

Scattered documents indicate that a woollen industry persisted in Valenciennes, but from all evidence it was waning across the seventeenth and eighteenth centuries. In 1671 leaders of the *sayetterie* corporation (whose members now wove little but *baracans* or *bouracans*, a type of rough camlet) noted that their trade, 'which is almost the only one remaining in this city', had little business. Masters found it difficult to survive; workers were emigrating.[78] Only 34 *baracan* masters were

counted in 1699, just 25 to 30 in 1713. They were said to employ few workers and almost no apprentices, so in 1723, with a mere five masters remaining, the craft was opened up to all comers. *Baracan* makers' problems stemmed, the municipal government maintained, in part from the disruptions caused by war, but (in an echo of its predecessors' assertions back in 1611) 'principally' from declining quality due to the non-observance of regulations and the use of inferior wool and dyestuffs. Competition from crafts in Lille and Abbeville also played a role. Weavers complained of difficulties in obtaining thread now that spinners in the area had found that they could earn more preparing flax than wool. Yet the fact that, as weavers themselves admitted, thread was available from the Beaumont, Mons, and Tournai districts in the Austrian Netherlands suggests that problems created by raw material supplies ought not to be exaggerated.

In common with many troubled centres, Valenciennes tried to avert the demise of its woollens industry by innovation. According to a later document, some producers, aided monetarily by the city government, turned to rough serges and *cazées*, used for soldiers' uniforms, and the industry 'was on the point of flourishing' before 1720. Unfortunately, hopes were dashed by competition from rural weavers across the nearby border. They were said to have 'much more aptitude (*facilité*)' than their French counterparts, and therefore could produce goods for less. So by the middle of the century serges and *cazées* were woven by no more than ten masters—only two of whom made significant amounts—and by 1781 the trade consisted of a lone master with four looms. Even more than in Tournai and Mons, it was linens that far and away dominated Valenciennes's textiles in the eighteenth century, though this industry too left the town for the countryside as the century wore on.[79]

Rural Hainaut's cheap drapery resembled its urban counterpart in several key respects during this period. Attempts to adapt to adverse conditions were to be found throughout the province, but many did not prosper for long, particularly in the districts conquered by France in the mid-seventeenth century. Again, the cheap woollens industry that did survive used carded as well as combed wool, making *molletons* as well as serges and *cazées*, thereby confounding distinctions between new and light drapery. Like towns, too, villages in Hainaut came to produce mainly for local markets or those in nearby regions, and preparatory trades became more important than weaving, most likely to an even greater extent than in Mons or Tournai given the predominantly rural location of spinning.

At Maubeuge, serges, *cazées*, and similar light stuffs had replaced says by the early eighteenth century. Despite charging slightly higher prices than rivals in the Netherlands, the industry may have prospered for several decades on the basis of superior quality, for Maubeuge producers claimed to pay close attention to regulations, prohibit the use of mechanical stretchers, and carefully inspect both wool and woven cloth. In the 1730s, Maubeuge had twenty-eight merchant manufacturers of *calamandes*, camlets, *estamines*, *molletons*, serges, *cazées*, and a variety of other fabrics, and they were said to employ in excess of one thousand people in the *bourg* and neighbouring villages (at least seven-eighths of whom must have been spinners). But shortly after, the 5–6 patar per ell price advantage enjoyed by competitors across the border began to tell; perhaps quality mattered less than cost to the peasants and workers who bought the cloth. By mid-century just seven masters remained, operating thirty-four looms and weaving 1,700 pieces of cloth each year, their fellows having switched once again, this time to stocking-making.[80]

The same fate befell Bavay, Avesnes, and half a dozen other villages near the frontier. In 1779, when total recorded output of serges, *cazées*, and *molletons* in French Hainaut amounted to 5,150 pieces consumed mainly by the local peasantry and soldiers, Maubeuge counted just twelve looms making 1,100 pieces, while Avesnes and its region had eight turning out some 400 cloths. Only Solre-le-Château, with fifty looms weaving 3,000 pieces per year, was a centre of significance.[81] Ten years later, an estimated 800 male and female spinners were employed in the district to supply a total of eighty looms. Output may have been as high as 6,000 pieces in 1788, but it was just 2,863 in the following year.[82] A recent calculation for the whole of French Hainaut and the Cambrésis, urban and rural, suggests that *c.*1791 at least 1,500 spinners and 450–500 other workers (weavers, combers, finishers) made a living from light woollens. This is not a trivial number, but it falls far below the more than 50,000–60,000 people employed full time by the linen industry, along with perhaps 40,000–50,000 more who worked intermittently.[83]

As already noted, during the eighteenth century the chief competitors of the new drapery of rural French Hainaut were to be found in villages just a few kilometres away in the Austrian Netherlands. At present, we have no information about their situation before the mid-eighteenth century, but surveys taken at that time are as invaluable for the countryside as for Mons and Tournai. From them we learn that a couple of the larger *bourgs* (they had ranked among Hainaut's *bonnes villes* in the

Middle Ages) had moderate concentrations of looms. Fifteen kilometres east of Tournai in Leuze, for example, which had been a new drapery producer two centuries earlier (though of unknown magnitude), the municipal and provincial administrations made a concerted effort shortly after 1750 to establish a manufactory of *pannes*, *calamandes*, says, serges, and the like. The attempt bore fruit for at least the decade of the 1760s, for which alone we have records. The six looms found in 1762 had increased to fifteen five years later, most producing cloth on the basis of orders from local individuals. Whether or not the result of similar initiatives, in 1764 three manufacturers of say and *carisée* in Binche (on the eastern edge of Hainaut, some 15 km. from Mons) owned ten looms and gave work to fifteen weavers and combers.[84]

Further to the south lay Beaumont, which trumpeted its long traditions and corporate organization. Despite a slowdown in sales that had recently idled 14 looms and led 150 workers to emigrate, in 1764 28 looms making says, *carisées*, and *molletons* gave work to 392 people, at least 225 of whom would have been spinners. Employers in Chimay, in southernmost Hainaut, where the making of *molletons*, camlets, and the like was said to have been established in the mid-seventeenth century, provided work to twenty to twenty-five weavers in the *bourg* and neighbouring villages and hamlets.[85] In addition, several villages and hamlets, each housing a loom or two, were to be found in the neighbourhood of all the *bourgs*, as well as around Mons.[86] All used local raw materials to make very cheap goods for local peasants, workers, and townspeople in their own and nearby provinces of the Austrian Netherlands and, albeit illegally, France, where, as we have seen, these fabrics enjoyed a decided price edge over indigenous cloth.

Though the rural weaving crafts of Austrian Hainaut and the Tournaisis may have constituted formidable competition for the equally small-scale and locally oriented new drapery of French Hainaut, woollen spinning and combing—for French as well as internal markets—were much more considerable activities in the area. Villages throughout the countryside engaged in these activities, but they were especially to be found near the border, perhaps to cut delivery costs and hasten delivery, though just as likely to profit from opportunities for smuggling. All of the one hundred inhabitants of the village of Montignies-sur-Roc, it was claimed in 1763, washed and combed wool, and fifty or more men, women, and children worked at least part time at these tasks in both Sivry and Grandrieu; all were on or very close to the frontier.[87] Already in 1729, Valenciennes's new drapery and stocking weavers

were said to rely on thread from the neighbourhoods of Tournai, Mons, and Beaumont,[88] and thirty-five years later officials from the area of Esplechin (on the border directly east of Lille), where every woman and girl was allegedly employed as a spinner, contended that '[t]he French cannot dispense with our raw materials', including both flax and wool. The 800 spinners who laboured steadily from All Saints' Day to Easter in Rongy, Rumes, Wannehain, and Bourguilles, all settlements (like Esplechin) south and south-east of Tournai, however, purportedly worked only for establishments in that city, and even at Esplechin enough wool remained after French purchases to satisfy internal needs.[89]

So while both rural and urban Hainaut and the Tournaisis maintained some cheap woollens weaving in the eighteenth century, their manufactures were small in the aggregate and had essentially lost the export orientation characteristic of their more substantial sixteenth-century predecessors. Now their woollen textiles were destined predominantly for quite local markets. Linen became the leading textile sector for both domestic and foreign markets. The only drapery work that continued to provide a large amount of employment and (at least in the Austrian Netherlands) significant exports consisted of spinning and combing. So in terms of woollens, Hainaut and the Tournaisis became predominantly processors of raw materials integrated into an inter-regional division of labour centred on French Flanders.[90] Under the sexual division of labour generally obtaining at the time, the labour force became largely female as preparatory processes emerged as the main light drapery activities.

The woollens industry of French Flanders remained much larger but increasingly came to be concentrated in the northern part of the area, notably the triangle between Lille, Roubaix, and Tourcoing, including the villages located therein. Douai's attempts to rejoin the ranks of light drapery producers all miscarried, while the Lys valley *bourgs* and villages followed Hainaut and the Tournaisis into linens after a final flowering of new drapery in the sixteenth and early seventeenth centuries.[91] Significantly, Lille itself housed 980 linen looms and 600 flax thread-twisting mills in 1789.[92] Light drapery, which remained primarily oriented towards foreign markets, was found nearly exclusively in Lille and Roubaix. But if the city maintained large-scale production, its *sayetterie* and *bourgetterie* were on the decline, while Roubaix's industry was growing. To some degree, Lille's troubles were the obverse of rural expansion, which overtook Lille's as well as English cloth in traditional

markets. The waning of Lille's light drapery can also be traced to the widespread implementation of mercantilist measures, as can be seen by the fact that its camlets (like Tourcoing's *molletons*) enjoyed a short-lived boost after rebellious American colonists stopped buying English cloth.[93]

Lille's other cloth also depended on exports. According to Dieudonné, only one-thirtieth of the city's *gingas* linen used for shirting and ticking was sold in the Département du Nord and another twelve-thirtieths elsewhere in France. The remainder went to the American colonies of France and Spain. Similarly, one-third of Lille's vast output of cheap lace went to Italy and America, another third was smuggled into England, and the final third was consumed in France. Twisted thread went to Spain, Italy, Switzerland, England, and the Indies as well as lace-making areas of France.[94] *Molletons*, however, whether woven in Lille or in Tourcoing, were sold in the protected domestic market, as were the new draperies that reappeared in Lille. Only under exceptional circumstances such as the American Revolution, it appears, could these fabrics compete successfully in export markets.

Much more than in Hainaut and the Tournaisis, then, a degree of specialization developed among the woollens centres of French Flanders during the eighteenth century, most notably in terms of types of cloth but also with respect to stages in the production process. With its concentration of spinning and combing, Tourcoing and its dependencies had a preponderantly female labour force. Yet the great amount of weaving carried on in this *bourg*, in many nearby villages, and especially in Roubaix and Lille—not to mention Lille's finishing trades—meant that the woollens industry of the area continued to employ a substantial number of adult men.

III

Studies of proto-industrialization typically postulate or assume a distinct and complementary regional division of labour in which cities provided financing, co-ordination, and marketing, while also specializing in commodities and services requiring greater amounts of skill, supervision, and capital. In rural areas, blessed with lower wages, taxes, and cost of living, urban merchants introduced putting-out systems to produce goods that were labour-intensive but demanded less skill.[95]

Evidence from the textile trades of French Flanders, Hainaut, and the Tournaisis can be cited in support of many elements of this model.

Relatively low-skill labour-intensive trades like spinning and, increasingly, combing and weaving were carried on in many villages, often with materials put out by urban entrepreneurs. As early as 1612, for example, it was alleged that unnamed merchants of Lille regularly distributed wool to *bourgetterie* makers in Roubaix, Tourcoing, Wattrelos, Armentières, and other village centres. One Lillois was said to control 40–50 looms operated by country folk.[96] Conversely, Mons, Tournai, and Lille all had silkworks, and the latter two cities made carpets and tapestries; Lille, at least, also wove velvet plush, gold and silver cloth, and other expensive goods. In addition, all were home to fullers, dyers, calenders, and other finishers. Lace, a trade in which quick response to shifting fashions was a *sine qua non* for success, throve in eighteenth-century Lille, which in 1789, according to Dieudonné, housed 13,600 of the 14,000 lace-makers of the future Département du Nord.[97]

In addition, contemporaries frequently quoted cost differentials favourable to the countryside. Already in 1560, Lille, Douai, Valenciennes, Tournai, and nearly a dozen other cities petitioned the central government to forbid rural weaving on the grounds that weak regulations in combination with low taxes and living costs permitted village producers to make cloth for 10–12 patars per ell less than their urban counterparts.[98] Similarly, in 1671 the municipal government of Lille pointed to lower production costs in the countryside to justify vehement but vain opposition to a royal edict opening the city's finishing facilities to certain rural fabrics.[99] Such claims ought not be dismissed simply as urban exaggeration, though doubtless they contained an element of that. Tourcoing's authorities, for instance, speaking in 1748, argued that rural areas could produce cloth for less than Lille because a lower standard of living prevailed. Villagers, they stated, subsisted principally on bread and had clothing and dwellings of 'petite valeur'; in addition, they owed fewer taxes.[100]

For all that, the early modern history of the woollens crafts in our areas also buttresses attempts to refine the explanation of the regional division of labour postulated in the dominant accounts of proto-industrialization. Herman Van der Wee, for one, has pointed out that much rural industry in the southern Netherlands had old and autonomous foundations and an orientation to distant markets independent of urban entrepreneurs. Village crafts did not, that is, simply represent the transfer of activity from town to country.[101] As noted in Part I, many villages and *bourgs* in our regions had produced drapery for export starting in the twelfth and thirteenth centuries. Furthermore—as

reported in Parts I and II—some of them, as well as others that had never before housed weaving crafts, launched new and light draperies at various times across the medieval and early modern eras, frequently in the teeth of bitter opposition from towns, which wanted to monopolize these same trades.[102] Rural weavers could draw on local wool supplies, combed, carded, and spun by village women and men. In addition, the countryside had merchants and entrepreneurs supplied with capital and direct contacts with finishing and exporting centres like Bruges, Ghent, and Antwerp.[103]

Rather than a countryside passively submitting to urban initiatives, in other words, we need to recognize that both generated economic change, with the result that villages ended up carrying out many of the same functions as cities.[104] Towns tacitly testified to rural dynamism by attempting to appropriate village creations. Lille, for instance, copied *molletons*—invented in Tourcoing—then turned around and tried to forbid their manufacture in the countryside.[105] In short, antagonism as well as complementarity characterized urban–rural industrial relationships. Some of the regional integration postulated by proto-industrialization theory obtained but so did much bitter competition.

Paul Hohenberg has argued that the countryside did not necessarily nor invariably enjoy a clear advantage over urban centres. Cities had various ways of holding down labour costs, and entrepreneurs operating in the countryside could face supervisory and transport problems that raised their expenses.[106] Most urban new or light drapery centres in French Flanders, Hainaut, and the Tournaisis have left too little evidence to test Hohenberg's interpretation. In Lille, however, more abundant documentation does suggest that cost-reducing practices helped the city remain a major producer of fabrics for mass export markets across the early modern period. To begin with, the light cloth corporations—which by the later seventeenth century had become essentially employers' associations—started to disregard long-standing prohibitions and permit the hiring of 'unfree' workers in preference to those having earned the corporate franchise.[107] Lille also had a well-developed municipal welfare system which, at least in the sixteenth century, distributed income supplements on a regular basis, thereby allowing wages to stay low.[108]

Equally important, many of Lille's weavers were not wage workers but self-employed petty masters. Such producers could, of course, cut their labour costs by greater exploitation of themselves and the family members who worked with them. Already in the sixteenth century,

moreover, these artisans had shown a remarkable capacity to adopt new fabrics (notably, but not solely, *changéants*) requiring less labour.[109] According to officials in Tournai, a producer of this type ('celui qui travaille sans dépendence' on his own loom or two in his own house) worked harder than those employed in putting-out: thus Tournai was exhorted to find ways of encouraging them.[110] Then, too, accusations that workers in Roubaix kept waste wool and silk, which they sold for their own profit, made less cloth than their employers felt the amount of wool put out called for, and engaged in other sorts of fraud, suggest the existence of costs that could negate the benefits of lower village wages.[111]

There are, in fact, a few hints that on occasion the cost advantage of rural labour narrowed sufficiently that urban weavers could successfully compete. When—in one of the rare surviving cases from Lille's *sayetterie* tribunal—Jean-Baptiste Desruelles was charged in 1698 with putting out thread in violation of corporate rules, it turned out that he employed weavers both in Lille and in the light drapery villages north of town.[112] Dieudonné, reporting a century later, also indicated that urban–rural labour cost differentials may not have been substantial. After giving wages for *molleton* weavers and associated workers in Lille, he added, 'it appears that at Tourcoing, Roubaix and Lannoi [*sic*] the same workers earn a little less [*un peu moins*]'.[113]

Two other strategies may have played an even stronger role in building and sustaining Lille's light woollens. One involved close attention to standards. Lille's light drapery regulations—like those governing earlier types of woollens—consisted largely of technical requirements, mandatory inspections, and rules ordering artisans to take back at their entire loss any piece of cloth found substandard by a merchant (and pay a fine on top).[114] Producers themselves seem to have been convinced that heeding quality paid dividends. In the 1730s, for example, Lille's *sayetteurs* bragged that quality was at the root of their craft's continued existence. Holland merchants, they went on, had found rural cloth so badly made, skimpy, and replete with other problems that they now insisted on buying only fabrics made, inspected, and sealed in Lille.[115] Dieudonné agreed. It was the 'strict observance of regulations', he wrote, that accounted for the 'marked preference' shown for Lille's camlets over those made by competitors.[116] Had Lillois wanted to bolster their position, they could well have cited Valenciennes, where merchants complained bitterly about shoddily made, undersized fabrics passed by inspectors who had become careless once they had bought

their offices.[117] Of course, higher quality did not save Maubeuge's cheap woollens from defeat at the hands of lower-cost competitors.[118] But Maubeuge was selling to peasants and workers, while Lille's light drapery was apparently directed at middling groups in society, for whom quality would presumably be a more important consideration.

The second policy was the acquisition and enforcement of monopolies. To be sure, Lille never managed to impose its ideal, in which the countryside would produce abundant, cheap thread, while the town would weave and finish cloth.[119] As we have seen, in the sixteenth and early seventeenth centuries villages won authorization to make mixed fabrics using *sayette* warps, and thereafter they continually encroached upon what Lille considered its privileges, despite repeated lawsuits and even, on one occasion, the dispatch of a bailiff and guild masters to inspect village goods and perhaps smash illegal looms.[120] The city was, however, successful with respect to fabrics woven entirely of *sayette* thread, keeping exclusive rights within its castelry to says, *changéants*, and later camlets between 1535 and 1777. As a result, Dieudonné credited Lille with housing 800 of the future Département du Nord's 830 camlet looms in 1789.[121]

Certainly contemporaries were convinced of the value of Lille's monopolies. Its own municipal and corporate leaders darkly prophesied mass impoverishment and wholesale emigration—'ruin', in short—every time villagers petitioned for permission to make fabrics claimed by Lille or simply started to weave them.[122] Village producers were also keenly and resentfully cognizant of the advantages bestowed upon towns by monopolies. They argued against such privileges on grounds of both principle—'freedom is the soul of commerce'—and utility. Not only was work needed for village residents, but the examples of England and Holland, 'where there is no distinction between towns and countryside with respect to manufactures', demonstrated that the destruction of privileges would encourage economic growth.[123] Such appeals fell on deaf ears, however, for government officials understood well the significance of monopolies. In 1698, for example, the intendant Bagnols—himself a defender of many urban privileges—admitted that the flowering of Roubaix and Tourcoing's woollen and mixed fabrics would have long since ruined town industries had not 'the making of many stuffs' been reserved to cities.[124]

In the end, of course, neither quality nor monopolies—nor any other strategy—proved able to prevent the erosion of Lille's light drapery and its eventual surpassing by Roubaix's. Taken together, nevertheless,

they helped keep the city's woollen cloth industry going on a large scale over three centuries, and did so not on the basis of a switch to luxury goods but on the basis of fabrics directed at the middle-class market.

From a historiographical perspective, Lille's monopolies point to a significant source of economic development unjustly neglected by proto-industrialization accounts, namely, the role of government intervention. Privileges represented only one facet. Direct subventions were another. Admittedly, grants did not guarantee success, but the implantation of inexpensive carded woollens production in eighteenth-century Lille (cited above) shows their value, particularly when combined with other forms of assistance. These additional types of help frequently included tariff policies. Not only were these critical to Lille's new drapery revival, but in the Austrian Netherlands raising export duties on raw wool exports and abolishing those on combed wool stimulated impressive growth in the wool combing industry.

The latter case—like the history of many other rural and urban textile crafts throughout the three provinces—raises two final considerations about proto-industrialization. First, as presently constituted, proto-industrial interpretations focus on rural–urban production interactions within single regional economies. Relations with other regions are considered from a commercial perspective: proto-industry is differentiated from traditional rural industry by virtue of producing for extra-regional markets. But examination of Walloon Flanders, Hainaut, and the Tournaisis indicates a need to consider inter-regional production structures as well. Second, in some instances, inter-regional relations crossed frontiers. At times, production was integrated across these borders. Wool spun and combed in the eighteenth-century Austrian Netherlands, for example, was woven into cloth on the French side. Here the international division of labour resembled the rural–urban division postulated by classical proto-industrialization theories. Yet there was also a good deal of friction across borders, as between town and country. Both the Austrian and the French areas performed spinning and combing as well as weaving, and a range of government policies aimed at developing—even monopolizing—the entire production process at the expense of rivals on the other side of frontiers. Because of their peculiar political and fiscal conditions, then, frontier zones comprised unique types of economic units, both (legally as well as illegally) permeable and divided, that deserve further study and theorization.

The early modern history of the new and light draperies of French Flanders, Hainaut, and the Tournaisis was initially one of rising output and geographical expansion, but ultimately one—with few exceptions—of contraction and concentration. From that perspective, the era from the end of the fifteenth to the end of the eighteenth century constituted another chapter in the history of the southern Netherlands woollens crafts, another cycle of rise and decline. But if we widen our view to include all textiles, urban and rural—linens, cottons, mixed stuffs, luxury woollens—the period appears as a phase in a longer process of innovation, adoption, and adaptation that once again was renewing the cloth industry in town and country, preparing it for qualitative change as well as quantitative growth.[125]

NOTES

1. This account summarizes all too briefly a very large literature. For overviews, see Coornaert (1950), 59–96; Verhulst (1972), 281–322; Van der Wee (1975); and now John Munro, Ch. 3 in this volume. For essential primary sources and commentary, see Espinas and Pirenne (1906–24); De Sagher (1951–66). Espinas (1923), the only general secondary work, is repetitive and talks little about the historical development of the crafts.
2. See Espinas (1931); Platelle (1982); Jennepin (1889–1909); Verriest (1943), 1–104; Arnould (1969), 130; Arnould (1954), 47–107; Hocquet (1906); Rolland (1957).
3. Coleman (1969), 423.
4. Van der Wee (1975). It is also worth noting that in the early modern Low Countries light drapery was typically made by the members of municipally regulated corporations of *sayetteurs*, *bourgetteurs*, and the like chartered in the years around 1500, whereas new drapery weavers usually belonged to—or at least were governed by—long-established drapery corporations. For a more detailed discussion and further clarification, see Munro, Ch. 3, pts. I and II.
5. Van der Wee (1975); Coleman (1969), 424. Both authors rely on Coornaert (1930*b*). For another instance of terminological discrepancy, cf. kerseys: these light, cheap, and less elaborately fulled cloths—which in Low Countries usage would be considered new draperies—are referred to by Coleman (p. 422) as old drapery.
6. The best guide to the many different kinds of cloth remains Savary des Bruslons (1741). Useful excerpts are published in Lottin (1968), 382–4.
7. De Sagher (1951–66), i. 649–50; ADN, B3762–3. Bousbecque's drapery privilege had been confirmed in 1531, though only a 'bien petite' amount of cloth was being woven there; Dalle (1880), 46, 139. Cf. Linselles, where a flourishing craft that exported to Germany in the second half of the 14th cent. apparently

all but disappeared during the next century. Just one *drapier*, three men recorded as *drapiers et laboureurs*, and a fuller were listed among 52 village notables in 1546, while in 1593 a draper in Bondues reported giving work to three *estamette* (a kind of new drapery) looms in Linselles. De Sagher (1951–66), ii. 655–6. For Bousbecque's and Linselles's earlier drapery, see Espinas and Pirenne (1906–24), i. 339–41; iii. 38–40.

8. AM Lille, Reg. 16,255–357, 895; Vanhaeck (1910), ii. 48–9; AM Lille, Reg. 381, fos. 186^{v}–188^{v}; De Sagher (1937), 479; AM Lille, Aff[aires] gén[érales], C[arton] 1222, d[ossier] 10. See also DuPlessis (1991), 87–8.
9. AM Douai, CC 256–65; HH, Registre des drapiers 1540–1610.
10. ADN, B3762–63; De Sagher (1951–66), ii. 295–6.
11. AM Douai, CC 235–342, HH tiroir 252, Reg. des drapiers 1540–1610; De Sagher (1937), 475, 498; A.P. (1867), 114–33.
12. For the survey, see AM Lille, Aff. gén., C. 1222, d. 10. Much of it (though little of the quantitative data already cited several times) has been summarized from a document in the municipal archives of Saint-Omer by Deschamps de Pas (1863), 303–29.
13. For the significance of the Baltic and Mediterranean markets, see De Sagher (1951–66), iii. 415–16; Coleman (1969), 424; and Van der Wee (1975), 216. For the domestic market earlier in the 16th cent., see the statement by several Lille merchants in 1545 claiming that Comines's new drapery, sold to 'le commun', had chased cloth from Abbeville, Rouen, 'et autres pays estrangers' out of the Low Countries; De Sagher (1951–66), ii. 52–3.
14. De Sagher (1951–66), ii. 11–12, 296, 303. Some flickers of activity did survive, however: in 1718 and again in 1724 Comines was credited with making a very small quantity of *estamettes*, *perpetuanas*, and mixed cloths; Vanhaeck (1910), i. 294–6; ADN, C112. For Halluin's and Comines's earlier textile history, see Espinas and Pirenne (1906–24), ii. 663–5; i. 618–46.
15. Coleman (1969), 424.
16. De Sagher (1951–66), i. 485–6 (in 1572, many textile artisans were forced to beg or emigrate, while the number of fulling workers, formerly about 70, had fallen to 28, of whom just ten had sufficient work), 192–203, 435–77.
17. De Sagher (1951–66), ii. 304–25, 643–6, 606–8, 616–17, 619; iii. 604; AM Lille, Aff. gén., C. 1222, d. 10.
18. De Sagher (1951–66), iii. 413–21; cf. Calonne (1986), 40–9, 56–7. In 1505, Tourcoing had claimed to be home to 120 drapers as well as 'a crowd of' weavers and fullers, reflecting the importance of its export trade to the Baltic; ADN, B3762. For the village's earlier textile history, see Espinas and Pirenne (1906–24), iii. 398–410.
19. De Sagher (1951–66), i. 203–23, 479–80. The fact that the woollen cloth of Armentières was permitted entry into the Spanish Netherlands even after the French conquest (ibid. 496) may have helped its survival, albeit at a minimal level, into the 18th cent.

20. De Sagher (1951–66), iii. 604; ii. 619. Drapery is known to have survived at Houplines until the mid-18th cent.; ibid. ii. 607.
21. In the early 18th cent., 500 or so cloths a year were still being woven in Haubourdin and the industry limped along until about 1770. See De Sagher (1951–66), ii. 305, 325, 333–6; ADN, C112.
22. Verriest (1943), 63–5, 87–92. In the late 1520s, new drapery also appears to have been woven in Leuze and villages in the triangle between Ath, Leuze, and Ronse (ibid. 62), but I have been unable to discover anything about either its significance then or its later history.
23. AM Lille, Aff. gén., C. 1222, d. 10; Deschamps de Pas (1863), 315–19, 321–2, 326. Tournai suggested that a 'collège des manufactures', consisting of four to five representatives from each province, be established to try to improve textiles, but provided no further details.
24. AEM, Ville de Mons, no. 2088, d. 50.
25. Ch. 3.
26. Initially permitted, say weaving was forbidden in the 14th cent. before being sanctioned once again in 1403. Munro, Ch. 3; Espinas and Pirenne (1906–24), ii. 342–3; iv. 52.
27. AM Douai, HH tiroirs 252 and 269, Reg. CC 256–65; Vanhaeck (1910), ii. 98–101. Cf. Rouche (1985), 74, 95, 121. The relative unimportance of velveteen-making even during *sayetterie*'s period of prosperity is suggested by the fact that from 1542 the seal was farmed out at a rate indicating yearly production that may have been as low as 400 pieces. The sorry state of Douai's light drapery in the early 17th cent. is shown by some *sayetteurs*' long and futile battle between at least 1613 and 1617 to gain permission to migrate to Lille, Arras, and other cities to practise their craft. See AM Lille, Aff. gén., C. 1166, d. 1.
28. Goris (1925), 297–8, 308–16; Brulez (1959), 483; Deyon and Lottin (1967), 24, 26–7; Everaert (1976), esp. 45–9; Vanhaeck (1910), ii. 204–5; Dieudonné (1804), ii. 429–42. Deyon and Lottin (1967) have shown (pp. 26–7) that at least in the 16th and early 17th cent. variations in Lille's light drapery output corresponded closely to fluctuations in exports from Seville to the New World.
29. See the document cited in Baelde (1984), 1072. The *sayetterie* figure was confirmed about 1575 by guild leaders, who mentioned some 2,050 independent masters and 200 others employed as master workers by their fellows; AM Lille, Aff. gén., C. 1171, d. 9.
30. For a history of and many essential documents on the chief branch of Lille's light drapery, see Vanhaeck (1910); for output, ibid. i. 354; and especially Deyon and Lottin (1967), 26–33. See also DuPlessis (1991), 88–96, which on the basis of tax figures from the municipal accounts (AM Lille, Reg. 16,274 ff.) gives disaggregated data on velveteens and *changéants* produced by *bourgetteurs*. It is impossible to itemize the numbers of *changéants* or other specific fabrics woven by *sayetteurs*, since the tax figures reported in the accounts lump together the various types.

31. Cf. Lille's objection in 1623 to Tourcoing's request to weave certain kinds of light drapery. In Lille, its officials declared, the number of say looms had fallen from 2,985 at some unspecified earlier date to 1,800, and the drop had been even greater among *bourgetteurs*, though no numbers were specified. Lottin (1986*a*), 72.
32. For slightly different loom figures, see Vanhaeck (1910), i. 206, 351–2; AM Lille, Aff. gén., C. 1170, d. 7, 9 and C. 1178, d. 3; Deyon and Lottin (1967), 28 n. 27. Doubtless the number of looms owned by members of the *bourgetterie* guild must also have dropped from the 617 counted in 1612—only 441 of which were currently in operation (AM Lille, Aff. gén., C. 1164)—but there are no later censuses.
33. The most complete account is Saint-Léger (1906), 367–404, 481–500. See also Baelde (1984); DuPlessis (1991), ch. 3.
34. In addition to the works and documents cited below, see Saint-Léger (1906); Hilaire (1984); Baelde (1984); Leuridan (1868); Trenard (1969), 175–200. All show constant squabbling, attempts by villages to use *sayette* thread and to make better-quality cloth, and towns striving to cut back the number of looms allowed in the countryside, if not to eliminate them entirely. Tourcoing and Roubaix, the largest of the light drapery villages, underwent substantial growth in the early 16th cent., a circumstance cited in their pleas for light drapery privileges. In 1505, Tourcoing counted 607 hearths, in 1549, 1,357; Roubaix went from 317 hearths in 1505 to 472 in 1543 and 600 in 1553. See ADN, B3762–63; Rousseau (1969).
35. Posthumus (1908–39), ii; Moens (1887–8); Schickler (1892).
36. See the graphs taken from Rousseau (1969); Hilaire (1984), 84, 103. In 1631 the leaders of Lille's *sayetterie* corporation alleged that 'a great number of workers', leaving towns to avoid taxes, had begun to weave *bourats*, damasks, grosgrains, and other light textiles, a development that was also causing thread shortages in Lille; AM Lille, Aff. gén., C. 1169, d. 1. Whether or not this movement was occurring, light drapery output in Roubaix at least was at its nadir in precisely those years—and then, frustratingly, the records break off for a quarter of a century.
37. Espinas (1931), 14, 113, 221; Munro, Ch. 3; Platelle (1982), 136.
38. AM Lille, Aff. gén., C. 1222, d. 10 (masters weaving *bouracans*, *draps*, and other woollens may have been included in the figures cited); Deschamps de Pas (1863), 316–19; AM Valenciennes, HH 433, 763: complaints by merchants of Valenciennes and elsewhere about shoddily made fabrics (including says and *changéants*) which had none the less been passed by inspectors. *Sayetteurs* accepted the accusation that their work was inferior, but preferred to blame the merchants both for exporting the best thread and for putting concern for low prices ahead of quality.
39. AGR, Acquits de Lille, no. 1850 portefeuille, contains a document dated Easter Wednesday 1564, in which three Mons merchants pay 1601 livres tournois per year for the *sayetterie* tax for three years. In turn, they are to collect two sols

tournois for each say made in Mons, as well as 12 deniers tournois on each *demi-say*, *colpon*, *cornette*, *pas de satin*, *reversé*, *changéant*, *buze d'orge*, and velveteen, all of which are said to have been made in Mons for 'peu de temps'. I discovered this document by chance, so perhaps consultation of the dozens of other portfolios containing material on Mons would yield additional information. Unfortunately, most of the several hundred sheets in each of the several portfolios I examined are rotting and many are illegible.

40. AEM, Ville de Mons, no. 2088.
41. Jennepin (1889–1909), ii. 434–5, 439.
42. Munro, Ch. 3; Hocquet (1906), 259–60; Soil (1891). I am grateful to Patrick Chorley for the latter reference.
43. These figures are calculated from Tournai's municipal accounts, AGR, Chambre des Comptes, Reg. 39,939–40,064. For a more complete analysis, see DuPlessis (1990), 66–75. For the 1580s measures, see Hocquet (1906), 289, 291.
44. AM Lille, Aff. gén., C. 1220, d. 10; C. 1164.
45. See AM Lille, Aff. gén., C. 1177, d. 4 (1693–1702); Vanhaeck (1910), ii. 252–4 (1721); ADN, C182 (1785); and the general discussion in Vanhaeck (1910), i. 311–13.
46. The purchases were completed in 1766. Alain Lottin (1985), 121; Dieudonné (1804), ii. 436 n. 1; AM Lille, Aff. gén., C. 1197, d. 6; Vanhaeck (1910), i. 318.
47. ADN, C1660, pièce 161; Dieudonné (1804), ii. 436 n. 1. According to the prefect, Douai did a little twisting of linen thread, but most work associated with linen was found outside the city, in the direction of Valenciennes. The 4,000–5,000 pieces of linen sealed annually in Douai between 1769 and 1773 (ADN, C3891) appear to have come from village producers. Certainly the municipal government reported in 1782 (ADN, C1660, pièce 161) that no one in Douai was making linens for the market, though a couple of people wove for local residents, who furnished the thread.
48. For the immigration of a *baracan* maker and 'plusieurs' workers from Valenciennes about 1665, see AM Lille, Aff. gén., C. 1171, d. 7. See also a report by the Director General of the *Bureaux du Roy* in Flanders (ibid., C. 1172, d. 4, 12 Nov. 1671), which mentions the recent adoption of Brussels and Holland-style camlets, as well as *draps* and serges in the English and Dutch fashions. For encouragement, by means of grants, loans, and other inducements, of immigration of masters from Hondschoote, who in 1676 numbered 12, controlling 86 looms, see ibid., C. 1175, d. 1.
49. For looms and masters, see Vanhaeck (1910), i. 352–3; the loom figures are also printed in Deyon and Lottin (1967), 28 n. 27, the yearly output on pp. 32–3.
50. Ibid. 28 n. 27.
51. Vanhaeck (1910), ii. 203, doc. 100, 28 Aug. 1694. Production years ran from 1 Nov. to 31 Oct. In 1696, the *bourgetteurs* reported to the intendant that more than 1,000 masters were unemployed or working for other masters and that more than 1,200 looms were idle; Braure (1932), ii. 370 n. 1. The number of looms in operation is, of course, at best a very approximate guide to output, as

is seen when it is possible to compare the number of cloths sealed and looms in operation. Calculations using figures on pieces sealed certified by town officials (Vanhaeck (1910), ii. 203, doc. 100) show that in 1686 60,116 *sayetterie* fabrics were woven on 1052 looms (an average of 57.14 cloths per loom), in 1688 61,817 cloths on 904 looms (68.38 per loom), and in 1692 49,627 pieces on 785 looms (63.22 per loom).

52. Vanhaeck (1910), ii. 236 (Vanhaeck's text [ibid. i. 352] incorrectly has 571 looms in operation in 1716, and this mistake is reproduced by Deyon and Lottin (1967), 28 n. 27); Braure (1932), ii. 371–2.
53. John (1967), 180. The years 1698–1709, cited as the earlier time of significant growth for Yorkshire (ibid.) also saw an upturn in Lille.
54. Vanhaeck (1910), i. 284 n. 2; Deyon and Lottin (1969), 28 n. 27. No information has survived regarding numbers of looms in operation between 1716 and 1764. Yorkshire woollens went through a renewed period of growth in 1769–72; John (1967), 180. Though a document dating from 1751 estimates that 300 *sayetterie* and 250 *bourgetterie* masters were currently working in Lille—no figures for looms are given but the totals seem likely (Vanhaeck (1910), ii. 329–31)—a 1778 report (ADN, C111) that mentions 470 masters in the two crafts, giving work to 2,060 looms, appears to be exaggerated. It may, however, include looms controlled by Lillois but located in the countryside or reflect the 'considerable' sales of Lille camlets in America during the Revolution mentioned by Dieudonné (1804), ii. 439, who unfortunately provides no figures. He does note, however, that 'since the peace' the Americans 'have gone back to [buying] English fabrics'.
55. Deyon and Lottin (1967), 28 n. 27; Dieudonné (1804), ii. 436–9. In light of the numbers reported in 1782—to which should be added an unknown quantity of *bourgetterie* looms—Dieudonné's figure appears plausible. Based on information given ibid. 444, it can be calculated that some 29,200 camlets (the generic name for *changéants* and similar fabrics) were woven in Lille in 1789.
56. For Lille, see AM Lille, Reg. 9745–88. Some 66 active masters and 205 workers were listed in 1711, 21 masters and 61 workers in 1761, 36 masters and at least 178 workers in 1781, 34 masters and at least 104 workers in 1789. In the last two years cited, workers were undercounted because masters currently holding corporate office did not report employees. For Tourcoing, see ADN, C111 (400 French workers said to be employed in combing establishments in the Austrian Netherlands, but they did not constitute the totality of the workforce there), and Dieudonné (1804), ii. 411–23 (his Tourcoing total of 1600 includes, but does not distinguish, those working in surrounding villages). For the 4,000 knitters in Lille, its suburbs, Armentières, and its neighbourhood who in 1789 used *sayette* thread, see ibid. 448–9.
57. Braure (1932) ii. 396–8; Saint-Léger (1906), 387; Dieudonné (1804), ii. 423–36. If a report of 1778 (ADN, C111) is correct that 2,500 pieces of *pinchinat* were produced in Lille each year at that time, the 1780s had witnessed major growth in the industry, but apparently no long-term statistics exist.

According to Dieudonné (1804), ii. 412–13, wool for carding came mainly from the waste generated by combers, from lambs, and from the stomachs, necks, and paws of sheep—all of which had a nap too short for combing.

58. See the graphs taken from Rousseau (1969); Hilaire (1984), 84, 103.
59. For markets, see Leuridan (1863), v. 77, and Dieudonné (1804), ii. 442; for wages, see Kerridge (1985), 241–2.
60. Leuridan (1863), v. 88.
61. Dieudonné (1804), ii. 439–42.
62. Leuridan (1863), v. 67, 88. According to Dieudonné (1804), ii. 442, one-twentieth of *calamandes* were sold in the Département du Nord, another four-twentieths in the interior of France, so the competition from English imports would have been keenly felt.
63. Comparison of Table 14 with Roubaix's output figures shows that the number of looms tripled across the 18th cent., while output grew sevenfold, suggesting that many weavers must have changed from part-time to full-time textile work across this period.
64. AM Tourcoing, 2HH1; ADN, C119; for seizures, AM Lille, Aff. gén., C. 1191, d. 4, C. 1196, d. 4. Some of the work may have been carried out in Mouscron, which abutted Tourcoing on the Austrian Netherlands side of the border. According to the village tax collector, in 1762 two-thirds of about 200 *molleton* workers (including 60 weavers and 80 spinners) in Mouscron worked for *fabriquans* of Tourcoing, using mainly *sayette* thread from across the frontier. See Brausch (1983), 32, 35. I owe this reference to Professor Hugo Soly.
65. AM Tourcoing, 2HH2, 31 Oct. 1789.
66. Dieudonné (1804), ii. 428–9, 436–42. With the 142 cited in Table 14, the village housed at least 502 looms making cheap woollens and mixed stuffs. A document from late 1790 (AM Tourcoing, 2HH2), a time when all Tourcoing's trades were said to be 'languishing', mentions 700 looms giving work to 3,800 individuals, including 800 combers, and turning out 15,400 pieces of cloth, notably 10,000 *molletons*, 1,450 serges, *prunelles*, *bourats*, and the like, 1,200 other *calamandes*, and 2,450 pieces of cotton and linen fabric.
67. ADN, C112; AM Tourcoing, 2HH1, fos. 8–10, 2HH2. See also n. 64 above.
68. Dieudonné (1804), ii. 414–19.
69. ADN, C111, 112; Dieudonné (1804), ii. 427–9, 442–3. Lannoy residents also spun wool for *molletons*. For the bourg's long struggles with Lille over the latter's monopoly claims, see Vanhaeck (1910), i. 298–307.
70. ADN, C199.
71. Dieudonné (1804) subsumes most of the textile activities of these smaller centres under those of Tourcoing and Roubaix; only spinning gets separate mention.
72. AGR, Chambre des Comptes, Reg. 40,065–124.
73. ADN, C3869.
74. ADN, C 1490; Moureaux (1974–81), i. 32, 514–19, 525–6; Craeybeckx (1976), 43 n. 71. Stocking-making also busied 300–400 looms and employed 550 city

people in the 1760s; by this point, the goods were made of wool, flax, and cotton. See DuPlessis (1990), 71. Professors Catharina Lis and Hugo Soly of the Free University of Brussels inform me that the AGR, Conseil des finances, contains additional documents on Tournai cloth manufactures in the later 18th cent., but I have been unable to consult them.

75. AEM, Ville de Mons, no. 2088, doss. 50.
76. Heirwegh (1980–1), 737; Heirwegh (1983), 312–13. I should like to thank Dr Heirwegh for sending me copies of his publications on Mons.
77. Moureaux (1974–81), i. 554–5, 559, 561, 566; Heirwegh (1980–1), 736–43; Heirwegh (1983), 309–13.
78. AM Valenciennes, HH 509. See also HH Sup. 303, for a complaint by *sayetteurs* in 1658 that linen weavers were taking away work by making cloth (perhaps *molletons*) with *sayette* thread.
79. Guignet (1977), i. 53–6 and *passim*; ADN, C9249 (source of the quotation about serge and *cazée* production); ADN C8815, 1729 (source of the information on wool supplies). The poor state of the woollens trades can be further gauged by Hainaut's negative response to a suggestion in 1762 that advantage be taken of a rupture in commercial relations between England and Spain to produce cheap fabrics like *bayettes*, *sempiternes*, and *châlons*. Provincial leaders demurred on the grounds that linen spinning occupied everyone in the region. Lille, Roubaix, and Tourcoing, they suggested, could much better undertake such a project; Guignet (1977), 81–2. Writing in 1804, Dieudonné (1804), ii. 443, commented that Valenciennes had once been famous for *baracans*, which industry employed more than 500 people before high taxes and other problems drove away its workers.
80. Jennepin (1889–1909), ii. 445, 447; ADN C9086, C9249. Cf. Dieudonné (1804), ii. 431, who noted that 'in the past' consumers preferred Maubeuge *cazées* to those made in 'rural communes', because of the hand-stretching that gave it 'more firmness', but added that he did not know 'whether that reason for preference' still existed.
81. Caffiaux (1873), 325.
82. Markovitch (1976), 186, for the 1788 estimate; Dieudonné (1804), ii. 430–3, for the 1789 figure.
83. Guignet (1977), i. 202–4. Markovitch (1976), 186, estimates the value of the area's linens to have been fourteen times that of woollens.
84. Moureaux (1974–81), i. 530, 574–5. Ath, once a new drapery town but now a prominent linen centre, had one *panne* weaver making ten cloths a year; ibid. 638.
85. Ibid. 674–5, 642–3. A brief report in 1751 (ibid. 37) asserted that the manufacture of mixed linen and woollen cloth (perhaps the *molletons* specified in 1764) daily employed 800 workers at Chimay, 600 of them to prepare the thread. These numbers, far in excess of those given thirteen years later, may be exaggerations or may refer to all those engaged in textiles throughout the area.

86. Cf. around Mons, Sars-la-Bruyère and Blaregnies (Moureaux (1974–81), i. 610); Grandrieu, Montignies-Saint-Christophe, and Sivry near Beaumont (ibid. 669–70, 674, 681); and Forges, Seloignes, Momignies, and Macon in the vicinity of Chimay (ibid. 647, 649, 662, 665–7).
87. Ibid. 617 n. 2, 669–70, 672–3.
88. ADN, C8815.
89. Moureaux (1974–81), i. 545, 514. Many other spinners and combers are listed in ibid., *passim*.
90. From the 16th cent., Lille had relied on a far-flung network of spinners throughout its own province, Artois, and even Picardy, and by the 18th cent. Roubaix was also getting thread from these areas. See AM Lille, Reg. 145, fols. 178–78^{v}; Vanhaeck (1910), ii. 101, 155; ADN, C111; Dieudonné, (1804), ii. 419–20; Leuridan (1863), v. 86.
91. A census from *c.*1759 counted 3,725 linen looms turning out 55,875 pieces a year in 33 *bourgs* and villages in the Lys valley between la Gorgue up-river from Armentières and Comines down-river, as well as surrounding villages five km. to the east (towards Lille) and 20 km. to the west. A total of 1695 looms were to be found in the 18 *bourgs* and villages in French Flanders. According to an attached document, the making of table linen, a speciality of Armentières, had been established there in 1735 by order of the four bailiffs who administered rural French Flanders. Twenty-one bleaching houses were also to be found along the Lys, eight of them in Armentières. See ADN, C166.
92. Dieudonné (1804), ii. 263–5.
93. Ibid. 439. The prefect gave no figures, but the number of seals reported in Vanhaeck (1910), i. 284 n. 2, shows that yearly output, 26,000 in 1772–4, fell to 22,000 in 1775 and 17,200 in 1776. Then it rose to 22,900 (1777), 22,000 (1778), 26,000 (1779), and 25,000 (1780), before falling off sharply to 15,000 in 1781 and 20,000 in 1782 and 1783, the last years reported.
94. Dieudonné (1804), ii. 263–5, 308–18, 238. Cf. ADN, C1660.
95. For classic statements, see Mendels (1972), 241–61; (1982), 67–107; Kriedte (1981); Deyon (1984), 868–80. Though Charles Tilly 'in principle' erases the distinction between urban and rural industries, in practice he adopts the usual contrast; see Tilly (1983), 123–42.
96. AM Lille, Aff. gén., C. 1164.
97. ADN, C111; AM Lille, Aff. gén., C. 1201, d. 15; Braure (1932), ii. 403–4; Dieudonné (1804), ii. 308–18, 443, 458–59; Moureaux (1974–81), i. 32, 513–14, 554–6.
98. The document is printed in *Cartulaire d'Arras* (Arras, 1863), 402–5. Cf. the like arguments set forth by Lille in 1553 in opposition to Roubaix's bid to make *bourgetterie* fabrics, as printed in Baelde (1984), 1073.
99. AM Lille, Aff. gén., C. 1172, d. 3. The size of the gap is indicated by the requirement that for each piece of rural wool damask dyed and finished in Lille 5 patars had to be paid to the city's cloth gilds. Cf. the city's *sayetteurs*' complaint in 1688 that lower wages allowed village fabrics to undersell Lille's by two or

three florins apiece, as cited in Lottin (1968), 95. Cf. also ADN, C181 (1785), in which Lille's officials predicted that were they permitted to do so, most employers would leave towns to take advantage of lower rural rents, taxes, and cost of living.

100. ADN, C119. Cf. an 18th-cent. remonstrance (ADN C128) by corporate leaders against numerous taxes in Lille which allegedly drove up prices and risked encouraging dyers, at least, to leave the city for the tax-exempt castelry.
101. Van der Wee (1984), 59–77. The same argument can be found in Van der Wee (1988), 307–81.
102. The best account of this drawn-out conflict remains Saint-Léger (1906).
103. For wool, see esp. Verhulst (1972), and reports about herds in ADN, B3762–63. For early commercial contacts, see Espinas and Pirenne (1906–24), *passim*. For merchants from village centres at Antwerp in the 16th cent., see Coornaert (1961), ii. 358 ff., 'Liste provisoire de noms de marchands français ayant travaillé à ou avec Anvers de 1460 à 1585'. For a draper of Bondues who controlled three *estamette* looms in Linselles in 1593 and a draper from Linselles who had two looms working for him in Bondues at the same date, see De Sagher (1951–66), ii. 655–6, 645–6. For 18th-cent. petty capitalists in Tourcoing, Roubaix, Mouvaux, Croix, and many other *bourgs* and villages, see AM Tourcoing, 2HH11. Cf. also AM Lille, Aff. gén., C. 1164, for traces of village entrepreneurs owning looms in the early 17th cent.
104. Finishing constituted the main—and always contested—exception. Lille, at least, always tried to use exclusion from its finishing facilities as a means of damaging rural cloth. Thanks to their commercial contacts, however, many village producers were able to minimize the effects of the prohibition by sending their goods to Ghent and Amsterdam, where they claimed also to get better-quality work performed and at lower cost than Lille could provide. AM Lille, Aff. gén., C. 1172, d. 3.
105. See ADN, C119, C199; AM Lille, Aff. gén., C. 1190, d. 3, C. 1191, d. 3, 4, C. 1196, d. 4.
106. Hohenberg (n. d.). See also Hohenberg and Lees (1985), pt. II.
107. See AM Lille, Aff. gén., C. 1183, d. 7, C. 1184, d. 5, C. 1212, d. 3; Vanhaeck (1910), ii. 305–6; Braure (1932), ii. 399–400. The evolution of the guilds is aptly symbolized by the *bourgetteurs*' decision in 1699 to exclude everyone save masters from the annual banquet, formerly an inclusive occasion; AM Lille, Reg. 14,731, fo. 9.
108. DuPlessis (1977), 185–219.
109. See DuPlessis and Howell (1982), pt. III; DuPlessis (1991), ch. 3.
110. Moureaux (1974–81), i. 515.
111. Trenard (1984*a*), 101–2.
112. AM Lille, Aff. gén., C. 1179, d. 4.
113. Dieudonné (1804), ii. 428–9. *Molletons* were the only cloth made in substantial quantities both in Lille and in the villages. Dieudonné also cited wages for

weavers and others making camlets and *calamandes* (ibid. 437, 440), but the former were made almost exclusively in Lille, the latter entirely in rural centres.

114. Cf. the documents printed in Vanhaeck (1910), ii, for these regulations.
115. Ibid. i. 108–9. Cf. the claim made around 1575 by *sayetterie* guild officials that besides all its other virtues, the system of small shops enforced in Lille facilitated supervision and thus helped guarantee merchants cloth of consistent quality. AM Lille, Aff. gén., C. 1171, d. 9, discussed in DuPlessis (1991), 111–14, and DuPlessis and Howell (1982), 72.
116. Dieudonné (1804), ii. 439.
117. AM Valenciennes, HH Sup. 763. The claim that the inspectors did a poor job may have had some merit, for in 1602 the city government condemned them for having passed 'very damaged' cloth and fined each one; ibid., HH 433. Cf. Guignet (1977), 53.
118. ADN, C9086.
119. For a clear and forceful articulation of this vision, see the document cited in Baelde (1984).
120. The officials were driven off violently in Croix, a dependency of Roubaix. For the incident, see Trenard (1984*b*), 52–4. Similarly, Lille's attempt to take over *molleton* production, though officially countenanced by successive intendants, never came close to destroying Tourcoing's craft. ADN, C119; Daussy (1986), 103.
121. See Saint-Léger (1906); Vanhaeck (1910), i, chs. 17–19; and Deyon and Lottin (1967), 32–3. In keeping with Lille's monopolies, in 1728 the intendant ordered Roubaix to stop making *callemandiles*, developed in the *bourg* for the Spanish and Indies markets. Several years later, Roubaix was stymied in an attempt to take up camlets and *polimites*; Leuridan (1863), 70–2, 77. Tourcoing, as noted above, was likewise supposed to give up to Lille the *molleton* industry that it had developed.
122. For two printed examples, see Lille's reply to Roubaix in 1553, cited in Baelde (1984), 1073, and its opposition to Tourcoing's bid in 1623 to weave wide *bourats* and damasks, quoted in Lottin (1986*a*), 72–3.
123. Both quotations are from a protest by Tourcoing, 15 Mar. 1700, ADN, C169. Many other rural protests are cited in Baelde (1984); Saint-Léger (1906); and Braure (1932).
124. Cited in Braure (1932), ii. 379. For Bagnols's support of Lille's exclusion of rural light drapery from its finishing facilities, see Vanhaeck (1910), ii. 201, doc. 98. For acknowledgement of the importance of privileges to Lille by a later intendant, see ibid. ii. 274–8, doc. 131.
125. The research for this paper was supported by grants from Swarthmore College and the Travel to Collections program of the National Endowment for the Humanities (Grant FE-22955-89).

5

THE NEW DRAPERIES IN THE NORTHERN NETHERLANDS, 1500–1800

LEO NOORDEGRAAF

THE history of the textile industry in the northern Netherlands during the pre-industrial era has attracted relatively little attention since 1945. Between 1900 and 1940 several dozen articles and monographs appeared, but since then much less has been published. The institutionally oriented study of separate industries and sectors lost popularity and had to make room for ambitious, often regionally oriented, studies in which economic life was studied in its totality and especially from a demographic viewpoint. Moreover, the publication of the second and third volumes of Posthumus's extensive study of Leiden's textile industry in 1939 could have led to the feeling that this study was both the high point and end point of historical research regarding the textile industry in Holland. 'It's all in Posthumus': that conviction has possibly kept many historians from tackling this topic.[1]

In the past few years, however, various articles have been published which have a revived social historical standpoint, and which are in certain respects opposed to the view of Posthumus, which has hitherto been dominant.[2] The time seems ripe to re-examine the development of the textile industry in the northern Netherlands, and in particular in Holland, since the Middle Ages.[3] I focus most attention on the period in which the new draperies were produced, that is after about 1580. I shall indicate in which respects the recent literature has opened up new areas of research regarding this branch of industry. Finally, with the help of a number of hypotheses, I shall attempt to stimulate further research.

Continuing along the lines of the most recent work, the question of supply stands central in my overview. Specifically this means that I am especially interested in subjects such as the organization of labour, labour relations, industrial organization, the nature and composition of the group of textile producers, and their conduct in the labour market.[4]

I. HISTORICAL OVERVIEW[5]

Before the new draperies were introduced with great success into the textile industry in the northern Netherlands in about 1580, the woollen industry had already largely freed itself from simple handwork. In this process, after the second half of the fourteenth century, Leiden had grown to be the most important centre of production—a position which the city would be able to maintain for centuries. The changes in the early-medieval production process come most clearly to the fore in the production of woollens in Leiden, but in many other cities the weaving of woollens also developed along lines which much later were generally interpreted as early or merchant capitalism.

The economic policy of these cities was directed towards hindering the textile industry in the countryside from producing more than was needed for their own use or for the local market and towards binding them to the urban producers. Certain basic processes were performed on behalf of the urban industry on a large scale in the villages, but the municipal governments attempted, with greater or lesser success, to keep the finishing of the woollens within the city walls. The wool employed in the countryside was the property of the burghers. This fact brings us to the heart of this essay, namely the way in which the woollen industry was organized, who was involved in it, and the social and economic relationships between the various participants.

In the woollen industry, especially in the cities in the coastal region, after the second half of the fourteenth century the artisan had largely been displaced by the putting-out system. The entrepreneurs who emerged from the weaving sector—the drapers—brought the different phases of the production process under their control through paying various specialists to carry out the separate stages of production required on the raw materials which they had purchased. This labour was not centralized by the draper, but each of the separate processes was carried out by the workers in their own homes. The putting-out system did not remain limited to the cities. Wage labour, such as carding and spinning, was also carried out in the countryside. During the entire production process, the product remained the property of the drapers, so that in a certain respect the formerly independent workers now began to carry out wage labour. The workers in the putting-out system, however, are not completely comparable with the wage-earners of today. They owned their own means of production and, in turn, they could hire employees (*knechts*). In the large textile centres independent

artisans were uncommon. Only in the smaller cities and in the countryside was work done for and on behalf of the individual, and then primarily for the local market. The development of this new form of industrial organization was facilitated by the exceptional nature of textile production. The large number of processes which wool had to undergo meant that a high degree of labour specialization already existed.

In contrast to the handicraft industry, the putting-out system did not only produce for a local or regional market. The draper who was both an industrialist and a merchant found more distant markets, such as the cities of the Hanseatic League, Antwerp, France, Germany, and southern Europe. He also did not work to order; he set out to secure the greatest market share and profit that he could. Export was possible because the product could be shipped over long distances without being subject to spoilage. The cities of Holland were the most important production centres, with Leiden in first place, followed by Naarden, Amsterdam, Hoorn, and Haarlem. The other areas in the north lagged behind and produced mostly for the regional market.

The putting-out system was developed precisely in the export sector and where the specialization of labour was highly advanced, as in Leiden, a high technical level was achieved. In combination with the use of the best raw materials, this city then also developed a superior product in comparison with other textile-producing cities, although the best woollens were intentionally not the chief product. With an eye to attaining an extensive market, the drapers produced woollens of a somewhat lower quality. The woollen industry primarily used English wool, and then when the amount imported declined, Spanish wool. Where other sorts of wool were used, the quality and price were proportionally lower. For example, textile producers in Naarden used wool from Westphalia. The finishing industry (*appretage*)—dyeing, pressing, glazing, etc—was especially highly developed in Amsterdam.

In order to give some idea of the complicated nature of the textile industry, the most important steps in the production process will be discussed in greater detail. After felling, sorting, washing, and cleaning, the wool was combed and spun. The drapers had the combing and spinning done largely in the countryside, because lower wages could be paid there. Drapers in Leiden even had wool spun north of the Ij and in West Friesland. These lighter activities were often done by women. The employment of married women and those living in nunneries depressed the wage level further.

Weavers employed in the putting-out system accounted for the majority of the textile labourers. In Leiden, because the width of the woollen required at least two persons to work each loom, the master weaver employed at least one worker (*knecht*); because working with more than two looms was prohibited, the maximum number of workers (*knechts*) employed thus amounted to three. The means of production were owned by the master, so that some industrial capital was required. In comparison with most of the drapers, the weavers had only limited assets at their command. The master fuller was also working in the putting-out system and was limited to employing a maximum number of workers (*knechts*). Some capital was required for furnishing and equipping the plant (*bedrijf*). Before the application of the fulling mill at the end of the sixteenth century, their number was not much smaller than that of the weavers.

Although the dyers were also dependent upon the drapers, they were more independent than the other wage labourers. A considerable amount of capital was required for setting up a dye-house. The dyers needed to hold ready money to be able to travel to the market for dyeing pigments (*verfstoffenmarkt*) and to be able to pay for the required dye-stuffs. Many dyers engaged in the drapery trade as a subsidiary business. The dyers' journeymen (*knechts*) had some property and formed an élite among the journeymen. The *uitreders* were even more independent from the drapers. They did not work for wages, but were independent masters who pressed and packed the woollens. Sometimes they even acted as woollen producers. Sometimes they also took on the work of shearers or dressers. Both of these trades were independent as well. Initially they sheared cloth for mercers (*wantsnijders*) and consumers, but in the sixteenth century they also worked for drapers.

The masters and journeymen who were dependent on the drapers had only limited rights. In Leiden, for example, the city government, which was largely made up of drapers, never allowed the organization of the wage workers to achieve independence. The crafts were not entitled to regulate matters concerning the industry; the city government enacted the required ordinances. Not even meetings could be arranged without permission from the city government, which hindered any organization of the workers. Only the dressers were required to join a guild. Where the putting-out system and wage labour were less developed, especially in the cities in the inland provinces, the guilds were stronger.

The average capital of the draper was quite large in comparison with that of entrepreneurs outside the textile industry. An unlimited increase in the draper's capital was, however, simply not permitted. Through laying down production limits, an attempt was made to hinder the wealthier drapers from overshadowing those with smaller capital resources. The regulations regarding the number of employees and looms and establishing the quality of the work done by the fullers and dyers had the purpose of limiting the size of the firms. In Amsterdam the freedom within the textile industry was the greatest, and the average production of the drapers was also higher there in comparison with other cities.

Although the production of woollens was concentrated in the cities, the extent of the industry in the countryside must not be neglected. The cities were very apprehensive of competition from the countryside, and did all that was possible to make the existence of an independent textile industry outside their walls impossible. The fear of the urban drapers is understandable, for, through the use of lower-quality raw materials, lower wages, and lower taxes, production costs were much lower in the countryside than in the cities. Moreover, in the villages the industry had greater freedom. In villages where a great deal of work was done for the accounts of urban drapers, as in Holland, the spinners and the combers were more readily able to purchase domestic wool themselves and weave it, especially in slack periods when wool was not delivered outside the cities. As a consequence of this, cloth production developed in Voorburg, Noordwijk, Akersloot, and other villages. Likewise, opposition arose in the cities against the cheap spinning and weaving labour in nunneries.

If the textile industry wanted to be certain of a continuing market, then the quality of the cloth had to be maintained. In the cities where good to very good cloths were made, local governments saw it as their task to maintain these standards. In ordinances enacted by city governments the way in which the different steps in the production process were to be carried out were fixed in minute detail. Those regulating the dyeing process were the most detailed, because the value of the woollens was in particular determined by their colour. The measurements of the pieces and the kind of raw materials which could be used were also prescribed. Inspectors (*Keurmeesters*) checked the woollens to see if the regulations had been followed. The city seal was attached to the woollen as a guarantee of its quality for consumers and was intended to prevent imitation. Infringements of the ordinances were dealt with by the city's

judiciary. The city governments also placed at the disposal of drapers with little capital tenters upon which they could stretch their woollens. Regulations were also enacted to protect producers against competition from the countryside. The means of production were not allowed to be sold to those living outside the city and the export of raw materials and the import of foreign cloths was prohibited. In cities where there was no textile industry or where it languished, the city attempted to attract textile producers through financial support, tax advantages, and export premiums.

In the last quarter of the fifteenth century the situation in the textile industry began to deteriorate. The unrest and conflicts which arose after the death of Charles the Bold were not conducive to an uninterrupted expansion of production. There was a small improvement at the end of the century, but production declined after 1500 on account of the wars with the Hanse cities and Gelre. Only in Hoorn and Leiden did production remain relatively stable. A certain recovery occurred from about 1515. Leiden even achieved a production peak in 1521 with almost 29,000 pieces of cloth. Haarlem was able to stimulate the woollen industry again in the 1520s with the help of Spanish merchants. However, the outlook for the textile industry was not bright, and after 1530 the industry in the cities almost completely collapsed. The yearly production figures for the number of woollens produced in Leiden clearly depicts the decline. The turnover fell almost without interruption from 24,000 pieces in 1530 to less than 1,100 in 1573. The most important cause of this was the continuous expansion of the English textile industry. Not only was the textile industry in the northern Netherlands confronted with increased competition, but also with a reduction in the amount of English wool imported, as a result of which the prices of the raw material increased substantially. The situation for the drapers in the Netherlands was further worsened through the protectionist measures implemented by the English government. The industry in Leiden, which did not switch over to Spanish wool in time, suffered especially. The English entrepreneurs drove Leiden's woollens from markets in the Baltic and were even able to find markets in the northern Netherlands. The producers in Leiden were able to find new customers in France and in southern Europe, but the closing of the wool staple in Calais in 1558 resulted in the decline of Leiden's cloth industry. Attempts were made to buy English wool in Bruges, but not enough wool was imported and the price was too high. The opportunity to switch over to the production of the increasingly fashionable lighter

fabrics was insufficiently exploited. Linings (*voerlakens*) and other coarser fabrics were produced after their introduction by immigrants from the southern Netherlands in about 1560, but this industry was not of much importance.

The urban draperies outside Holland also languished, largely because of the textile industry in the countryside, although even this did not flourish everywhere as a result of plunderings during this politically unstable period. The decline in the quality of the cloth occurred at the same time as the decline in the industry's production. Through employing a less thorough production process and an inferior dyeing process, attempts were made to lower production costs. The regulations were increasingly circumvented. Disadvantageous consequences for employment in the industry could not fail to appear. The number of workers needed continuously declined and unemployment set in.

The period of decline was followed by renewed prosperity after 1580. Once again Leiden became the most important production centre. Because of religious and political troubles, a stream of textile producers from the southern Netherlands came to live in the city. The Flemish textile industry with its centre in Hondschoote totally collapsed. Between 1585 and 1594, immigrants from the southern Netherlands made up 79 per cent of Leiden's new citizens. Later a growing number of immigrants also came from Germany. This resulted in an enormous population growth: from 12,000 inhabitants in 1580 to approximately 72,000 in about 1665. In 1635 more than half of Leiden's population was employed in the textile industry.

The refugees had a greater amount of technical and commercial knowledge at their command. They introduced cheaper production methods and they reacted alertly to the changing demand in foreign markets. Through their activities, light fabrics became the main articles of production. The combination of different raw materials and the application of diverse weaving techniques resulted in a new variety of products. Between 1580 and 1795 no less than 180 types and sub-types were introduced, for which not only different kinds of wool were used, but also a mixture of wool and other materials such as linen, silk, hair, and cotton.

The growth in output was at least as spectacular. While in 1573 only 1,086 pieces were made, by 1584 this had already risen to 27,000 pieces. In 1664, 144,000 pieces were woven. Most of these were light fabrics such as says and fustians. The increase in production as well as the improvement in quality was in part brought about by the introduction

of new machinery. Via Amsterdam, exports were sent particularly to southern Europe, with Russia and the countries along the Baltic also being important customers. The textile industry in Leiden became the most important in Europe. The heaviest competition came from the English and from the southern Netherlands, where the industry was able to recover after 1600. The fame which the fabrics made in Leiden enjoyed was due to their good finish. Unfinished cloths were not a valuable commodity. This was reflected in the social standing of the workers in the different trades. Dyers and dressers had more status than weavers and fullers.

The putting-out system, in which wage work was done, remained the characteristic form of industry. The enterprises remained small. Assets did increase, but that did not happen very fast. The capital resources of the immigrants were also small. Being the sharp businessmen that they were, the Flemish drapers were able to bind a large group of workers (*deelbewerkers*) to themselves.

As a consequence of changes on the demand side, after 1635 another form of industrial and labour organization became evident. Not only did demand steadily increase in the markets, but requirements of quality also began to play a more important role. Changing fashion and keen competition both required the ability to adapt. The drapers, however, could not process large orders for frequently costly fabrics. They lacked the necessary capital and also did not always have the necessary knowledge at their command. In this way room was created for a new function in which demands were made for capital, knowledge, and organizational skills on a larger scale than in the drapers' trade. The new places were taken by the so-called *reders*, financially powerful individuals, most of Walloon descent. Through making use of the limited financial means of the drapers, the *reders* made the drapers dependent upon them. When credit had been given, they forced the drapers to sell them the fabrics at a low price. After a short time, the *reders* themselves began to engage in production. Small *reders* took drapers on as paid employees, so that they became a kind of middle-master. The large *reders*, however, broke with the putting-out system and attempted as far as was possible to have the production carried out in their own workplace. In order to be able to meet the extensive demand, in addition to the actual production, they also had the finishing carried out in their own workplace. If this was not possible, then wage labour was performed by the finishing industries for the *reders*. A number of drapers made attempts to expand their undertakings through having weaving and finishing carried out in

their workshops, but only a few were able to have more than ten looms in action.

Another group of producers who were able to break through the putting-out system and to work their way into trade were the dressers. In the course of the seventeenth century, they manufactured or bought cloths themselves which they brought to the market for handling.

Through all of this the small decentralized undertakings that were so characteristic of the putting-out system began to give way here and there to a centralized form of industry, the manufactories, in which as many successive phases of the production process were concentrated as was possible.[6] The advantages for the entrepreneurs are evident: the elimination of intermediate profits, more efficient organization, and better control; both the productivity of labour and the quality of the product could be increased; technical improvements could more easily be implemented and lower cost prices could be arranged through the purchase of larger quantities of raw materials; and the velocity of the floating capital was increased.

The transition from the putting-out system to manufactories was coupled with fundamental changes in the relations between entrepreneurs and workers. If the relationships were already more business-like in the putting-out system than in the craft system, in the large workshops the gap between the supervising entrepreneur or foreman (*meesterknecht*) and the workers (*knechts*) became even greater. The cottage worker could organize the work as he saw fit, thus retaining a certain measure of independence; in the workshops, employees were under continuous supervision, and the amount of time worked also increased. The absence of patriarchal relations, the increase in the social distance between employers and employees, the stricter control over the work which was to be done and the allied incentive to increase production—no longer bound to a maximum as in the Middle Ages—created a climate in which labour conflicts rapidly mounted. This became most obvious in the dressing industry. Here workshops (*ateliers*) developed with a large number of employees (even more than twenty-five), giving rise to a feeling of solidarity which was absent in the putting-out system. The employees (*knechts*) regularly held meetings at which they discussed their common interests. Reductions in their wages led to a number of strikes. As a reaction to this, the dressers in the cities in Holland organized meetings, called dressers' synods (*droogscheerderssynoden*), in which they decided on uniform action against the strikers and on the regulation of wages and labour conditions.

Notwithstanding the number of strikes, the journeymen never achieved efficient organization. The so-called *knechtbossen* (journeymen guilds) were only intended to provide funds for sick pay and funeral costs and for the support of widows. A feeling of solidarity surpassing that of occupational interest was absent. Through the division, which was a consequence of the judicial organization of the industry, discussed below, and the isolation under which the worker in the putting-out system lived, the development of class consciousness was checked. The workers formed a heterogenous mass in which everyone pursued his own interest and in which, through the employment of women and children among other factors, each threatened the other in his wages.

Other important changes in labour relations developed in different industries through the introduction of machines, such as mechanical presses, burnishing, calendering, fulling, lace, and ribbon looms. On ribbon looms as many as twenty ribbons could be woven at the same time, so that a considerable reduction in labour was achieved. Forty-five of these machines were operating in Leiden in 1610, producing more than 1,000 metres of ribbon per day. Social conflicts developed, but the introduction of the machines could not be stopped. The use of machines was felt especially in the fulling industry. In the seventeenth century the number of fullers only amounted to a fraction of the number there had been during the fourteenth and fifteenth centuries.

The working class underwent changes in other respects as well. At the end of the sixteenth century child labour became more widespread. Before then children had been employed, but not on such a large scale and often with the intention of training them in an independent occupation. However, now their exploitation was primary. The children went to work at a very young age. Their pay was so low that cheap female labour was driven from the market. Little attention was paid to their education. Not only were poor children and orphans employed, but large numbers of children were also sent to the Republic from areas around Liège, Aix-la-Chapelle, and Juliers to be used in the different branches of the textile industry. They had to endure long hours and even mistreatment, although the government did try to act to prevent this.

The conflict between large-scale industry and the laws governing industry was characteristic of the new situation. In Leiden the various branches of the textile industry were organized into distinct corporations (*bedrijfsrechterlijke organisaties*) with legal (*publiekrechterlijke*) authority over the so-called *neringen* (trades). As before, the ordinances

were proclaimed by the city's 'law' (*gerecht*). The classification of the *neringen* rested on the nature of the raw materials used, the boundaries between them being established as precisely as possible. With the rise of large-scale industry, in which activities were carried out which could belong to different *neringen*, major problems arose for the *reders* and dressers. The strict delimitation of occupations and businesses hindered the expansion of the enterprises. The large-scale industry which worked for foreign markets, where the whims of fashion were important, was also hindered by the detailed rules and regulations governing production. The major industrialists brought pressure to bear to relax the stipulations regarding the mode of production, and their pressure was successful in a number of cases. The increase in the number of employees and shearers in the dressing industry could not be held back, despite the opposition of the smaller producers, and an attempt to limit the size of the pressing plants was effective only for a short time. In this way the efforts from above—dating from the Middle Ages—to banish competition receded into the background and the freedom for producers to manage their businesses according to their own economic acumen increased. Just as before 1580 the guilds were of little significance.

The textile industry in most of the other cities of the Republic was small in scale and of only local significance. Haarlem, Delft, and Kampen were the largest competitors in the woollens branch, although their production remained far behind that of Leiden. Other cities often attempted to lure producers away from Leiden through offering more attractive facilities, such as interest-free loans and subsidies. Amsterdam, where the actual production of woollens was limited and not very successful, did stand out above Leiden as far as dyeing, dressing, and other finishing processes were concerned. After 1635 urban industry was once again increasingly confronted by competition from the countryside where the labour costs were much lower. Attempts to eliminate the industry from the countryside had little effect because of mutual differences among those concerned. While the drapers did all they could to combat the rural industry, the cloth merchants and dressers, in particular those from Amsterdam, continuously attempted to organize a commission industry in the *Generaliteitslanden*.

After 1670 the cloth industry had passed its peak. A lengthy process of decline and stagnation set in. Competition from England and the southern Netherlands, in combination with increasingly vigorous foreign protectionism, damaged the urban industries which were

struggling with high wages, and led to their ruin. The production of the extremely successful cheaper fabrics came under especially heavy pressure. Until the first decades of the eighteenth century, the more expensive cloths were reasonably capable of holding their own, but thereafter this branch also had to give way. With the exception of the *warp* and the protected blanket industry (*dekennijverheid*)—which was oriented towards the domestic market—the textile industry in Holland shrivelled up. At the end of the eighteenth century the export sector was but a mere shadow of what it had been during the Golden Age.

In imitation of the commission industry organized by the cloth merchants on the 'sandgrounds' in the south-eastern provinces, entrepreneurs from Leiden initially also relocated a part of their production to these areas in order to save their businesses. A kind of division of labour was developed in which the basic processes and the weaving and fulling were done in North Brabant for the accounts of producers in Leiden, and the dyeing, shearing, and finishing were undertaken in Holland. The costs however remained too high to compete with foreign competition and the domestic 'proto-industry'. The entrepreneur who saw his enterprise dying away with sorrow-filled eyes was forced to move the entire enterprise. And so in 1741 it was mentioned for the first time that manufactures from Leiden 'have sacrificed their life's pleasure and exchanged this pleasant city (of Leiden) for one as depressing as Tilburg (in North Brabant)'.[7]

II. PROBLEMS AND HYPOTHESES

New Draperies: What, Where, and When?

Which fabrics do we count among the new draperies? When and where were they first made in the northern Netherlands? The answers seem simple. The new fabrics were first introduced after the siege of Leiden in 1574 through refugees *en route* to England from the southern Netherlands, and after 1582 the new branches rapidly flourished on account of the large-scale emigration from the south to the Republic, and in particular to Leiden. The fabrics which they made can clearly be distinguished from the usual woollen products made by the cloth industry of earlier centuries, which had almost completely declined. Thus it is not surprising that the cloth industry before 1580 is referred to as the old drapery and from after that year as the new drapery.

In the old drapery, woollens were produced that were made up of an ingenious mixture of carded and combed wool. In comparison with the new drapery, these cloths were heavy, of high quality, and expensive. At first only costly English wool was used as the raw material, but due to the difficulty of importing it during the sixteenth century it was necessary to switch over to Spanish wool.

In the new drapery a variety of fabrics were made which shared several common characteristics. In the first place, in the new drapery fabrics were also made from a mixture of carded and combed wool, but none the less, from a technical standpoint, they differed markedly from the old draperies. Bays and *warpen* were the primary sorts in this category. In the second place, a product was developed in which only combed wool was used. Says were the leading sort. In the third place, the so-called half-wool fabrics were to be counted under the new drapery. These were made up of a combination of combed wool and linen, cotton, hair, etc., such as rashes (*rassen*) and fustians. Despite the differences between these fabrics, in comparison with the old drapery they were lighter, of lower quality, and cheaper. Inferior sorts of wool, including domestic wool, served as the raw material. With the use of the term 'new draperies' as a general category under which a variety of diverse fabrics can be brought together, especially on the basis of their differentiation from the old draperies, certain terminological and chronological problems seem to be solved.

Because the concept of the 'new draperies' is so general a description, the literature is not always so clear. The confusion is caused by the place which is given to the woollens (*lakens*) and camlets (*greinen*) after 1580. Depending on the criteria which are chosen, these fabrics can be classified in different ways. One might argue that the classification does not make much difference, but from the literature it is apparent that the place which is given to these fabrics determines our view of the development of the conjuncture in the textile industry. The conceptual problem is thus not completely irrelevant. Where contradictory criteria are applied, not only does confusion follow but also obvious mistakes.

It is sensible to determine the nature of these fabrics, not least because in contrast to bays, says, rashes, and fustians, they were able to stand up to the strong English competition. The production of woollens had fallen into decline during the sixteenth century and by about 1575 virtually no woollens were any longer being produced. In the early seventeenth century, however, this industry slowly began to rise from its fallen state and in the second half of the seventeenth century it grew

(in combination with the production of camlets) into the most important branch of the textile industry.

The continuity of the development will be stressed by those who emphasize the fact that both before and after 1580 woollens (*lakens*) were produced, and can be deemed to count as 'old drapery'. From this point of view the cloth industry after 1580 cannot simply be referred to as the new drapery and that of before 1580 as the old drapery. This year is not in all respects a dividing point. The chronological problem, which seemed so readily solved, reappears. Thus, as Coleman remarks, 'the old draperies did not disappear'. In contrast, Van Dillen reckons the seventeenth-century woollens to be new drapery on the basis that they were much lighter than the old draperies. Where the one author emphasizes the continuity, the other sees a discontinuity. It is curious that where Coleman points to the changes in the technical structure of the traditional woollen industry, Van Dillen stresses the great similarity of the technique used in the old and new woollen industry.[8]

Those who argue that the way in which the fabrics are ultimately classified is determined by the raw materials which were employed will have to conclude that both points of view are problematic. The new woollens were exclusively made out of carded wool, while the old woollens were made out of a mixture of carded and combed wool. However, the new woollens also differed in this respect from the other new fabrics which were also made either out of a combination of these wool sorts, exclusively from combed wool, or only in part from combed wool. Is this reason enough to introduce yet a third category next to the old and the new draperies? In continuity with the classification used in some sources, 'light drapery' could be illuminating. The new drapery, however, is also called light drapery by several authors.

Everyone counts the production of bays as new draperies. A problem arises here for the researcher who wants to distinguish the new woollens from the new draperies. Although it is the case that bays had a weft of carded wool and a warp of combed wool, in Leiden the bays, and of course the woollens made after 1580, were reckoned as belonging to the carded wool industry. Posthumus also counted the bays among the carded wool industry and reserved the term 'transitional industry' (*overgangsnijverheid*)—that between the carded and combed wool industries—only for the production of *warpen*.[9] Or were bays none the less exclusively made from carded wool, as I believe is the case today? Whatever the case may be, the logic of counting bays but not woollens among the new draperies is not made more understandable.

Then there were the camlets (*greinen*). There are different opinions regarding the nature of this product. Charles Wilson counted these among the worsted and mixed industries. Ponting, on the other hand, considered camlets as 'a woollen-type fabric'. Posthumus, who was an important source for both of them, viewed camlets as a combed wool product, but from his list of raw materials it can be established that combed wool was in fact not used in many sorts. After having originally used combed wool this raw material was replaced by angora wool and camel hair.[10] The last two raw materials mentioned must be considered as carded wool, which seems to be what Ponting's opinion ('woollen-type fabric') implies. This change could well have taken place by about 1650, because at about that time the production of camlets was organizationally separated from the say industry. I suspect that both views are partially correct, but Ponting perhaps more so than Wilson. Originally combed wool was the raw material used in camlets. This wool, however, was replaced by goat's hair and camel's hair which were carded. During this transition goat's hair was often mixed with combed wool. It is difficult to establish the phases of this process, but by about 1650 it will have been by and large completed. In 1654 the production of camlets was separated from that of the says and organized under a separate hall with its own administration. The use of angora wool and mohair had become so widespread that its classification as a part of the combed wool industry was no longer logical, because most (all?) camlets were carded. Camlets then—at least most of them—may be classified as mixtures, but not as worsted cloths. The concept of the 'new draperies' does not gain in clarity through this. If my supposition is correct, then Posthumus's explanation that the production of camlets was detached from the say industry due to the vast new demand for camlets can be supplemented. It was not so much the new demand in itself, but rather the fact that the fabrics were made of carded wool which caused the organizational change.

In any case, it is clear that camlets can be classified in different ways. Those who do not count them among the new draperies get an entirely different image of the conjunctural development of the worsted cloths than those who do, as is clearly shown in the difference between Wilson's and Ponting's figures. The answer to the question of how long the prosperity of the new draperies lasted is naturally also dependent on the classification which is used.

The view that there is a clear differentiation between the old and the new draperies, which initially seemed so certain and which is sometimes

so readily presented to us, can apparently easily be shattered through renewed research into chronology, the nature of the raw materials, the technique, and the quality, durability, and price of the textiles. This is reason to question whether the term 'new draperies' can be so inconsiderately used as has often been the case.

This question gains a further dimension when we ask ourselves if a division between the old and the new draperies during the Middle Ages and the early modern period does justice to the entire woollen industry in the northern Netherlands. A nominal distinction was made in about 1580 between the old draperies (*oude Leidsche draperie*), new draperies (*Vlaamsche draperie* or '*nieuwe rederije* as of the says, bays and others'), and *nieuwe rederij*. The last branch included the production of linings, *schortecleetlakens, tiretaines* (*tirenteinen*), and bays and *warpen*. These fabrics were light, coarse, cheap, and usually made of domestic wool. We know only little about this industry in Leiden. It came into existence there in about 1550.[11] The volume of production remained modest. Posthumus is ambivalent in his classification of these fabrics. On the one hand, he emphasizes that they are to be positively distinguished from the production of traditional woollens and from the new branches after the siege of Leiden in 1574. On the other hand, he himself speaks of a 'new drapery' and he calls these producers the forerunners of the later entrepreneurs in the bay industry.

Both limited knowledge of the *nieuwe rederij* as well as the uncertainty regarding the exact nature of the product demands further research. In particular, did the production of bays and *warpen* differ so much from those made after 1574 that they may not be referred to as new draperies? Or were the new draperies already introduced into the northern Netherlands before the 1570s? In the mean time, from a source other than Posthumus, we know that in about 1530 woollens were made in Haarlem which most likely may not be included among the old draperies. Moreover, from a forgotten article written by W. S. Unger in 1926, it appears that a draper from Dixmuiden in the southern Netherlands travelled successively to Haarlem (1527), Middelburg (1528), Utrecht (1546), and once again to Middelburg (1546)—repeatedly without a result—in the attempt to establish a 'new drapery' (*nyeuwe draperye*) 'in the manner of Bruges'.[12] Were there more of these attempts perhaps with results? Research into immigration from the southern Netherlands prior to 1575 forms an important point of departure, especially for cities other than Leiden.[13] This point also applies to the following period. Through the overwhelming impact of Posthumus's

work on the textile industry in Leiden, the textile industry elsewhere in the north has fallen too far into oblivion. On the basis of various detailed investigations into the situation in other cities, it appears that the production of textiles there has been studied too much on the basis of what occurred in Leiden. I expect that such research will sharpen our insight into the periodization, extent, and diffusion of the new draperies. Possibly it will also contribute to the clarification of the crucial conceptual problem.

The Labour Market, Labour Organization, and Region of Origin

The decayed textile industry received powerful impulses through the emigration of numerous southern Netherlanders to the Republic. Not only in Leiden but in many other cities as well, the new branches were introduced with greater or lesser success. New research regarding the choice of where to settle and the role the city governments played in it will not so much underline the importance of this immigration—that has been known for a long time—as place the known sources into a context which has been relatively infrequently chosen in Dutch historiography, namely, in that of an investigation concerning how the labour market functioned.

In the last few years the realization has grown among economic and social historians that those who want more thoroughly to investigate labour relations, wage formation, the division of labour, the specialization of labour, and migration patterns can no longer view the labour market as a homogeneous whole.[14] It has become clear that there was not an undifferentiated homogeneous mass who offered their labour. In the context of a limited definition of the problem and limited possibilities with certain types of documents, one may assume a simplification of labour to a category which will not be further specified. In order to gain more insight into the relation between supply and demand, it is meaningful to make a distinction between the different kinds of submarkets or segments. The question of the way in which the different parts of the market were or were not related to each other in particular offers a good possibility for understanding the way in which it functioned.

The insight that the market falls into segments in which supply and demand develop along divergent lines has previously been based on research which has analysed the supply of labour on the criteria of educational level, duration of employment, sex, and region of origin. Here

the issue of origin is very important. It concerns the relation both between the immigrants and the indigenous population and between the different groups of immigrants. The question of the extent to which the stream of immigrants succeeded in monopolizing certain segments of the market by the exclusion of other immigrant and/or indigenous groups is important in understanding how the labour market was built up and functioned in its totality.[15] Recently, Knotter and Van Zanden showed that in Amsterdam during the seventeenth century the share of the different groups of immigrants in the occupational categories which were distinguished was determined by the typical occupational specialization in the regions of origin. For the textile industry it appeared to be quite possible to analyse the composition of the supply of labour in the dressing industry and in the caffa, *bourat*, camlet, silk, and lace branches on the basis of the 'origin principle'.[16]

With the help of the many sources which are available, it is possible to study the various branches of the textile industry.[17] This is based on the assumption that the southern Netherlanders should not be viewed as a homogeneous group, but that a strong correlation can be established between the nature of the various branches and the place or the area from which the individuals employed in these branches came. Which specific informal preferences influenced recruitment? Prosopographical research can show the degree to which the segmentation was continued in subsequent generations. In addition to coupling specific producers with the areas out of which they emigrated, the role of the indigenous workers can also be determined. Did they find a place in the new firms set up by the immigrants and in which position or function? Legions of yet to be answered questions can be thought up. For example, to what degree did formal preferences, as dictated through institutional relations, play a role in the segmentation of the labour market?

In mentioning the institutional context of the industry, we encounter the nature of labour and industrial organization. In this respect, marked segmentation may be supposed, in which regional origin is correlated with forms of labour and industrial organization. The most obvious example of such a connection is that personified by the rise of the group of *reders* of Walloon descent and the transition from the putting-out system to the workshop, or from decentralized small industry to centralized large-scale industry. However, such relationships may also be supposed for the putting-out system, which differed from craft production in the way in which it organized labour and industry.

The question which directly arises out of this is to what degree the business conduct (*bedrijfsvoering*) and the labour structure (*arbeidsstruktuur*) introduced by the southern Netherlanders can be called capitalistic. Did the introduction of the new draperies after 1580 mean a new departure for the textile industry in this respect in the northern Netherlands? DuPlessis and Howell stated in 1982 that 'small commodity production, not capitalism, characterized the city'. Leiden's socio-economic system was 'not the first stage of capitalism', not some form of 'entrepreneurial capitalism', but 'small commodity production' rather than simply a 'primitive form of capitalism'. There were ways in which the still vigorous urban communities of the late-medieval and early modern period were able to fashion 'a viable non-capitalistic system in which artisans retained control of production'. And to top it off, small commodity production was '*not* simply transitional or intermediate, but formed one of the "obstacles" to the rise of capitalism, one which, because it was created in response to changing circumstances, was resistant to many of the forces which had undermined medieval craft production'. The situation only changed after 1580 with the arrival of the Flemish immigrants and their new draperies. Leiden was incorporated into the capitalist economy. In the seventeenth century merchant-capitalists succeeded in establishing a true putting-out system.[18] In 1986 Howell by and large unfolded the same viewpoint, although with more nuances, in a stimulating monograph.[19]

In this interpretation 1580 is seen as transition point both with respect to the conduct of business and the organization of labour. However, I am inclined to see much more continuity in this respect. In employing the same criteria as those used by DuPlessis and Howell, I see relatively little difference between the organization of the old draperies and the new draperies, as regards worsted and mixed industries. If the carded wool industry is also reckoned among the new draperies, then in my opinion marked changes only developed with the rise of the Walloon *reders* and their more centralized form of production.

If this is correct, there are two possibilities. The first is that in typifying the production relations of the new draperies after 1580, just as for the old draperies, the term 'small commodity production' can be used. For many firms engaged in one of the branches of the combing wool industry, this could have applied for much longer. The second possibility is that those who label the woollen industry before about 1635 as capitalistic would also have to do this for the old draperies given

the similarity of the mode of production and of the relations of production. In the first instance we follow the lead of DuPlessis and Howell, who have used the term capitalism too quickly for the new draperies. In the second instance we follow the lead of Posthumus, who would not have disapproved of using the concept of capitalism for both the new draperies and the old draperies.

Paths to Capitalism

It is not my intention to discuss here the question of what it is that must be understood by capitalism. Employing the same criteria which DuPlessis and Howell themselves use, it is not clear to me why 'small commodity production' cannot be included under early modern or merchant capitalism. The mode of production and the relations of production which the authors saw to be typified in 'small commodity production' formed in my opinion a specific phase in the transition from craft production to capitalistic production in the meaning which they themselves give to it.

Furthermore, I do not believe that the use of the term 'capitalism' has to lead to an anachronism or a teleology, provided that we realize that the modes of production must be viewed as historical categories. Capitalism developed gradually and not in a straight line. There were obstacles, wrong turns, and dead ends. There was stagnation and even regression. Capitalism does not preclude the possibility that entrepreneurs can benefit by not annexing smaller firms or by not pricing them out of the market. Capitalism does not necessitate the take-over of firms in the finishing industry. In certain situations it can be utterly rational to allow the independence of firms engaged in diverse aspects of the production process (*deelbewerkers*) to continue and to oppose the exploitation (*uitholling*) of small firms, without making the label of capitalism useless. It is not exceptional for the artisan mode of production to continue, even though the owners are in the grip of merchant capitalists.[20]

That it can be considered necessary at the political level to oppose the unlimited expansion of the capitalistic firm, for example through limiting the number of looms and employees (*knechts*), can perhaps be explained on the basis of social and moral considerations, but this does not preclude an economic explanation. For that matter, the long continued existence of ideas and ideals belonging to an earlier period under changed and changing production relations and class relations is surely not surprising.

My doubts about the usefulness of the introduction of the concept of 'small commodity production' require further explanation. I limit myself to a hypothesis which can serve as a guide to a more extensive discussion of DuPlessis's and Howell's ideas. The ease with which the new draperies were introduced was possible because many of its elements were already known. One could even suggest that in the last decades of the sixteenth century, the old draperies were more capitalistic than the new draperies.

Even if I do not think that the debate concerning the transition from feudalism to capitalism is directly served through the introduction of a 'small commodity production' as argued by DuPlessis and Howell, in another respect I find their publications indisputably valuable.[21] At the same time they invite considerable attention to be given to the social-political aspects of the history of the textile industry. The relations between the government and entrepreneurs has scarcely been investigated in the historiography of the northern Netherlands. As a continuation of their study, an investigation would be useful concerning political relations after 1580, and the resulting consequences for class relations and the tensions which the continuing social and economic differentiation brought about.[22]

The question concerning the paths of capitalism is of importance in yet another respect. In the eighteenth century the textile industry in Holland steadily declined, among other reasons because of its relocation to the 'sandgrounds'. This is true at least for the capitalistic branches. Craft production, which was organized in guilds and worked for the local market, was better able to maintain itself, but had only slight importance. The disappearance of the firms 'between craft and factory' meant that industrial capitalism in Holland did not develop, or developed only to a very small degree, directly out of an early modern capitalistic mode of production. As a result there is a gap chronologically in the transition from early to modern capitalism. We also see this in other industries.

The decline or relocation of firms to the countryside entailed a marked decrease of the population employed in the merchant capitalistic industry. What happened to these working women and men? Did they follow the entrepreneurs to the 'sandgrounds'? Employment opportunities there will have been limited through the presence of a local rural population; a population, afflicted through the downward conjuncture in agriculture after 1650, happy to earn an income which was or was not supplementary. The possibilities of earning a livelihood

were also limited because proto-industrialization remained modest there for a long period of time *vis-à-vis* the urban industry on the eve of its decline.

Where then did they go? I suspect that many—certainly the more educated—emigrated abroad. I dare not speculate about their number. This emigration is certainly not unknown in the older literature.[23] A few recent studies, which have chosen their point of departure abroad, reaffirm my conviction that this exodus should once again be thoroughly studied.[24]

My impressionistic ideas concerning the emigration of labour do not have the intention of denying that the population decline which was so typical of Dutch industrial cities in the eighteenth century should not at the same time be explained through a high death-rate. On the contrary, it is exactly in the early capitalistic industries that I am inclined to take emigration into account. Whatever the case may be, my last hypothesis is that the late industrialization of the Netherlands in general—and in the textile industry in particular—can in part be understood through the emigration of the rapidly dwindling proletariat.

I have raised many questions, offered some vague suppositions, and only sketched a few answers. We may expect that in the foreseeable future once again more time and energy will be invested in what has been considered an old-fashioned topic.

NOTES

1. Posthumus (1908–39).
2. Dekker (1985), 69–85; Dekker (1988), 1–19; Duplessis and Howell (1982), 49–84; Howell (1986); Kloek (1987), 373–402; Knotter and Van Zanden (1987), 403–31; Noordegraaf (1982*a*), 39–64—a condensed version in Noordegraaf (1982*b*), 125–35.
3. Jansma directed his attention primarily to the period before 1500. Jansma (1976), 51–6. For the 14th to 16th cents. also see Howell (1986). Extended reviews of Posthumus not in Dutch: Coornaert (1914), 258–66; Coornaert (1946), 169–76. Wilson (1961) focuses primarily on trade and Anglo-Dutch competition after 1620. Stone-Ferrier (1985) follows Wilson, but also gives some information about the organization of labour, etc.
4. This choice naturally has consequences for my selection of data, and restrictions of space were a determining factor.
5. Noordegraaf (1979–80*a*); Noordegraaf (1979–80*b*); and Jansen (1979–80).

6. Posthumus prefers the term workshop (*atelier*) to that of manufactories (*manufactuur*). The difference does not become completely clear when the formulations throughout the text are compared with each other. Other literature regarding this is also not clear, so that new research regarding this form of industrial organization is obviously needed.
7. As is the case with 'manufactories' and 'workshop', new research is desirable into the nature of the precise difference between *reders* and *fabrikanten*.
8. Coleman (1969), 425–8; Van Dillen (1970), 176.
9. Elsewhere Posthumus states that old woollens were completely or partially made of combed wool (Posthumus (1908–39), ii. 107).
10. Wilson (1961), 215–17; Ponting (1974), 135; Posthumus (1908–39), ii. 272, 305, 324–7; iii. 926; Stone-Ferrier (1985), 125.
11. Posthumus (1908–39), i. 68, 70, 81, 408; ii. 3. Linings (*voerlakens*) were also already made in the 15th cent., but only in about 1560 did entrepreneurs who specialized in this business settle in Leiden, according to Posthumus (ibid. i. 70). I could not verify Coleman's claim that says were made in Leiden in the 1490s; he does not give a source and I consider this very unlikely (Coleman (1969), 426).
12. Unger (1926), 563–72.
13. For example, are cloth-dressers (*lakenbereiders*) the only ones who left Tilburg before 1580 to settle in Rotterdam or had Tilburg's production also already been relocated there? See Boeren (1955).
14. Cf. Noordegraaf (1985), 95 n. 69.
15. Noordegraaf (1987), 362.
16. Knotter and Van Zanden (1987), *passim*.
17. Although from another point of view, Posthumus has already largely worked up the sources so that these theoretical ideas can be properly tested. For other places the literature also offers points of contact and there are also printed sources accessible for this kind of research.
18. DuPlessis and Howell (1982), 59, 63, 79, 80, 81, 84.
19. See criticism in Kloek (1987).
20. See e.g. Thijs (1982), 119–20.
21. Of importance particularly for them is Kohachiro Takahashi (1976) and the following critiques (especially Lefebvre) in Hilton (1976), 68–97.
22. Also see Prak (1988), 133–45.
23. De Vries (1968), 103–7.
24. *Poorters* (1986) (see Boone (1987), 232); de Peuter (1985), 11–31; de Peuter (1988), 145–60; Davids (1985), 135–56.

6

WOMEN'S WORK IN THE NEW AND LIGHT DRAPERIES OF THE LOW COUNTRIES

MARTHA C. HOWELL

HISTORIANS have never taken systematic account of women's work in the new and light draperies of the late medieval and early modern Low Countries. Their neglect of the topic is understandable because the sources known to us seem to contain very little ready evidence about female labour in any but the ancillary trades. There, it appears, women participated only as piece-workers providing low-skilled, part-time, and cheap labour.

To be sure, the occasional local study has offered richer documentation. For example, Posthumus's massive tomes on Leiden's early modern textile industry devoted a small section (some six paragraphs) to female labour; in his analysis of Hondschoote's *sayetterie*, Coornaert was careful to call attention to the presence of women in several of his sources.[1] But neither scholar sought to uncover the patterns according to which women took on or were delegated certain tasks and not others. Neither asked, for example, about the ways in which a woman's own class position, marital status, age, or geographic situation correlated with her role in the industry or how the representation of women as a group in the industry was affected by the degree of labour specialization, by the social organization of industry and trade, or even by cyclical conditions.

If sources as good as those Posthumus and Coornaert used—and theirs are among the richest we have about the new and light draperies in the Low Countries—did not provoke either of these master historians to undertake a serious study of women's work, it is little wonder that we, their successors, have been inclined to exclude the sexual division of labour from our own problematic. By and large, we have accepted, as most of the sources tempt us to do, the obvious explanation: women formed a distinct and undifferentiated labour force, one

content, even eager, to do low-skilled, low-paying, intermittent work and one therefore easily exploitable. If that understanding is correct, we too have been correct in excluding women from the economic, labour, and social histories of the new and light draperies that we have written. This labour force was predictable, in a fundamental sense unchanging, and therefore logically exempt from scrutiny.

In the last fifteen years, however, we have learned to be suspicious of such reasoning, for we have learned that women's work is seldom so easily categorized, rarely as stable, and never exactly as it appears in the sources. Historians of women have of course pioneered in fashioning this more nuanced understanding of the importance of the sexual division of labour, and as historians of women our concern has rightly been with the way the sexual division of labour has created and sustained gender hierarchy and the ways changes in the sexual division of labour have been both a response to and a catalyst of changes in socio-economic structure.

Economic, labour, and social historians whose research interests are different have, however, been quick to grasp the import of these findings. For example, economic historians now regularly analyse the industrial revolution of the nineteenth century in terms of the sexual division of labour as well as in terms of changes in technology, labour organization, capital output ratios, and trade. Even an introductory survey of the period written today does not fail to take account of women's special roles in early forms of factory labour; their even more important place in the history of piece-work and sweated labour, events without which the industrial revolution is incomprehensible; and women's critical contribution to what was in many ways an increasingly complex world of subsistence production and domestic management. Women's work in other times and places is also now under scrutiny: the contemporary world of international capitalist production, which is characterized by an unstable sexual division of labour; the medieval urban economy, with its household-based family economy; and the preindustrial countryside, with its own kind of household economy.[2]

This essay argues that we would equally enrich our understanding of the structure and development of the new and light draperies of the Low Countries if we were systematically to investigate its sexual division of labour. The essay is built upon a wide-ranging and careful reading of primary sources and secondary literature about the new and light draperies, but it neither exhausts the published material nor exploits heretofore unknown archives. Rather than a detailed study of one

branch of the industry, of one city, or of one village, it is an effort to survey the industry as a whole, using known sources along with the rich secondary literature available to us. The result of these forays is a three-part argument concerning the variability of women's work in textile production in the early modern Low Countries, the possible reasons for these variations, and the significance of these variations for our histories of the new and light draperies.

I

Even a cursory look at the published material about women's work in the region's industry calls into question the idea that women constituted an undifferentiated and unchanging labour force. The studies by Posthumus and Coornaert on Leiden and Hondschoote, along with the relevant sources, are clear cases in point.

At first glance, Leiden seems to confirm Posthumus's idea that women were confined to the familiar, marginal world of 'light' and unskilled wage work. It seems that women almost never wove, fulled, or finished the *sayes*, *baies*, *changéants*, *tierteinen*, fustians, or *lakens* that the city produced by the thousands in the seventeenth century. Unsurprisingly, however, they did do some spinning and wool preparation, and both girls and boys were regularly employed in the *ateliers* of *saye* producers in the seventeenth century.

But closer inspection reveals at least two surprises. First, women were not the source of most low-skilled labour. It was apparently men, not women, who dominated spinning in the seventeenth-century *laken* industry, and the sources also imply that men almost alone combed its wool.[3] Children, at least half of them boys, rather than adult women, did much of the low skilled work in the *sayetterie*, tasks which had incontestably been the monopoly of women in Leiden's medieval drapery. Second, women did in fact hold some of the very jobs from which they would have been excluded, had their relegation to low-skilled, dependent work been absolute. It is not at all uncommon, although admittedly far from typical, to find women drapers, cloth and wool merchants, even owners of calendar mills. The records usually describe these women as widows and frequently identify the husbands from whom they had inherited their trades.[4] But even women who were apparently not widows took on certain entrepreneurial positions. The dyeing business was one enterprise making places for such women, and a series of documents

from the mid-seventeenth century suggests that women then constituted the majority of Leiden's blue-dyers in the *sayetterie* and were also well represented in other dyeing specialties.[5]

In sixteenth-century Hondschoote, where the *sayetterie* alone held uncontested dominance, women took rather different jobs than in Leiden. In Hondschoote, women spun wool much more often, especially women living in the countryside where Hondschoote's merchants and drapers had most of their spinning done. Yet even in Hondschoote, women did not monopolize spinning as they apparently had in nearby centres of cloth production during the Middle Ages, such as Douai and Bruges. Nor did they comb wool; as in Leiden, this task was the province of men. Again, this pattern contrasts with the medieval system of Flemish cloth production in which women usually both combed and carded wool.[6]

Small numbers of women also took on higher skilled trades and entrepreneurial positions. Apparently persuaded that the lines between women's work and men's work were not rigidly drawn, Coornaert also reported that 'jamais aucune distinction juridique ne sera faite pour aucun genre de profession entre les hommes et les femmes'.[7] As we shall see, the published sources do not confirm that the sexual division of labour was so flexible (in fact, Hondschoote's sources provide *less* evidence of women's work than Leiden's), but they do unambiguously describe women drapers, *saye* merchants, and finishers. Women in Hondschoote seem to have been particularly well represented among the *corroyeurs*, a trade closely associated with dyeing, and considered by Coornaert to bear an equally high economic status.[8]

Other cities and towns were different from both Leiden and Hondschoote. Regulatory records from fifteenth-century Bergues commonly refer to women drapers both of *sayes* and traditional cloths; while later ordinances omit women from their purview, other kinds of sources from the later period confirm that women continued to organize the production of *sayes*. For example, a list of fines from 1538–9 included six women *saye* merchants along with twenty-one men. Women in Bergues, like women in Leiden and Hondschoote, seem not to have woven or fulled cloth intended for export, but they did regularly assume their husbands' roles in finishing and even established and managed their own shops.[9]

In early fifteenth-century Comines, in contrast to Leiden, Hondschoote, and Bergues, the ordinances imply that it was women also who spun wool. An ordinance of a slightly later date (1451) concerning

draping both of cloth of English wool and of other sorts, assumes women drapers, and an account of 1484–5 mentions a widow who was a draper.[10]

Evidence from Dixmude is particularly intriguing. Regulations beginning in the early sixteenth century describe women as producers both of traditional cloth and the new light *sayes*.[11] More concrete evidence confirms the language of the ordinances. A judgement from judicial records of 1545–52 assumes a *saye* draper's wife could take over her husband's business; an account from 1533–4 records a subsidy paid to a widow in order to persuade her to move to Dixmude to make *sayes*; other accounts from later years record payments to women for cloth they delivered to the magistrate.[12]

In sharp contrast to these documents, records from other cities, such as Lo and Tourcoing, disclose no evidence that women bought or sold wool, cloth, or labour, that they did skilled work of any kind, or even that they helped with unskilled work. Admittedly, the published evidence from such cities is sparse, but the total absence of women or feminine references from any of the sources distinguishes them from other contemporary records and, indeed, even more strongly from the medieval sources we have.[13]

The statistical significance of these variations is undeniable, but its historical meaning is far from clear. The difficulties of assessing the reality behind ordinances and prescriptive documents are legendary, and even the more concrete data drawn from fiscal accounts, records of fines, tax rolls, or governmental surveys cannot be considered directly to represent the labour force. Certainly we must be especially cautious when using these sources for measuring women's work because they necessarily conceal and even distort the labour of women.

This methodological point requires further discussion but before taking it up, let us look outside this region and somewhat beyond the new and light draperies, into those other branches of the early modern textile industry where the sexual division of labour seems to have been even more flexible. In the Pays de Caux, for example, women working in the pay of Rouen's merchants spun cotton yarn at home until the 1790s, while men dominated the cotton-weaving trade; from the 1790s on, however, men left weaving and women took it over.[14] In the Osnabrück linen-producing area of the eighteenth century, women and men together, with no apparent fixed separation of tasks, grew flax and produced linen cloth for sale in export markets.[15] In the nineteenth-century wool cloth producing region of the Oberlausitz, women and

men together produced wool fabrics in household workshops they jointly managed.[16]

II

Sparse as it is, the published evidence from the Low Countries explodes the idea that the sexual division of labour there took a predictable and constant course. Yet the evidence does not have self-evident historical meaning. Why should women have spun wool in medieval Leiden and in early modern Hondschoote, but have rarely done so in early modern Leiden? Why should women have woven cloth in Dixmude but not in Lo, dyed cloth in Leiden and Hondschoote but not in Comines? Are these variations the result of different reporting and regulatory practices or of different socio-economic and institutional conditions?

Both kinds of factors seem to have been operative. To understand them, we must look more closely at cultural, economic, and institutional factors that shaped the sexual division of labour in this period. The argument of this essay depends upon such an analysis, specifically upon a study of the household economy in which the sexual division of labour was embedded.

Long a focus of study by economists, the household economy has more recently been recognized by historians as one of the central social institutions of medieval and early modern Europe. In recent years, historians have profitably begun to examine both its demographic and legal features, on the one hand, and its economic functions, on the other. In its 'typical' form, the household they have analysed was made up of a 'nuclear' family, the occasional dependent relative, and helpers of all ages. It contained an average of perhaps six persons and was headed by a conjugal pair—a husband and wife—who founded and headed the household. When one of the spouses died, the other usually succeeded as sole head of household or, more often, remarried to merge his or her household with another.[17]

The household was also an economic unit. In its best-known form, as it classically existed in the 'mythical' medieval countryside, this social unit controlled economic production, both for subsistence and for the market. Its members divided the necessary economic tasks according to a pattern with two particular features of interest here. One granted authority to the husband but recognized his wife as second-in-command, indeed as his economic partner. The other feature established a rough

sexual division of labour which allocated to women child-rearing, preparing food and clothing for immediate use, nursing, and all associated domestic tasks, while charging men with lumbering and building, care of flocks and herds, and field work. It is hard to assess whether and how this division of labour buttressed male authority in the household, and scholars have disagreed on this matter. It is none the less clear that the division was consistent both with the biological fact that women bore and nursed children and with cultural norms tending to associate women with the domestic space and men's with an outside world.[18]

Although powerful, this sexual division of labour was not rigid. Women sometimes did field work or took care of flocks; men sometimes kept gardens, made beer, and, one supposes, rocked babies. Other tasks did not fall neatly into either a female or a male realm. Textile production was one of these. Women, it seems, had primary charge of clothing family members and it usually was they, we are certain, who spun wool or flax, wove cloth, and sewed clothes for family use. But men also performed some or all of these tasks, particularly in later centuries, as more of this production came to be directed towards the market.

And it is of course only with families involved in market production that this essay is concerned. Nevertheless, it is important to recognize that the family-based household economy of the late-medieval and early modern period had strong roots in this less complex medieval household in the European countryside where the market was localized and, by an economist's standards, primitive.

As the market expanded, however, both giving birth to cities and changing the economic dynamics of the countryside, the choice of goods a family made and how they made them became complex decisions depending upon factors well outside the ken of the small household unit. Inevitably, the internal dynamics of the household changed, and with them, the sexual division of labour. It is these changes that existing scholarship has not fully taken into account. The reasons are understandable, for only when we look at women's roles in this household does it become apparent how much the household's internal economic structure would alter as the household turned from subsistence production to market production.

Two aspects of this development are important here. First, the line between 'female' and 'male' work could become even more blurred than it had been. In some cases women would retain tasks traditionally theirs but enter new spaces in order to do them. For example, women might

keep their roles in nursing, but in cities they now worked as sworn public officials in performing their jobs. Or they might continue to make cheese and beer but they would now travel to local markets or they would set up their own distribution outlets to sell their food. In these cases, women stepped 'outside' the domestic hearth and were entering what has been conceived of as male space. In other cases men began to make cloth for sale or bake bread for their own retail operations, thereby, as it were, moving female tasks into the male domain.

Second, and usually second in time as well, work for the market was clearly broken out of the undifferentiated matrix of household 'chores' to which it had once belonged. Now identified as work done for money, rather than for subsistence, it came to have new value, initially if only because it brought the family cash, an essential commodity in a world of tax collectors, landlords, and church assessors, or because it became a means of daily subsistence in communities where even basic goods could no longer be obtained except through local markets.

The realities of competition for markets, especially long-distance markets, also led to standardization, quality controls, and production scheduling; at the same time the geographic separation of production from raw material sources and from markets as well as the new sophistication required of marketable goods inevitably led to new divisions in the labour process and to new tasks. Many of the resulting pressures on artisans and workers, as well as their responses, have been well documented in historical literature.

One possible outcome was a capitalist production structure. The early modern textile industry, being dependent on long-distance merchants for access both to markets and to many of the raw materials, was classically susceptible to capitalist pressures, especially since it had access to a huge potential labour force in urban and rural households.

But other results were also possible, even in regions serving international markets. Textile producers, with or without the intervention of local political authorities, could join to protect their artisanal and entrepreneurial status and to control capital accumulation. This pattern was more common in luxury industries of late-medieval cities where a highly skilled labour force could more easily organize (or be organized) and where mobility of capital and labour was limited by institutional and legal factors. It was less common in the early modern textile industry where markets appear to have been more price-sensitive and where capital and labour were more mobile. But even there it did occur.

All the evidence we have, including that gathered for this essay, suggests that the household and its sexual division of labour were deeply implicated in the transformations wrought by such social and economic shifts. The connections between the internal structure and functions of the household, on the one hand, and socio-economic change outside it, on the other, were so close that neither can be contained by a tidy schematic. Yet certain patterns of change in the household economy are observable, and to take account of them, I have abstracted three typologies, each having separate implications for women's work and the way it appears in the sources.

(1) The best-known type of household economy to emerge in late-medieval and especially in early modern Europe has been called a 'family wage economy'. In it, men, women, and children took in whatever wage work was available and pooled their earnings to support the household. No formal institutions, few legal or property rights, and very little of traditional custom stood between these workers and their employers. Never fully realized in the early modern textile industry, this pattern was nevertheless approximated both in rural and urban industries of the period, classically in situations dubbed 'proto-industrial' in recent scholarly literature.

In these branches of the industry, some kind of sexual division of labour survived, but it often fell easy prey to market demands. It is often here that women can be found in 'men's' jobs, possibly weaving cotton cloth, as they did in the Pays de Caux, or making silk, as they did in seventeenth-century Lyons. Just how the changes occurred is not fully understood, but we suspect that the pattern developed with dramatic shifts in the demand for or supply of labour. When faced with a shortage of male labour, capitalist employers would readily turn to whatever labour force was available, and propertyless households, rural or urban, whose traditional means of subsistence had become inadequate, took whatever work was available and allocated it to any available household worker.

This pattern, driven by the same forces that produced systematic exploitation of child labour in early modern textile production, is relatively well known to historians of the period (although its place in the history of the domestic economy may be less well understood) precisely because the participants in the system functioned 'free' of intervening institutions. Any contemporary observers or any state officials monitoring this industry ineluctably recorded the activities of merchants, on the one hand, and workers, on the other. Hence, from the latter part

of the early modern period when bureaucracies of all kinds were busy measuring and commenting on the economy, we have many sources which actually name wage workers and their employers.

(2) Although the availability of tax rolls, surveys, and narrative accounts from the early modern period have helped us understand this capitalist production system, they have probably also misled us about the frequency of its occurrence. In this period, a form of the household economy rather more closely resembling its medieval progenitor was surely more typical; I have elsewhere characterized it as a 'family production unit', but the 'ideal type' probably has greater heuristic value if considered as being of two kinds, one a full household partnership and the other an alliance of unequals.[19]

In the first, a household partnership, the family retained essential control of production, often owning its tools as well as its raw materials; here, the conjugal couple, rather than an abstract market, managed the labour process. But because this version of the family-run household economy devoted itself to market production, it differed from its progenitor in significant ways: in it, the traditional sexual division of labour had weakened, as it had in the family wage economy, because man and wife alike together adapted their roles to fit the demands or opportunities of the market. This seems to have been the pattern in the linen industry described by Schlumbohm and in the wool-producing households of the upper Rhine, perhaps in the dyeing shops in Leiden, or in the finishing shops of Dixmude. According to Coornaert, it was in fact the dominant system throughout the early modern Low Countries' textile industry, which rested, he claimed, on a vast domestic/household industry of which the 'kingpin was everywhere the master artisan, the draper, who managed a family shop of greater or smaller size'.[20] Although undoubtedly more common in early modern Europe than the capitalist family wage economy, this household economy is less well understood because the official sources—state and corporate—that described the industry did not represent the household as the production unit. It was only the 'head' of household who appeared in the tax rolls, fiscal records, or judicial accounts. If he lived, the husband took this role, and women appear in these sources almost exclusively as widows.

(3) The third type of household economy, which appears perhaps as often in the sources particular to the new and light draperies, is the second variation of the family production unit. In this form, the male household head was a member of a corporate or other public body created to regulate or govern the craft. The sources describing this

household, which are perhaps the most abundant we have, do not represent women well, because women, along with other family members, were in reality not full participants in the husband's work.

Several related reasons help to explain their exclusion, all having to do with the need of regulated crafts for a finite and comparably trained work-force that could be organized to meet fixed production schedules and provide standardized output. It was in the very nature of organized crafts to issue (or be subject to) stringent work rules and rigid membership standards. These factors alone probably can explain women's absence from most regulated industries, especially from weaving and fulling, where controls of this kind were typical in the Low Countries, even in the rural villages.[21] Women, whose primary, domestic functions tied them to the rhythms of the household, were certainly less able than men, and as men's subordinates less free, to take on work schedules subject to extra-familial demands.

Similar restraints almost certainly operated to restrict women's roles in long-distance trade, which usually required travel, extended absences from home, and independent creditworthiness.

Political realities may also have restricted women's place in the regulated crafts. Corporative organizations, whether self-determining or created by political superiors, tended to limit their memberships to individuals, rejecting families as the basis of public authority.[22] In this patriarchal system of politics, only men would have counted as fully competent civic persons. The door would have been shut to women, no matter how important or useful they had traditionally been in artisanal production.

A fully realized system of craft regulation therefore marginalized women, leaving them but three choices: (*a*) retreat from market production to the increasingly distinct 'domestic' sphere of subsistence production where 'work' was not measured or counted; (*b*) a shift from skilled entrepreneurships to piece-work in still unregulated sectors of the economy; inevitably this was lower skilled work; (*c*) a move to those entrepreneurial positions or skilled work that remained free of systematic regulation.

III

This three-part schema does not, of course, capture the complexity of family structures and functions in the early modern economy, or even

in the new and light draperies. In reality, most families were not pure wage economies, pure household partnerships producing for the market, or pure household economies in which men worked in regulated production and women were relegated to subsistence or loosely organized market production. Most families were hybrids.

Yet, even in its over-schematized and provisional form, the three-part typology I have constructed can help to explain the data about women's work presented in this essay, for the schema makes it clear that women's role in market production would have differed in each type and would have been differently represented by the sources. Only those sources recording the use of occasional piece-work, those documents registering the employment of wage labour controlled by capitalists, or those treating the household as the unit of production where the woman headed the household would regularly have taken direct account of women. All other sources would have failed to capture the work of women.

The evidence reviewed earlier in this essay from cities such as Leiden, Hondschoote, Bergues, or Comines includes each of these possibilities. Some of the records describe the well-known case in which women spun wool and did other low-skilled, part-time work for the industry. Some of these women, in medieval Leiden and early modern Hondschoote alike, lived outside the city proper and took in this work as an ancillary source of cash for the peasant household they helped support. These women belonged, however, to a world that was disappearing in the early modern Low Countries. Instead, most of the women who spun wool or did other preparatory tasks for the early modern industry either belonged to a fully transformed family wage economy which devoted most of its labour time to this work or belonged to the smaller number of household economies which managed this kind of work as entrepreneurs; Roubaix's spinners may serve to exemplify the first pattern, and Hondschoote's combers, the second. In either of the two latter cases, however, men could join or even fully replace women, as they had, for example, in Leiden's wool-spinning.

Other records describe women who did more highly skilled work or had their own businesses; their household economies were different. Women drapers of Dixmude or Leiden were members of such households, and their survival can be attributed to the fact that draping, still a small-scale, independently managed activity in these cities, could be contained within the traditional household economy.

Those few women who traded wool and cloth were beneficiaries of similar structural conditions, but there were markedly fewer women merchants than there were drapers, dyers, or finishers because long-distance trade was easily rendered incompatible with the rhythms of the household. All the sources we have show that women merchants were widows, and most of them carried on their husbands' trade for just a year or two before disappearing from the sources.

This schema can also explain the apparent inconsistencies of the sources. Women do not turn up in those describing weaving or fulling because these trades were everywhere subject to strict production controls that excluded the intermittent, informal worker. But women did survive in the skilled trades which were less closely regulated, such as dyeing and finishing, both as partners/widows of their husbands and as entrepreneurs in their own right. Many women in these positions had either inherited their fathers' shops or had learned the trade as girls and had somehow obtained the capital to set themselves up in business when they married. In either case, they belonged to a family-based household economy, one where men and women together produced for the market as entrepreneurs.

IV

This analysis not only helps us understand the vagaries of women's work in the early modern Low Countries, but it suggests that we need to reconsider several aspects of the textile industry's history. This essay confirms our long-standing assumption that the actual labour force in the new and light draperies was much larger than that measurable with published sources simply because thousands of wives, not to mention children and servants, worked alongside male heads of household in family workshops where wool was spun, woven, fulled, dyed, or finished or where wool was bought and cloth was sold. Sometimes these women surface in the sources (the wives who worked with their husbands combing wool for Hondschoote's *sayetterie* are an example), but for every woman who peeps over her husband's shoulder there are tens, even hundreds, who are hidden.

Yet this essay has also argued that wives were not always their husbands' silent partners. Only when we are dealing with a fully functioning household partnership can we assume that every head of household could count on an appreciable contribution of labour from his wife, his

children, or his servants. Men who worked full time for a wage in the pay of capitalists probably could depend upon very little wifely aid at the wheel, loom, dyeing vat, or tenting frame. Instead, their wives were taking in their own piece-work, were going out to domestic service jobs, or, if rural residents, were desperately trying to farm what little land the household still retained—all the while struggling, as women always had, to nurse babies, prepare meals, and make clothing for the family.[23] Men in another kind of household economy, those who belonged to regulated crafts, surely benefited from some wifely help, but this practice was under constant pressure, and many of the women in these households turned to other work. Whether their other work was in textiles, whether it was done for a wage as an entrepreneur, depended directly on the local economy and on the economic status of the household. Each local situation was different, and each must be studied independently.

This essay also gives us a tool for further research into how the mix of industry in a locality developed and the way a given array changed. We now can appreciate that women who were excluded from the male-run household workshop would have become available, perhaps desperate, for alternative work. Where non-industrial jobs, especially domestic service ones, were growing, as they were in larger cities during the period, single women may well have fled to them, thus skewing urban immigration rates and producing what most commentators have seen as an 'oversupply' of women in certain cities.[24] Married women would not, however, have had this option. Instead, they might have taken up lace-making or similar work that could be done part-time at home. While women had always engaged in this kind of work, they would now have turned to it in great numbers, as it became almost their sole means of entry into market production in areas where the household economy had lost its role as provider of common work for husband and wife.

We now also have an aid for understanding better the process of proto-industrialization, a term usually used to describe the transformation of a peasantry into a rural proletariat. The keys to proto-industrialization appear to lie in land shortage, poverty, and the sufficient development of a market. When all these pieces are in place, the result can be a profound transformation in the labour process and, at the same time, in the demographic system.[25] The last element concerns us here. According to this model, peasant or artisanal families fundamentally alter their marital strategies once fully captive of the wage. Now they marry early, have more children, and thereby contribute to their own further proletarianization and emiseration.

The theory has been questioned on many grounds but one of the chief problems with it is that in many places the predicated demographic revolution did not occur.[26] In struggling to resolve this difficulty, many scholars have rightly focused on women's marriage ages, acknowledging that it was a low marriage age for women alone that could have changed marital fertility rates. In some proto-industrial regions, they have found, women did not marry early. In the eighteenth-century Pays de Caux studied by Gay Gullickson, for example, women continued to marry late, just as they had in centuries past, although the putting-out system was deeply entrenched. There, however, it was primarily women who worked for wages, while men retained partial independence of the wage system because they still owned small plots of land. Gullickson has proposed that women's age of marriage did not fall in this region because their marriage age was determined as much by their prospective husbands' work as by their own, and because it was men's, not women's, capacity to found a new household that determined the age of marriage for both sexes. Whether Gullickson's explanation will hold elsewhere remains to be seen, but her evidence suggests that we would do well to look at men's and women's work separately in studying demographic transformations, just as we now look separately at their ages of marriage.

The essay also challenges certain of our assumptions about women's work. It provides no clear evidence that women formed a larger component of the labour force when production methods were simplified or as raw materials became less costly. In fact, contrary to what we might expect, it suggests that women were more active as skilled or propertied workers in the old urban drapery (where skills were higher and materials usually costlier) than in the new, and were barred from highly skilled work in either only when it could not be performed by the household unit. If the hypothesis proposed here survives further research, we may find that women regularly appeared in earlier sources because the household economy there was intact.

This is not to say, however, that all shifts in technology and raw materials were unimportant. Many of the sources we have from this period reveal women's active participation in linen-making, and here raw material availability and technology may have played a role. Throughout most of the period, flax-growing and linen-making could be easily contained within a single household workshop because flax could be grown and prepared almost everywhere and by almost anyone.

The differences in technology and labour organization between the old, the new, and the light wool draperies are, however, more subtle than those between linen-making on the one hand and wool cloth-making on the other. Each situation must be analysed independently because there were so many local variations in how wool was obtained and processed, how cloth production was organized, and how cloth was marketed.

This analysis also calls into question the categorizations we have frequently made between 'free' and 'regulated' industries. Coornaert proposed that the relative 'freedom' of capital and labour in Hondschoote both accounted for its success in the *sayetterie* and also explained what he regarded as women's high levels of participation in the industry.[27] As we have seen, women do not appear in Hondschoote's published sources with greater frequency than in those of many nearby villages and towns where trade and industry were closely regulated. Coornaert's association of 'freedom' with open access for women thus seems wrong, or at least too simple.

In making this association, Coornaert was evidently thinking that Hondschoote's system of production approached capitalism, and he imagined that in this system employers would have made no distinction between male and female labour. As this essay has argued, such a pattern could have developed in truly capitalist situations with a fully dveloped female proletariat. But this evidently did not happen in Hondschoote. There were surely female wage workers in Hondschoote and its environs, but more typical must have been the household unit which survived as part of a *Kaufsystem*. In this system women would have regularly worked with their husbands, as Coornaert suspected and as the sources occasionally report, but would have appeared in the sources less frequently than he imagined.

Whether this interpretation fits the facts better than Coornaert's remains to be seen, but it does have the advantage of preserving his insight that Hondschoote's system of production was further along the road to capitalism than that of its neighbours. Yet, it also leaves open the possibility that women were in fact more active in this industry than in the more closely regulated trades of neighbouring villages, if they were not, as he thought, 'free' workers, undifferentiated from men.

Finally, this essay raises the question of just how important the demand for labour was in determining women's work in these textiles. Our evidence indicates that women did not always do textile work, even when the demand for labour was intense, and they did not always retreat from the industry, even when times were disastrous. Much more

important than changing demand and supply conditions, general conjuncture, or interruptions in trade seem to have been the social and cultural factors outlined in this essay.

The female labour force in the new and light draperies of the early modern Low Countries was, thus, not undifferentiated, easily predictable, or unchanging. It was fully as complicated as the male and as subject to cultural and institutional factors beyond the purely economic. But it also differed from the male because it was subject to influences particular to gender. By implicitly conflating it with men's labour history, we have surely misunderstood both women's labour history and the development of industry itself. It is evidently time for a closer look at women's work itself.

NOTES

1. See Posthumus (1908–39), iii. 574 ff. Posthumus attributed the presence of women to their 'oversupply' and thought they worked in the early modern industry much as they had in the medieval. As this essay will point out, however, there were some significant differences between the old, medieval drapery and the early modern new and light draperies. See nn. 6–8 below for a summary of Coornaert's comments regarding women in Hondschoote's *sayetterie*.
2. See e.g. Beneria and Roldan (1987); Howell (1986); Kriedte, Medick, and Schlumbohm (1978).
3. In Posthumus (1910–22), e.g.: vol. iii, docs. 26, 100 (74), 106, 165 (10), 214 (12), 312 and vol. iv, doc. 44, all of which refer to male spinners or to male and female spinners together. No regulatory documents in this period refer to female spinners alone. The male spinners in the *laken* industry seem to have been urban dwellers, while both men and women spun for wages in the countryside. For evidence that men controlled combing, see the 1596 list of wool-combers which names 67 men and two widows: ibid. iii, doc. 370.
4. See e.g. ibid. iii, doc. 139 which names 45 saye drapers, one of them a widow; 165 (102), an ordinance of 1591 which refers to both men and women as workers in the *sayetterie*, language which is repeated in subsequent editions such as doc. 271 (35); doc. 213 which is a 1602 list of 1,180 owners of saye or *grein* looms, eleven of them women; doc. 223 which is a 1610 judgement granting a widow rights to run her husband's calendar mill for twelve years; doc. 259 which is a 1602 list of 278 owners of fustian looms, three of them female; doc. 284 (15) which is a 1583 ordinance granting widow's rights to *droogscheerders'* (finishers') widows, including the right to continue the business with the help of a

meisterknecht; doc. 304, a list from 1591 of 49 *lakencopers*, including three widows; doc. 328, a 1602 list of owners of *laken* looms on which five of 172 names were female; doc. 347 which names one women among 34 owners of linen looms, dated 1602; vol. iv, doc. 136, which names two women on a 1602 list of 31 *saye* merchants; doc. 159, which names one women among 36 merchants of Lille's cloth; doc. 185, which is a 1613 judgement allowing a woman the right to set up a fustian-making business.

5. See ibid. iii, doc. 207 which lists one of 21 blue-dyers as female (dated 1600); doc. 263, a 1563 judgement allowing a woman to set up a dyeing business; vol. iv, doc. 147, a 1637 judgement which names four women among seven blue-dyers and doc. 151, a judgement from two years later, which names five of seven as female and stating that these people are the only blue-dyers for the *sayetterie* in Leiden; doc. 148, a 1637 judgement listing two of seven black-dyers as women; doc. 179, which names seven male dyers, one of whom is acting for his mother.
6. See de Sagher (1910), 287–8 in particular, where he credits women with most spinning in the medieval *sayetterie*. Craeybeckx (1962), 449, found both men and women spinners in 18th-cent. Bruges. For evidence that both men and women spun wool in Hondschoote and that men controlled combing, see de Sagher (1951–66), ii, doc. 330 (dated 1577–1602), 'Extraits du registre aux amendes de la draperie'; and Coornaert (1930*a*), 103 and 394, and esp. 398 where he comments that among 'ouvriers', 'Toutes les professions peuvent être exercées indistinctement par des hommes, des femmes et des enfants de "tout âge" '.
7. Ibid. 113.
8. For Coornaert's comments, see ibid. 387. For examples of women finishers, see ibid. 391 n. 7, 113 n. 1; for women drapers see ibid.; for women helping in wool trade, see ibid. 317; for women warpers, see ibid. 436. For women as *corroyeurs*, see ibid. 388–9; also de Sagher (1951–66), docs. 328 and 329. The 'registre aux amendes' from Hondschoote published by de Sagher (1951–66) (doc. 330, dated 1577–1602) yields the most unambiguous data about women's roles in the industry: it shows that there were many women drapers and *corroyeurs*, but in both areas women were in a distinct minority to men. None the less, the best published evidence brings women's representation in the actual function of draping to a statistically significant 15 per cent. Similarly precise measures of women's participation in the marketing of *sayes* suggest that women were much less significant there. In the period between 1528 and 1739 (the records are not continuous during the period), there were just 43 women among 1,134 men; all but two of the women were widows and all but three sold very small quantities of *saye* and, even then, they usually were in the market for only a year or two: ibid., doc. 309.
9. See ibid., doc. 186, the list of fines mentioning women *saye* merchants; doc. 170 (4, 5, 10, 14, 25, 18), a 1567 ordinance which includes women as *tondeurs*; doc.

163 (18, 25, 34), an early ordinance which mentions female drapers; also see 163 (12) which includes women as dyers. The ordinances referring to spinning do not confine themselves to the feminine form of the noun. See docs. 163 and 165.

10. Ibid. i, docs. 215, 220, and 226.
11. Ibid. ii, docs. 245, 247, 248, 250, 251, and 253.
12. Ibid. ii, docs. 255, 256.
13. For Lo, see ibid. ii, docs. 380–6; for Tourcoing, see ibid. iii, docs. 542–3.
14. Gullickson (1986); see also Gullickson (1987).
15. Schlumbohm (1983).
16. Quartaert (1985), 145–62.
17. The literature on the demographics of the late-medieval and early modern family is vast. Probably the best introduction remains Laslett and Wall (1972). Legal evidence supporting this interpretation is less conveniently accessed, but see Goody, Thirsk, and Thompson (1976), and Godding (1987).
18. This line of separation has been discussed by French historians of the Annales school; see Le Loy Ladurie (1979) and Muchembled (1981), for their understanding of the division. Feminist scholars have been concerned with the role of this division in the creation of male dominance; for discussions of the theory and references to the literature, see Rosaldo (1980), and Ortner and Whitehead (1985).
19. For a discussion of the family production unit, see Howell (1986).
20. Coornaert (1950), 84.
21. Coornaert (1950) provides a fuller discussion of this point.
22. For a fuller development of this argument and references to the literature, see Howell (1988).
23. Surprisingly few historians have considered just how the rural family survived, when its male head devoted his time to market production—surely not all subsistence goods were available in local markets, surely the meagre wages of piece-workers did not suffice to support the household even if the goods were available. It is time to consider how the rest of the jobs necessary for support of the family were apportioned, and systematically to take women's labour into account. For examples of this omission, in otherwise very useful studies, see Vandenbroeken (1981) and Jeannin (1980).
24. Verbeemen (1956) notes, however, that most lace-makers in early modern cities of the southern Netherlands were single or widowed. Apparently, married women had left market production or were still contained within household economies managed by their husbands.
25. The standard works on proto-industrialization include Mendels (1972) and see also Gullickson (1986) for a full bibliography.
26. See Gutmann and Leboutte (1984), 587–609; Coleman (1983), 435–48; and Vandenbroeken (1981).
27. He argued elsewhere, however, that none of the industries in the new and light

draperies, even those in the countryside, was totally free of regulation and that most towns and villages adopted municipal controls not unlike those of the great medieval centres such as Ypres. For Coornaert's comments on Hondschoote, see Coornaert (1930*a*); for his later summary of conditions throughout the Low Countries, see Coornaert (1950), 84.

7

THE RECEPTION AND DISTRIBUTION OF THE NEW DRAPERIES IN ENGLAND

B. A. HOLDERNESS

IT is a debatable assumption, seldom contested, that the new draperies in England were an innovation of the Flemish refugees who fled from the turmoil and the persecution of Protestants after the death of Charles V.[1] The form is certainly a calque upon the French or Dutch, in which it had been current for more than a century before the migration. The date at which it was received into English usage is obscure. There is no trace of the form before 1560 and, so far as I can tell, it only came into circulation quite late in the reign of Elizabeth. 'New drapry' appears in the Patent that authorized the aulnage of new stuffs in 1578, but only intermittently thereafter. Merchants and public officials were aware that Flanders could offer a range of textile novelties to sixteenth-century England that were probably wrought with greater art than any competitive fabrics made at home.[2] These 'outlandish comodityes' were not expressly distinguished as products of the *nieuwe draperij* (in Flemish usage), although they were generally characteristic of that branch of the clothing industry called the *lichte draperij*. The various names mentioned in English records of the 1560s underline official ignorance of Flemish conditions. In the licence granted to the Duke of Norfolk in 1565 to bring strangers to Norwich it was ordained that 'therty Douchmen of the Low Countreys of Flaunders', with their families and servants, might settle in order to exercise 'the faculties of making Bays, Arras, Says, Tapstrey, Mockadoes, Staments, Carsay and such other outlandish comodities as hath not been used to be made within our realm of England'.[3] On another occasion there were listed frisadoes, mocadoes, Spanish blankets, serges, Flanders cloth, *sayettes*, stammels, grograms, velvets, and fustians as refugee products.[4] The desire to attract these skilled immigrants is seen in repeated discussions in the Privy Council. Several of the Queen's counsellors indeed

acquired an interest in promoting stranger congregations in various parts of the country. Even so, privileged as were most of the colonies in the management of their crafts, they received little other support from the state. Complaints that they were 'more extraordinarily sessed' than the English were aggravated by the decision to levy a tax of 4*d*. per cloth on the new commodities, upon which John Johnson constructed an elaborate calculation of the national profits to accrue from 'the clothinge of strangers in England'.[5] As always much of this speculation was unfounded. It illustrates the misapprehension that existed over the effective contribution of the immigrants to the English economy. The government wanted to attract and cherish skilled artisans, but could not refrain from treating them as milchkine for replenishing the Treasury. They offered privileges with one hand and binding regulations with the other. At the least the strangers were not given leave to settle where they might wish. Their ingress and even their internal migration within England were subject to supervision. This means that from the records kept by the several approved congregations themselves and from the state papers and English municipal archives we can find as clear a view of their actions and experiences in this country as of any contemporary social movement.[6]

In 1561 a group of families, numbering 406 persons, were allowed to settle in Sandwich. They apparently came from London, being 'planted', upon the Queen's order, with the purpose of 'repaire to our said towne and porte of Sandwich' through textile production and fishing.[7] The extent to which London was a collecting point for later distribution of the immigrant population is not yet clear. The capital had long possessed a large alien population of Low German extraction and it continued to attract both overseas migrants and strangers moving within England throughout the later sixteenth century. Undoubtedly many, probably most of the families dispersed into provincial towns after 1564, had begun their English journey into London. The records of the congregations give some account of these movements, which included inter-marriage, although they disclose rather more meagre information about the continental origins of the families. At this point I should observe that the occupations of the newcomers extended far beyond the textile trades: perhaps half of the male householders had little connection with the new draperies. They were skilled in several crafts, including goldsmith's work and bookbinding, that were as desirable to the government as weaving and dyeing. Most of those who made landfall at Great Yarmouth, Harwich, Dover, and several at Lynn and

Sandwich were mariners and fishermen and are seldom to be related directly to the Flemish fugitives in Canterbury, Colchester, or Norwich. It is, however, probable that several families turned their attention to the drapery, because of its importance to the stranger communities, after arriving in this country.[8]

The formation of the London congregation is impossible to date convincingly. Sandwich was the first of the provincial settlements, to be followed by Norwich and Canterbury, Colchester, Maidstone, Southampton, and Stamford. The last congregation was the least successful and little is known of its contribution to the life of the borough. Stamford was Burghley's own sphere of influence, which explains the origin of the project, but not its failure.[9]

Outside London the Dutch found themselves at Sandwich, Norwich, Colchester, and Stamford; the Walloons at Norwich, Canterbury, Maidstone, and Southampton. There was some variation in the product lines developed in each town, but the Dutch chiefly manufactured fabrics resembling says and bays, while the Walloons introduced a wide range of white sayette, coloured and lustrous textiles, says, serges, rashes, carrels, oliots, satins, and also camiant (*changéant*) cloths, which in some varieties employed silk wefts as on the continent. The Walloons in due course created the Canterbury silk industry as they were largely responsible for the high-grade 'stuffs' of late seventeenth-century Norwich. A satisfactory, if not yet complete picture of the textile innovations at Sandwich, Colchester, and, despite their bewildering variety, at Norwich hangs for inspection in the main gallery of sixteenth-century history.[10] The situation at the other places is not much clearer now than it was to Cunningham or Moens. Canterbury in particular would repay investigation. Above all, the textile industries of London, 1520–1680, are virtually an unknown quantity, which seriously limits the value of any generalization about Flemish influences.[11] Until we can see London more clearly the focus of our discussion must be Norwich.

Norwich received more of the strangers than any other provincial town. By 1580, at least one quarter of the population of Norwich was Flemish. Although their trades are specified in the earliest records there was evidently some subsequent changing of occupation in the refugee families and it is far from certain exactly how important weaving and dyeing were among the various cells in the community. But the purpose of inviting the first group to the city had been to revivify the apparently ailing textile trades of the region. Mayor Thomas Sotherton took the initiative in the attempt to attract newcomers in 1564:

by reason that the commodities of woorsteed makyng is greatlye decayed, by whiche many cittyzens bothe marchants and artizans that befor that tyme hadd ... their whoale lyvinges, and greate nombre of the poore of the cittye were sette on worke by spinninge, weavinge, dyenge, callendringe, and shearinge the sayde clothes which nowe were owte of estination and vente ... and after ... was geven intelligence that dyverse straungers of the Lowe Countryes were nowe come to London and Sandwiche and hadd gott lyscens of the Queen's majestye to exercize the makynge of Flaunders comodityes made of woolle ... a motion was made to Thomas, then duke of Norffolke ... [that] he obtayned of the Queen's majestye ... who ... dyd tollerate and admytte to be and inhabite within the her highnes' Cittye of Norwiche, thirtye master workemen, to have either of them tenne servauntes, to exercize the makynge of these comodityes with warraunte to the Maiour and citizens to permitte them so to do.[12]

The newcomers were expected to introduce new techniques or to improve existing practices and product lines. A clear distinction was made throughout between Dutch and Walloons, not least because they contributed different talents, even though many of the refugee families originated from townships within a few kilometres of one another in the old country. The social history of the immigration is better known for Norwich than for any other receiving town, but it is not part of this essay.[13] However, since it is important to find out what the strangers had to offer by way of technical superiority or of innovations in design, an exploration of their continental origins and antecedents would be valuable.

Some work has already been done, enough certainly to show how much evidence exists relating to the strangers both in England and in Leiden. As one might expect, communication between the cities of refuge within England, and to an extent between England and Holland, was well established and quite persistent through the 1560s and 1570s. The Dutch who were most numerous were obviously more disposed to set up links over considerable distances. The Walloons of Norwich were in communication with those of London and Canterbury (but not apparently with Southampton), and they also kept in touch with events in the Low Countries. Whether these connections among the strangers were more important to them and to their business interests than commingling with the English is far from certain. The Dutch, almost in spite of the efforts by the leaders of their congregations, were assimilated relatively painlessly into the local population in the second and third generations. Maintaining links with Flanders had sentimental value, but the economic consequences remain debatable. Innovations of

technique or design continued to be introduced after 1570: superficially at least, these novelties still resembled Flemish practices. Moreover, since weavers and finishers of cloth continued to arrive in various English cities from overseas throughout the late sixteenth century, the external origin of some commodities must be assumed. The role of Leiden in this exchange would also repay detailed investigation, since it is reasonable to suppose that Holland was generally earlier and more successful in receiving the new draperies than eastern England.[14] There is no evidence in the Norwich or the Colchester records to prove the process of technological transference. A more useful exercise would be to find out where the refugees originated, to establish beyond any doubt that they derived from parts of the Low Countries associated with the new or light draperies.

I have hitherto simply called the immigrants Flemish. Although the native place of many families is not yet known, we can be sure that they were mostly rural; that is to say that they originated from outside the greater cities of the province such as Antwerp, Bruges, Ghent, Lille (Rijsel), or Ypres. There were a few Brabanters, Gelderlanders, Hollanders, and Liégeois (Vanluck, i.e. Van Luik) among the fugitives. In Kent and London also, Walloons were sometimes confused with other French-speaking Protestants, such as Picards, Normans, or Parisians. However, the territory from which came the majority of families so far identified straddled the present frontier between Flanders and the Département du Nord, from villages and small towns around Ypres and Armentières (both of which provided a proportion of the strangers), approximately from between Oost-cappel and Quesnoy, and from the middle Leie (Kommen-Wervik-Menen-Beveren), and from townships between Lille and Tournai (e.g. Herseaux and Spiere). In sum, therefore, virtually all were Flemings, especially from the Westkwaartier: the Walloons and the Dutch were not geographically separate, except in respect of particular townships, since several of the Dutch-speaking refugees came from places in that part of southern Flanders annexed to France in 1667.[15]

It does not seem possible to associate any specific fabric with a particular family or township, but the general correlation between the strangers' origins and the late-medieval and sixteenth-century distribution of the *nieuwe draperijen* is striking, all the more so, if we list the villages and towns in their entirety from which refugees came to England. English usage of toponymic cloth-names, such as houndscot (for Hondschoote), dornick, arras, and perhaps russell (if it stands for

Rijsel), like shalloon and cambric, was too loose to be of value in tracing the pattern of influences. All these names, like worsted (*ostate*) and kersey, in reverse, seem to have acquired a general application on the continent before transmission to England. Another problem is that names are unreliable as a guide to geographical distribution. Perhaps a dozen of the names used in English new draperies in about 1600, not counting say or serge, were the same as those current in the fifteenth-century Flemish *lichte draperij*; but in both the *baytrie* and the *cangeantrie* of Norwich and other places these inherited names were outnumbered by novelties of less conspicuous provenance.

The outlandish commodities had a durable influence on the English textile industries. Viewed from a point at the end of the seventeenth century, when manufacturing in this country was again in receipt of a considerable foreign endowment from the Huguenots, the new draperies, where they had survived, had become thoroughly naturalized. In East Anglia assimilation and autonomous invention had assured the posterity of the strangers' creativity, whereas in most of the cities of refuge their technical contribution had been depleted or exhausted when the turmoil of the Civil War unsettled those remaining. Archbishop Laud's attempt at confessional conformism had adversely influenced the strangers' congregations and provoked some emigration in the 1630s particularly from Kent.[16] Whether or not Norwich and Colchester were more resilient because the strangers found support in the region's clamorous puritanism, their congregations flourished longer. The focus of a case-study of the new draperies must therefore be upon these towns and their hinterland.

II

We cannot tell how much of the Norfolk worsted industry was known to the strangers who accepted Mayor Sotherton's invitation to settle in the city. Was even Norwich known to them as a city with a long tradition in their trade? Its needs certainly were not more or less exigent nor its qualifications more or less attractive than those of other cities in the search for migrants. In retrospect, Norwich can be seen as the *obvious* place of refuge for Flemish weavers of the new draperies. Its traditional role as both emporium and manufactory of the English *sayetterie* was an inestimable advantage, even though the worsted trade had been in secular decline for a long period. Yet as the worsted weavers were in due

course moved to allege, the strangers introduced products and perhaps techniques that were already familiar in the city. Much of the disputation between the natives and the aliens was the consequence of special pleading, but there was nevertheless a fusion or convergence of practice within the city by the early seventeenth century that must in part explain the success of Norwich in exploiting the new draperies since at the same time the worsted industry was effectively rehabilitated or renewed.[17]

The traditional worsted industry was not in a healthy condition in the 1550s, but in its palmy days the manufacture had been both diversified and specialized. Disregarding the obscure and unimportant *clothing* industry of the city, the medieval legacy can be summarized under four headings. First, the classic worsted industry which produced various grades of says or serge-like stuffs using yarn of long staple spun on the distaff had been divided into distinct categories: known in 1410 as '*les draps de Worstedes appellez Boltes* otherwise Thretty Elnys either *streites* or *brodes*; *les Worstedes appellez Mantelles* ("sengles, demy-doubles, et doubles si bien les motles, panles, cheleves, raies, flores, pleynes, monkes-clothes . . ."); *les Worstedes appellez Chanon clothes* ("sengles, demy-doubles, doubles"), *les Worstedes appellez Worsted beddes* ("doubles et sengles de trois assises")'. These types of stuff varied in quality from coarse to superfine ('like unto silke'), and in an essentially similar manner continued to be produced in the city into the sixteenth century. A distinct but inferior mystery of 'coverlight-weavers' also existed from the fourteenth century. Since it was often associated with the dornicks-weavers' craft it is reasonable to assume that the coverlet-weavers used mixed fibres, rock-spun warps with wheel-spun wefts. Whether medieval English dornicks contained any linen fibres is doubtful, but there are references to linen yarn being mixed with woollen before the arrival of the strangers. Finally there were companies of craftsmen set up to introduce into Norwich fabrics not hitherto produced in the city, such as felted hats (the short-lived Hatters' Company of 1543) imitated from French practice. A decade later russells, satins, satin reverses, fustians of Naples were introduced by the Russell Company of 1554 which also drew inspiration from Flemish or French expertise in the making of these 'specyall comodites'. The Russell Company had from the outset depended upon foreign skills. It survived, essentially Anglicized, into the seventeenth century and from time to time contributed vigorously to the disputes about the rights to particular textile designs after the refugees had settled in the

city. Apart from these stuff-making activities in early sixteenth-century Norwich there was a small, quite reticent craft of linen-weaving, the trade of which at least played some part in the evolution of the new draperies later in the century.[18]

Since the worsted manufacture was regularly in need of regulation or supervision between the fourteenth and sixteenth centuries, there is a considerable body of material relating to the description and definition of techniques and products. From these it is clear that Norfolk possessed a range of light draperies founded upon stuffs similar to, perhaps directly connected with the *lichte draperijen* of Flanders. The cross-currents of both commerce and migration are difficult to evaluate since data are insufficient. Apart from the aliens harnessed to the service of both the Hatters' and Russell Companies, the impact of Netherlandish immigration into Norfolk before the 1560s eludes the historian not content to repeat the anecdotes of Thomas Fuller or Archdeacon Cunningham. And the trade statistics for worsteds, in effect the imports and exports of Great Yarmouth, are both incomplete and confusing for most of the period before the 1560s. The *technology* of 'worsted' weaving, however, was common to much of northern Europe, Italy, and Catalonia before 1500. How exactly 'mantles' or 'beds' related to Flemish or Florentine production and terminology could with research be ascertained; however, there is very little doubt that the fabrics known to Norwich as says, stammins, bustians, rays, turtains before the 1520s were virtually the same throughout Europe.[19] The fact that several of these names occur in lists of the 'outlandish commodities' to be introduced by the strangers testifies to the ignorance of most public officials in London; the Norwich records commit few such solecisms, in contrast interestingly to those of Colchester or Canterbury. On the other hand, the lack of vigour and resilience in the Norwich industry which the strangers exploited may well signify that some at least of these products were but a distant memory: the manuscript sources are not particularly helpful.

There is no evidence that Norwich had produced *changéant* textiles before the Walloons came. When the French were embroiled in disputes, as they were with natives as well as with the Dutch, the bone of contention was invariably a fabric of the type claimed by the Russell weavers or belonging to the Saytrie. The Walloons demanded the privilege of manufacturing textiles with dry, scoured yarn, which in due course became a distinguishing characteristic of the Norwich Stuffs.[20] The inference is that the worsted weavers like the Dutch bay-makers

employed only *laine ointe*. The scouring of combed yarn, however, was not wholly new in Norwich in the later 1560s; it may have been used for some of the lightest and finest of worsteds for a century or more. The Saytrie apparently included fabrics using comb-wool yarn of both types. East Anglian 'houndskots' (Hondschoote says) were certainly made of *laine ointe*. The difference between such says and the 'chanon clothes' of fifteenth-century Norwich is mysterious but was perhaps not substantial. The chief Walloon contribution to the development of Norwich stuff-making was through the *cangeantrie* which eventually included many varieties of high grade textiles not all *changéants* in the Flemish sense. Walloons produced or strove to make satins and fustians, grograins, carrels, bombazines, mockadoes, velvets, stammels.[21]

The Dutch, who specialized in the *Baytrie*, were equally ingenious in diversifying their product lines and often encroached upon terrain occupied by the russell weavers and worsted weavers. But the process of innovation was bilateral. The English assimilated most of the techniques associated with bay- or say-making as the Dutch adapted the production of worsted-like tissues often to new uses. In the mobile confusion of invention, innovation, and imitation, the only certain fact is that the strangers were the teachers and the natives the disciples. It was their sense of market opportunity and entrepreneurial flair as much as their adherence to objective standards in manufacture which distinguished the refugees from the traditionally less meticulous and imaginative natives, about whom allegations of poor workmanship, fraud, and indifference to customers' demands had for centuries been repeated in official circles. Since these complaints had often been voiced by customs officials or importers in the Low Countries the poignancy of the situation can be readily envisaged. In most of the cities of refuge where the strangers encountered an overhanging textile industry (and a vested interest supporting it) their scorn for English craftsmanship not only offended this interest but reinforced the resolution to prohibit or at least to supervise English participation in their mysteries.[22]

Behind Norwich lay an as yet ill-defined territory of manufacturing villages in the later Middle Ages. The county industry was certainly large in the fourteenth, fifteenth, and sixteenth centuries, although it is probable that the trade had passed its meridian by 1350. How far the attempts by Norwich to control manufacturing from the late fourteenth century impeded its expansion outside the boundaries of the city is not revealed in the documents. On the face of things the dispersal and varied rural textile industries of the fourteenth century were mirrored

in the Norfolk of Queen Anne. According to Celia Fiennes and Daniel Defoe, for example, textiles were still prominent in the country districts.[23] The comparison, which has a certain geographical coherence, is nevertheless unreal. What is striking about the Norfolk worsted manufacture is the gradual 'collapse towards the centre' of its entrepreneurial autonomy between the late-medieval period and the seventeenth century. The ascendancy of Norwich did not depend upon the strangers' exercise of privilege, but the immigrants' confinement within the city and their expansive ingenuity in textile design accelerated the process of centralization. By way of compensation villages took up linen-making, knitting stockings, or combing and spinning wool. The new draperies took root in no Norfolk village or market town, except as a minor adjunct to the city's business. The reasons for this, since it implies a measure of disindustrialization, becomes especially interesting when we consider that in Essex county communities were almost as important for bay-making as Colchester by 1620. Unfortunately there is no clear explanation of the development in Norfolk.

We can illustrate the trend by mapping the incidence of weavers and finishers recorded in a selection of sources at different periods (Maps 3–6).[24] Since the research is incomplete these data are tentative, but they are sufficient to underline the argument. The medieval records are especially difficult to use in conjunction with those, often composed of wills, inventories, and parish registers, of the later period. Very few of the listings of inhabitants, for example subsidy or muster rolls, disclose occupations and even for the fourteenth century the frequency of 'surnames' connected with textile production is no guide to industrial distribution. Manorial records, particularly account rolls, are apparently a good source, not least because they survive in some quantity for Norfolk despite the 1381 peasants' rising, and we shall perhaps have a more complete picture than is revealed in Map 4 when the necessary collation of material is finished. They do, however, tend to suggest that weavers were ubiquitous. The concentration of activity can be guessed at, not least because the distribution plotted from the primary sources squares with the more general accounts of the Norfolk worsted industry contained in the state papers. The density of finds in the neighbourhood of Norwich in each period is obvious; so also are the names clustered around Aylsham and Worstead. All the townships thereabouts with significant concentrations were identified as weaving towns in the early fourteenth century. Not counting the three boroughs of Lynn, Yarmouth, and Thetford, the next most important industrial district

between the fourteenth and sixteenth centuries was in the centre of the county. Mattishall was celebrated around 1550 for its wool broggers and two or three centuries before the village had given its name to a cloth called *matsal*, which was apparently not a worsted and may have been a coarse kersey. Very little else is known about the district except that weavers (some undoubtedly *linen* weavers) continued to appear in the local records until the early seventeenth century. South Norfolk (i.e. the area between Beccles, Diss, and Norwich) retained much of its importance as a centre for textiles into the eighteenth century, but in the early modern period it was renowned for linens, like the area west of Diss, and the part played by worsted weaving is still obscure.

I can therefore vouch for the superficial appearance of the maps if not for their exact composition. What is striking about them is the steady decline of the country districts outside the linen area. We have no medieval evidence of the wealth of Norfolk weavers. It is certain there were no Paycockes, Wyncolls, or Springs, at least outside the city, but the autonomy of the men of Worstead and Aylsham, of Diss and Lynn was not seriously undermined, even when Norwich established its Worsted Seld in 1388, until the sixteenth century. By 1600 most of the wholesale, *pace* capitalist, functions of the stuff trade were controlled from Norwich. Some country places slowly subsided into agriculture, like Worstead itself, or became essentially outposts of Norwich drapers and master weavers. As in Suffolk the face of the East Norfolk countryside was animated more by spinning than by weaving worsteds or other stuffs in the late seventeenth century, and the distinct textile trades of Thetford, Yarmouth, and Lynn had collapsed. Aylsham enjoyed a spell of renewed activity after 1570 with the growth of knitting, although Norwich remained the regional centre of the trade. So far as I am aware no attempt was made either to entice Dutch baymakers into the market towns as at Halstead or Maidstone, not even to Lynn or Thetford or to adopt any of the new commodities before the second generation of their reception. Bays, like dornicks, were made outside the city towards the end of Elizabeth's reign but not in any systematic manner. No growth untended by Norwich was ever allowed to flourish. Even for those fabrics composed in part of linen yarn the contribution of the country districts is doubtful, for Norwich had a linen manufacture of long standing and the strangers brought the technique with them also. Moreover, because a good proportion of the country linen trade consisted of tissues made of hempen yarn a connection with the Norwich Stuffs of the seventeenth century is not very probable.[25]

To sum up the position in about 1620, the Norfolk Stuff manufactures—i.e. worsteds proper, dornicks, new draperies of all kinds, what little remained of the russell weavers' art—were urban rather than rural. Knitting was more widespread but was still managed from Norwich. The relatively small number of rich men who were not members of either stranger congregation were freemen of Norwich. Country woollen drapers were much more like retailers than wholesalers, more like shopkeepers than *Verleger*, although they no doubt obtained some supplies from their neighbourhood. The leading stuff merchants of the city, not yet wholly free of the trammels of London, were still capitalists in a large, diffuse way of business. The consequences of the Cokayne fiasco were serious for Norfolk but the setback was temporary. Despite recessions caused by war, embargo, cut-throat competition, plague, or dearth, Norwich had recovered as a textile manufacturing city between 1570 and 1620. The results were less stunning than those achieved by Leiden in the same period, but the recovery had benefited the worsted manufacturers as much as the baymakers or masters of the *cangeantrie*. It was the market opportunities created by the new draperies at large in the world which stimulated this rebound in Norwich, even though it is probable that a considerable proportion of the total output of the city was consumed at home.[26] Foreign trade statistics are in this matter all but useless. The Yarmouth port books do not square with the water bailiff's accounts of the borough. Moreover, there had been a running fight between Norwich and the Blackwell Hall factors for generations owing to the reluctance of Norwich drapers to sell their stuffs in London. Output of the new draperies and russells is more certain, since there is little reason to doubt the statistics produced by the various regulatory bodies in late sixteenth-century Norwich. But to the 30,000 or more new draperies made each year on average from 1575 to 1600 we should add perhaps as many stuffs manufactured by the worsted- and dornicks-makers in the neighbourhood.[27]

III

The differences between the experience of Norfolk and that of the southern East Anglian textile region are intriguing. There is still no convincing explanation why, in the absence of immigrant congregations in any inland townships, some adopted new draperies while others

continued with cloth-making or receded into rusticity. J. E. Pilgrim's distinction between the white cloth area, which responded to the challenge offered by bay-making, and the coloured cloth area, made famous in earlier generations by Lavenham, Hadleigh, and Bergholt, is acceptable but fails to deal with causes, except at a superficial level.[28] Moreover, it does not encompass Colchester itself which had formerly specialized in the production of light or cheap cloths, such as russets and dozens. In the case of Colchester, depression, even decay of the medieval industry was so far advanced by the mid-sixteenth century that the strangers apparently faced pressure from few vested interests when they arrived in the 1570s. As in Norwich immigrants were at first viewed as redeemers of a degenerate entrepreneurial tradition. Colchester, however, like several of its outliers, proved fertile ground for indigenous bay- and say-makers in emulation of the newcomers.

In the longer term, that is to say in the middle period of the seventeenth century, the trade in Suffolk coloured cloth itself decayed more or less beyond rehabilitation. Between 1560 and 1620, however, its resilience was no less remarkable than the revival of the worsted manufacture. The decline of Lavenham after Thomas Spring III has rather tended to deflect attention from the prosperity of Hadleigh and the satisfactory record of cloth exports out of Ipswich. Historians have looked for signs of weakness, conscious of the growing potency of the West of England and alert to the evidence of difficulty, grievance, and despair disclosed in the public records. State papers and treatises by partial 'experts' eager to gain the ear of government or to score points off rivals form so much of the data base of historical discourse during the critical period that we are apt to forget that they display the pathology of early modern industry. While accepting that cloth-making in Suffolk and north Essex encountered difficulties that may have been more daunting than in Wiltshire or Gloucestershire in the second half of the sixteenth century, I believe that there is enough evidence to show how the manufacturers of coloured cloth, especially perhaps of a lighter, more fashionably designed type, overcame the impediments to their business activities. They held on to, or even extended, markets in the Eastland, Muscovy, and the Levant, and to judge from the Ipswich Port Books, merchants in the port also continued to drive a considerable trade with the Low Countries. Dyed short-cloths, straits, and similar types of fabric encountered competition from overseas producers and apparently also from the exporters of worsted, bays, new draperies, and Reading kerseys on the continent. Commercial conditions were

obviously a good deal less favourable than in the late fifteenth century.[29] Nevertheless to attribute to the Suffolk clothing industry an entrepreneurial failure not ascribed to the manufacturers of Sudbury, Coggeshall, or Braintree is to overlook the market opportunities that still existed for dyed cloths of modest pretensions. The collapse of the industry between 1620 and 1650 owed more to the mismanagement of commercial policy, to the superior competitiveness of the Dutch, and to the vagaries of diplomatic *exchanges* than to internal dry rot.

Bay- and say-making made some inroads into the clothing districts before 1600. Bay-makers appear in the records of Lavenham, of Hadleigh, and especially of Dedham, though they apparently established no permanent footing in these towns. In the case of Hadleigh and other villages in the Brett valley, Pilgrim's list of clothiers active between 1558 and 1640 suggests that the need to adapt to the new draperies was inconsiderable. Hadleigh indeed, at least before 1600, had emerged as the principal clothing town in Suffolk.[30] Why Lavenham and its satellites should have been eclipsed remains mysterious. It cannot be that the town simply regressed after the death of Thomas Spring III, whose wealth and control over Lavenham's trade had been so immense, since there had been several middle-ranking clothiers active in the town before 1525, who offered an additional focus of production and employment. The passing of Thomas Paycocke of Coggeshall and John Barnard of Hadleigh had no such effect on their communities.[31] In the longer term, Lavenham recovered a modest prosperity. This occurred when the district was brought into spinning combed wool yarn for the Norwich Stuff industries. Wool-combing and spinning connected much of central Suffolk to the network of districts supplying the city with primary products for its weaving industry. The inference from the available documents is that Bury and Lavenham, Bildeston and Stowmarket were engaged in the production of worsted yarn. Inventories, however, suggest that wheels were not uncommon in the county by the late seventeenth century, but it is not clear whether these were linen wheels, old-style 'great wheels' of the kind anciently used to spin carding wool for felting, or 'little wheels' which among other things were used to spin jersey yarn. Where the worsted weavers and bay-makers obtained their wool yarns has not without doubt been established, despite Allison's careful analysis of the Norfolk wool trade.[32] But if, as seems likely, some of the combing wool was sorted out of material supplied in local fleeces, the remainder may have been employed at least to provide the coarser carding wools in request for many

union fabrics. Wheel-spun *sayette* tissues, part of the produce of the upper Stour valley, were apparently made of local fleeces.[33]

There is much material relating to the Suffolk spinning trade by the seventeenth century, much of it regulating the quality of the product or concerning disputes and allegations of fraud. The refrain of these records is that spinning had evolved alongside the coloured cloth industry in the later sixteenth century, eventually to supplant it and to bring the district into the orbit of Norwich. The disindustrialization of central Suffolk follows the same course as at Worstead or Aylsham in Norfolk. Colchester extended some tentacles into this district in search of yarn, but the chief beneficiary of the change of industrial use was the manufacture of Norwich Stuffs.[34]

Sudbury, Long Melford, and Glemsford, with outliers in Clare and Cavendish, were more successful in adopting the new draperies. One element in this assimilation of new technology was the use of hand-warp yarns in the local cloth industry. How extensive was this practice and how ancient is not evident. Mid-sixteenth-century references to Gleyneforthes (Glemsford cloths) couple them with Coxall whites, both of which were characterized by the use of rock-spun warps.[35] I can find no medieval evidence of wool-combers in the neighbourhood and there is apparently no equivalent to Thomas Paycocke's bequest to his 'kembers' at Coggeshall in 1518.[36] And yet there is no suggestion in the state papers of the 1550s that 'handywarps' were a recent innovation. There is no technical reason why East Anglian white cloth (presumably the medieval Essex or Sexe cloths) should not always have contained rock-spun yarn. There is no medieval ordinance extant against the practice, nor for that matter in favour of the distaff rather than the wheel. An argument *ex silentio* is unsound, but we must bear in mind that the historians of textile production in medieval Europe were not until recently aware of the course of technological change in the preparation of wool for spinning or of yarn for weaving, between the twelfth and fourteenth centuries. Moreover given the condition of the wools available one should expect much variety in the methods of producing white cloth outside areas subject to guild or municipal regulations.[37] Whether we shall ever trace the history of hand-warp yarns in the Essex industry must remain in doubt. Their local use, however, has opened up the intriguing possibility that the stuff called 'bay' was a transmuted version of the Coxall white. Expressed most baldly the change was simply nominal. What the Flemings sold as *baeyen* at Antwerp *c.*1550 may thus have been English cloths which were emulated

by their fellow countrymen and then brought back as a new device in the 1560s.[38]

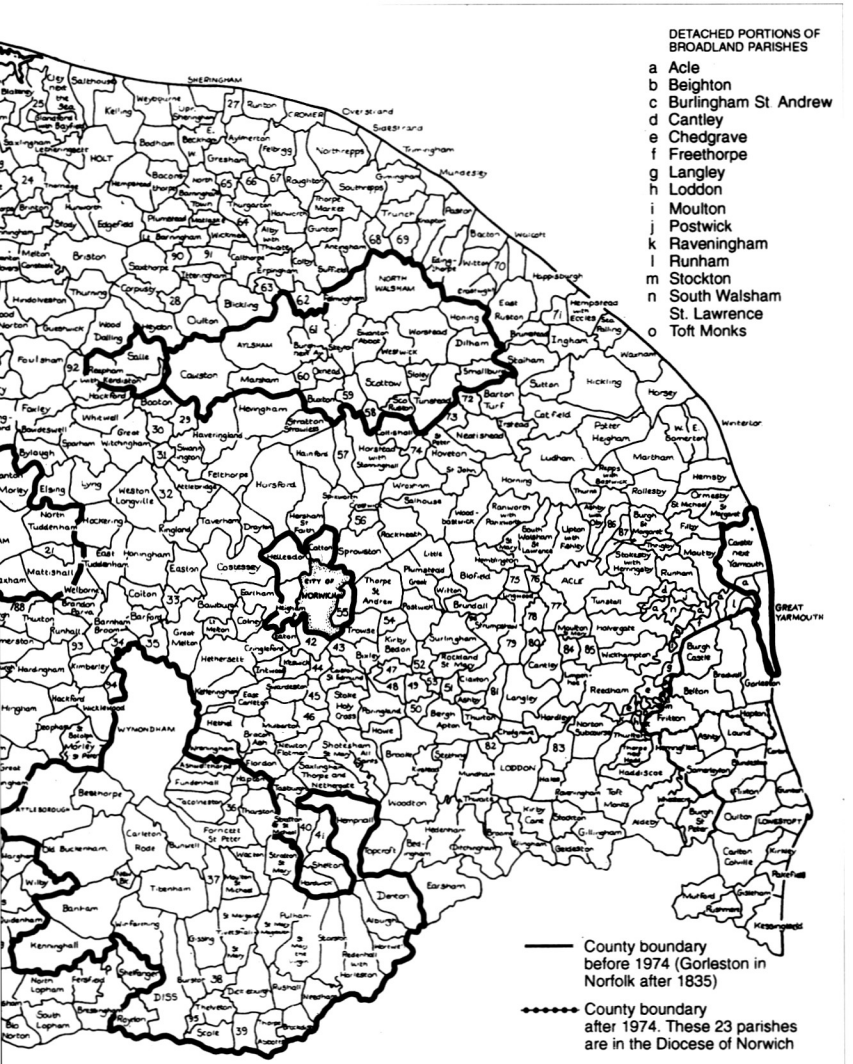
The origin of the bay, or, to be precise, of its name, is certainly obscure, but there is no reason to believe that the fabric was not Flemish in invention and development. One might expect bays to be received in Sandwich as outlandish commodities, but the tacit acceptance in Colchester of their novelty hardly supports the view of their Essex origin. Name and thing may diverge. The passage of bay-making from Colchester into the interior, by which the trade reached Coggeshall and Braintree in about 1575, is merely a case-study of onomastics; it cannot be given greater substance. Moreover, the problem is compounded by the far from uniform description of the bay as a fabric. It is, however, worth the attempt to discover what happened at Coggeshall, eponym of the Coxall cloth. I hope eventually to solve the riddle. In the mean time the following points seem relevant: first, although we hear much of clothiers in the town in 1550, the chief manufacturers in 1620 are described as bay-makers; secondly, the nominal connection between the two groups was tenuous (or better, unclear); thirdly, there was a brief period, 1575–85 or thereabouts, when the two fabrics appear side by side in the records; fourthly, the wider relations of the clothiers had been with London, whereas the bay-makers had regular and fruitful contact with the Colchester industry and the commerce depending upon it; finally, although we have no certain information how a Coggeshall bay was made, it does not seem to have differed in substance from those of Colchester, Norwich, or Sandwich, and the *white* had been distinctive not only in using hand-warp yarns but in that it also customarily (perhaps invariably) comprised superior March wools in the weft.[39] The trade between Essex and Herefordshire in these fine wools seems to have ceased before the early seventeenth century. It is probable therefore that bays superseded Coxall whites, just as says and worsted spinning supplanted *gleyneforthes*, in the Sudbury-Glemsford district, before the end of the sixteenth century.

There is room for further interpretation of the records throughout East Anglia but I should summarize the impact of the new draperies as a major innovation dislocating but also regenerating the textile industries inherited from the Middle Ages. East Anglia is the only region with any claim to a pre-existing industrial economy exploiting techniques and product lines, unequivocally described in Flanders as the new draperies, but conditions there before the strangers came were so unfavourable to both competitive opportunity and technical development

without their intervention that it is difficult to see an outcome in Norwich or Colchester, different from that in Sandwich, Canterbury, and Southampton, where the new draperies were assuredly an innovation of Dutch or Walloons after 1560. The same point could no doubt be made about Leiden. What seems doubtless clear for England is that the new draperies were so essentially Flemish that no alternative pattern of influence is discernible. Southampton rashes were made *à la Florentine* but by Walloons who had emulated Italian practice long before they set foot on English soil.[40] The singularity of this experience is striking. The elements which made up the new draperies were drawn from many parts of the continent, refined or adapted in the Westkwaartier and *then* by a singular conduit transmitted to England. The external influences which touched the West of England clothing industry were much more varied, with Italian, French, and Dutch contributions, during a lengthy period, providing technological impetus. Felt hat-making, another alien craft brought to England in the mid-sixteenth century, numbered Normans, Picards, Italians, Flemings, and Brabanters among the experts invited to take part in the new enterprise.[41] The English connections of the new draperies with the countryside between Ypres and Lille indicate just how special was the organizing principle of technological transference. The Flemishness of this bequest to Kent, Norfolk, or Essex in the sixteenth century seems even more remarkable a century after Cunningham's definitive study of alien influences through immigration, because we know much more than he did about the diffuseness and the heterogeneous constitution of the new draperies in continental Europe. The entrepreneurial or commercial failure of the English, effectively of Norfolk, to exploit the late-medieval opportunities for diversification and indigenous innovation stands out as much against the native vigour of adaptation in the early fourteenth century as against Flemish, Brabantine, or Tuscan responsiveness to the promptings of change, whether producer-directed or market-oriented, and their particular boldness in devising union cloths that affronted the precepts of the *grande draperie* alike in Ypres and in Florence. In the long run the new drapery of Norwich, of London, and perhaps for a time of Canterbury became as diverse, inventive, and successful as ever it was on the continent, but before 1640 the fabrics were like flowers that scented the air of a stovehouse constructed by men who did not quite trust the English climate.



MAP 3. Norfolk parishes: reputed clothing districts in the fifteenth to sixteenth centuries



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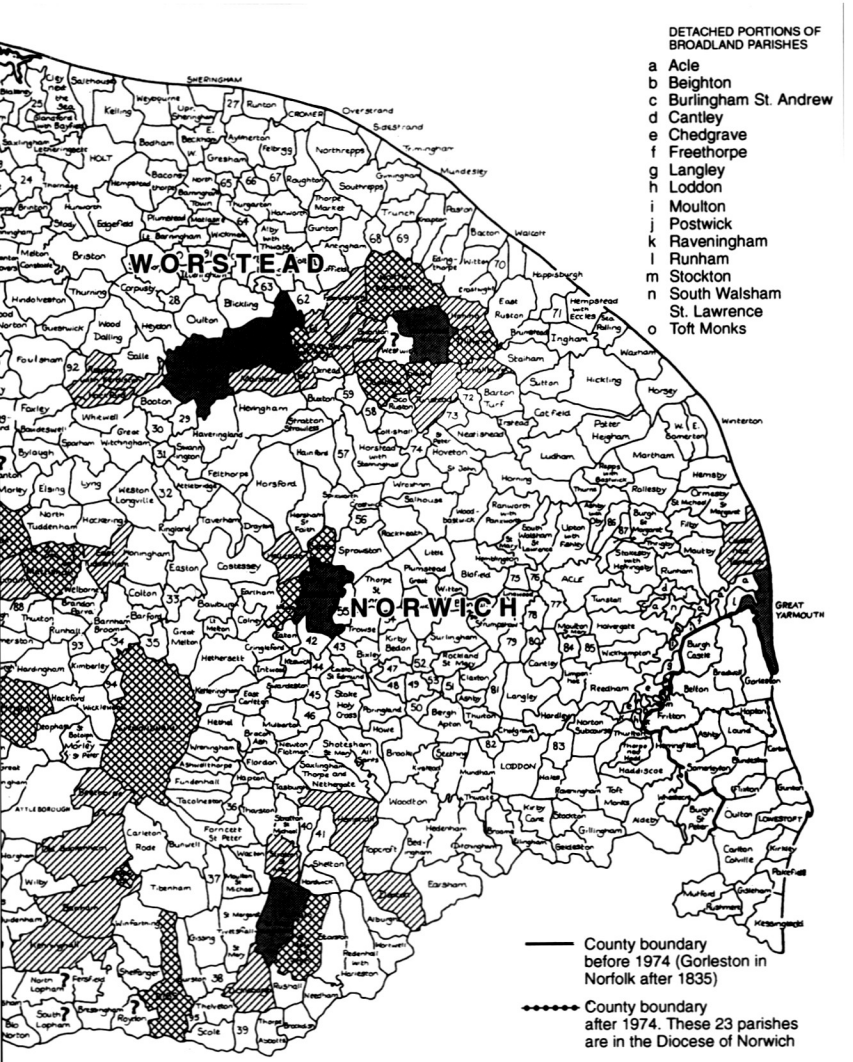
MAP 4. Relative density of weavers and cloth finishers, 1380–1520



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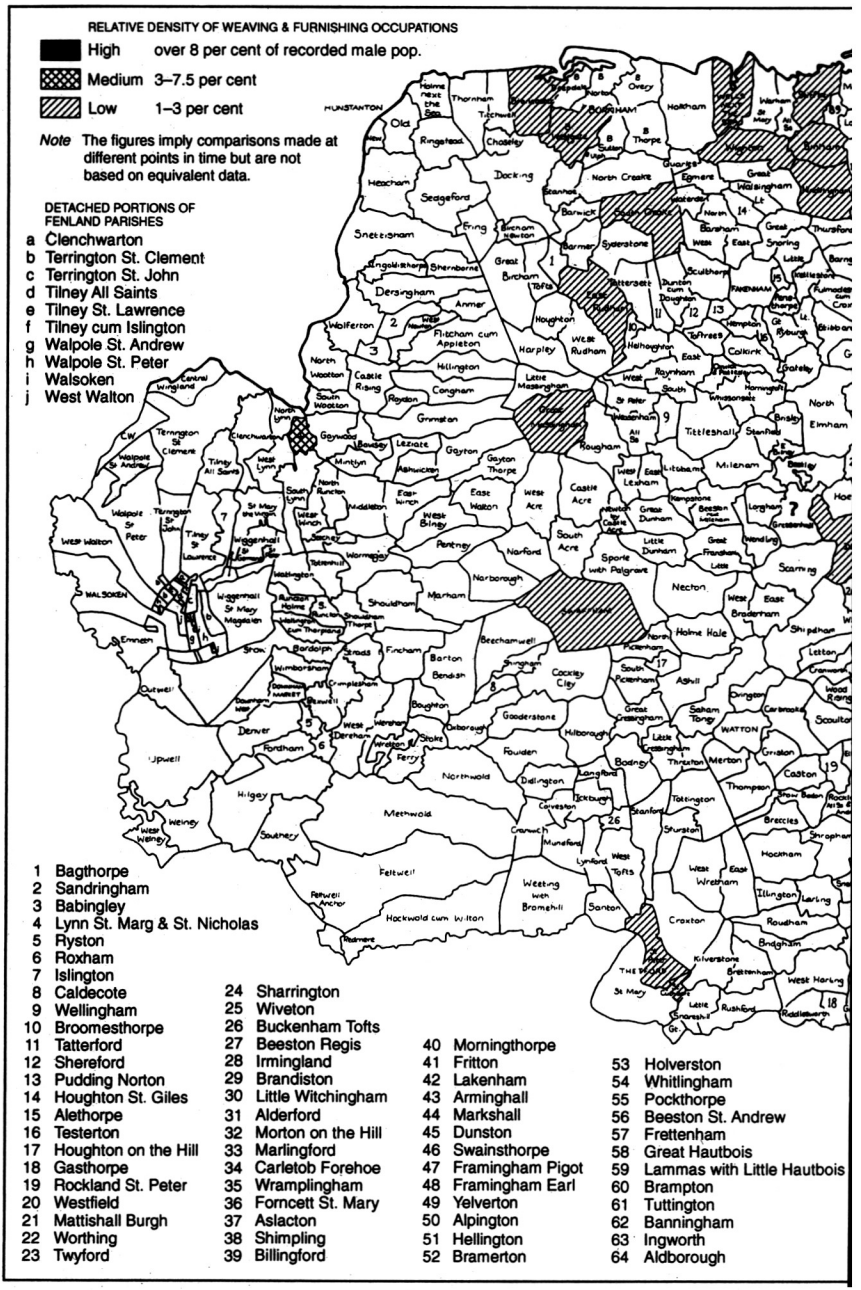
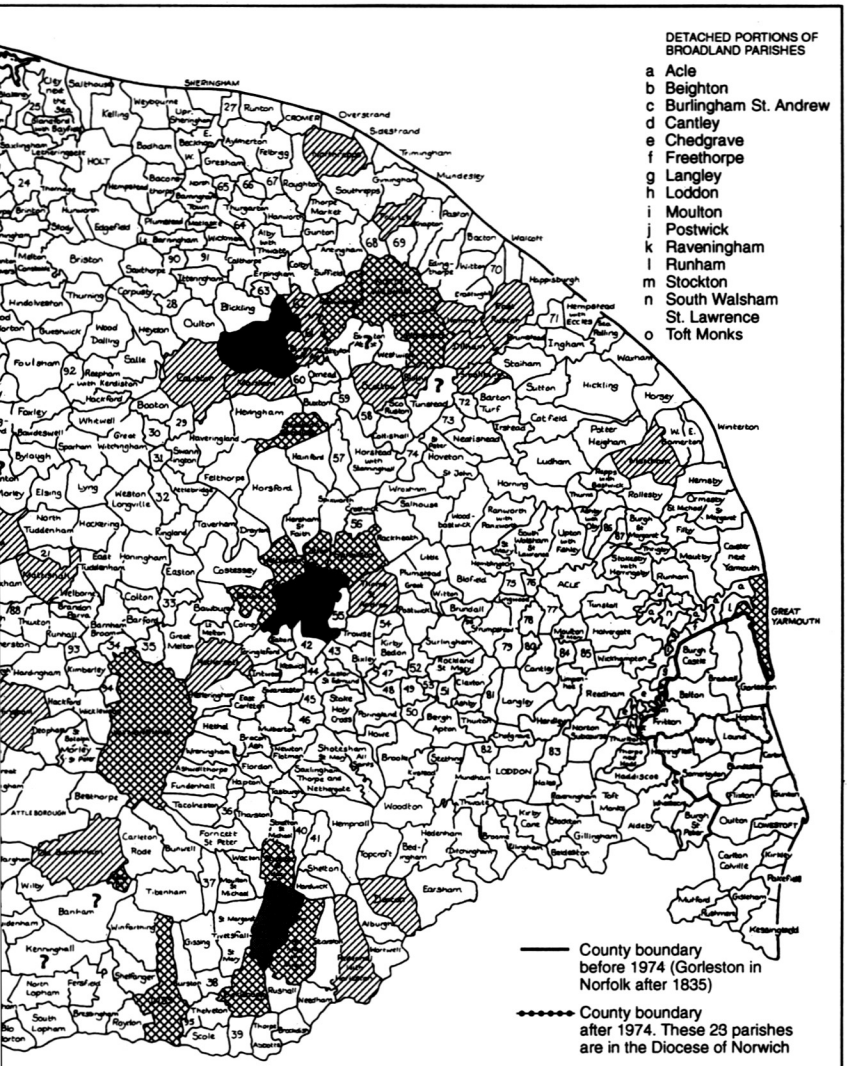


MAP 5. Relative density of weavers and cloth finishers, 1540–1590



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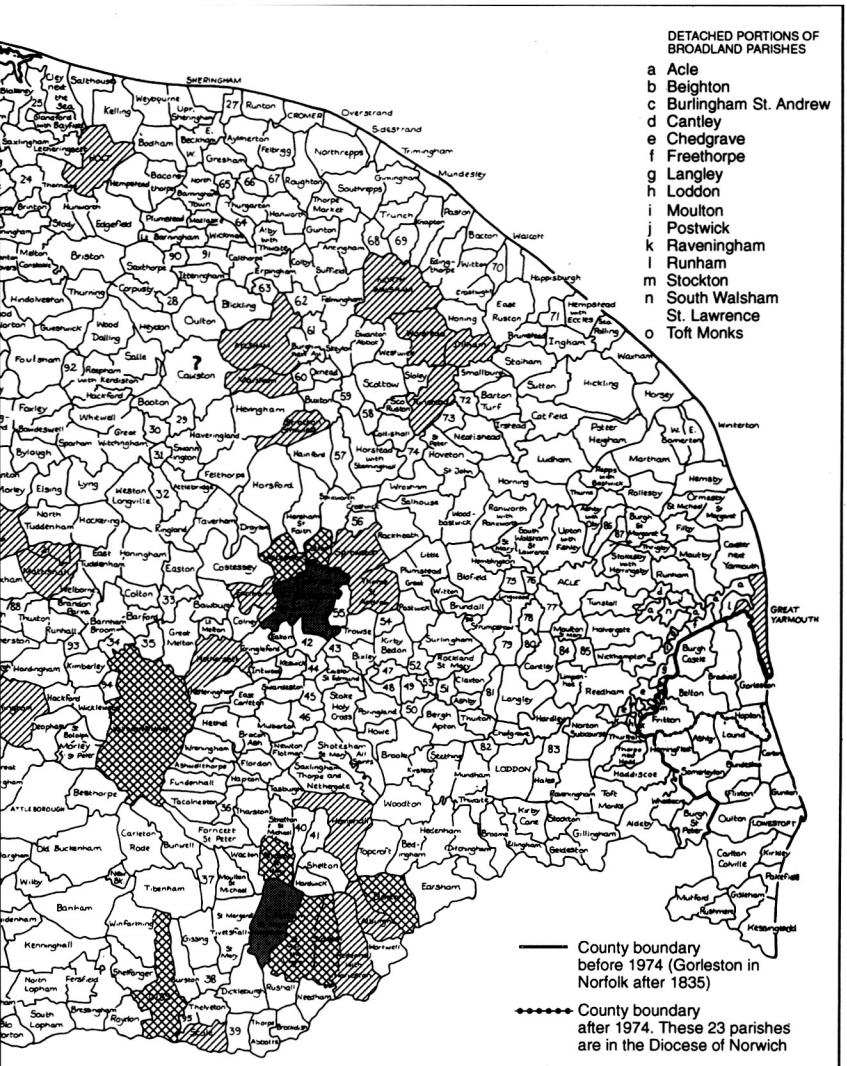
MAP 6. Relative density of weavers and cloth finishers, 1620–1660



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NOTES

1. See e.g. Hudson and Tingey (1910), pp. lxxviii ff.; Allison (1961), 61–2; Pilgrim (1972), 255. *Au large* the following make essentially similar points: Burn (1843); Rahlenbeck (1865); Moens (1887–8); Cunningham (1969). Local histories such as Blomefield (1808) vol. ii, Morant (1748), and Boys (1842) in the eighteenth century, did much to establish the argument. For a contrary view, Kerridge (1985), preface, *inter alia* citing John James's opinion (see below n. 18).
2. Coleman (1969), 417–29; De Poerck (1951), ii; PRO, E101/347/19; Fine Rolls, 394 m.21. The point was repeated as late as 1616, *SPD Jac I*, lxxxviii. 12.
3. Printed in Hudson and Tingey (1910), ii. 332–3.
4. PRO Fine Rolls 394 m. 21 ff.; Williams (1951–2), 353–5, Cf. PRO, E134/44.
5. Johnson (n.d.), 69. See also Stow (1754), ii. 267; Moens (1888–9), in *Huguenot Soc. Proceedings*, ii. 427; Moens (1887–8), 61.
6. The *Huguenot Society Records* series, esp. Moens (1887–8); Moens (1888–9); Moens (1905); and Cross (1898) provide the most accessible source of information on the social and political milieu of the refugees.
7. *SPD Eliz.*, xviii. 9, printed by Boys (1842), App. G., p. 740.
8. The church records and lists in the volumes cited in n. 6 are not explicit about occupational changes, but an analysis by family reconstitution points towards versatility usually when an opportunity arose through marriage.
9. A. Rogers (1961), 57; *SPD Eliz.*, xliii, 11; Strype (1822) App. lxxiii, p. 210.
10. In addition to the works cited, see Allison (1955); Sixta (1957); Rickwood (1967); Cross (1898); Scouloudi (1987), 42–71; Goose (1982); Goose (1984); Pilgrim (1949); Chalklin (1967), 116–22.
11. Stow (1754), ii, bk. V, pp. 300 ff. and *passim*; Rymer, *Foedera*, xx, 178; Scouloudi (1987), 42–55; Scouloudi (1985); Brett-James (1935), esp. pp. 225–32.
12. Hudson and Tingey (1910), ii. 332–3 from the Norwich City Records, Book of the Dutch and Walloon Strangers, fo. 16 (now in Norfolk and Norwich Record Office).
13. Rickwood (1967); Rickwood (1989), vol. ii; Hudson and Tingey (1910), ii, Intro. pt. V/4; Moens (1887–8), *passim*; Rudd (1925–6).
14. Posthumus (1910–22), esp. vol. ii; Posthumus (1908–39), ii. 22–5, 44–56; Eggen (1908), 170 ff.
15. My own sporadic research in the English stranger records and in certain Belgian archives has been supplemented by personal contributions from Dr A. J. Vermeersch of Knokke and Mr Marcel Backhouse, a research student engaged upon the Sandwich congregation, of Southampton University. Refugee geography is slowly taking shape but the findings are not yet more than provisory.
16. Cross (1898), ch. III; Bulkeel (1645); Oakley (1987), 56–71.
17. I differ in this respect from Allison (1955), 588. See also Williams (1951–2), 355 ff.; Williams (1988), 63–6, 191–9.

18. *Rotuli Parliamentorum* (n.d.), iii. 637; Hudson and Tingey (1910), ii, *passim*; Kerridge (1985), ch. 4; James (1857), 107–10 and *passim*; Allison (1960), 79–86.
19. De Poerck (1951), ii; Van Uytven (1983), 151–83.
20. Priestley (1985); Rudd (1925–6); Hudson and Tingey (1910), ii, Intro. pt. V/9; Kerridge (1985), 67 and *passim*; Allison (1961), 69–71.
21. Williams (1951–2), 356; Rickwood (1989), vol. ii *passim*.
22. Hudson and Tingey (1910), Intro. pt. V, pp. 332 ff.; Rickwood (1989), vol. ii.
23. Fiennes (1984), 136; Defoe (1971), 85–6, 95.
24. These maps are provisional. They have already been compromised by the work of Luc Martin of Pembroke College, Cambridge (private communication and Ch. 8). I include them at this stage only to underline what I believe to be an essential truth. I have begun the research necessary for our understanding of the medieval industry and will present a complete list of sources in due course. I have, however, relied chiefly on manorial account rolls, wills, inventories, and related documents deposited in the Norwich and Norfolk Record Office.
25. See N. Evans (1985), ch. 3; cf. Edwards (1877); Rudd (1925–6); also Redstone (1921).
26. Allison (1961); Kerridge (1985), ch. 6; Hudson and Tingey (1910), Intro. pt. V, pp. 332 ff.; cf. Crofts (1987).
27. Output data for the strangers' products are available for many years, see e.g. *The Strangers' Book* and *The Book of the Draperie* (NNRO, Norwich City Records). The russell weavers' production is given by Hudson and Tingey (1910), 412–13. The aulnage of worsteds, like the export trade through Yarmouth, is fragmentary and untrustworthy; see e.g. Williams (1988), 191–98; Allison (1955), *passim*.
28. Pilgrim (1972), 255–6, citing his MA thesis of 1939.
29. Evans (1987); Pilgrim (1972), 255–6; Thornton (1928), 158–67; Unwin (1927), 282–90.
30. Pilgrim (1939), 227–32; Unwin (1927), 290–301; Thornton (1928), 202–11; Dymond and Betterton (1982), 37–42; Brome (1673), 208 ff.; Beeton (1925).
31. See e.g. Pilgrim (1939), *passim*.
32. Allison (1955), pt.3; Kerridge (1972).
33. Kerridge (1972), 58–9, 9 ff., 110–11; Unwin (1927), 290–301.
34. Unwin (1927), 254–6.
35. Kerridge (1972), 90–1.
36. Power (1924), 161; Emmisson (1976), 75–9; *Victoria County History of Essex*, ii. 375–86.
37. See Coleman (1973), 2–8.
38. This is Kerridge's view (1972), 104–6.
39. Bowden (1962), 64, 81, 92.
40. PRO SP 12/256/47; *Acts of Privy Council, 1601–4*, p. 247; *Victoria County History of Hampshire*, v. 451.
41. Unwin (1927), 313; Hudson and Tingey (1910), pp. lxxii *et seq.*

8

THE RISE OF THE NEW DRAPERIES IN NORWICH, 1550–1622[1]

LUC MARTIN

I

THE rise of the new draperies is one of the major themes of English textile history during the early modern period. New draperies came to be manufactured in a number of English counties, including Norfolk, Suffolk, Essex, and Kent, but nowhere in England was the variety of new drapery products more diverse than in Norwich.[2] Indeed, over the period 1550–1622, Norwich was transformed into one of the most formidable centres of textile innovation in England. Given the importance of Norwich in the development of the new draperies in England it is, therefore, somewhat surprising to find that the term 'new drapery' itself is largely (though not totally) absent from contemporary Norwich records. The most common terms used to describe the new draperies in the years following their introduction into the city include 'new commodities', 'new inventions', and 'new manufactures'.[3] Part of the reason for this anomaly is due to the fact that textiles recognized as 'new draperies' were liable to certain fiscal dues.[4] Indeed, as Kerridge has argued, the term new drapery 'was hardly ever used outside fiscal circles'.[5] Despite this fact, it would be unwise to suggest that contemporaries, either in Norwich or elsewhere, failed to recognize the term as applicable to their products. In 1618, for example, the eight elders of the alien congregation in Norwich asserted that the city and county worsted weavers 'are makers of stuffes called new draperies'.[6] The terms 'stuffs' and 'new draperies' are almost used interchangeably in contemporary documents, although English makers tended to use the former. One of the earliest references to Norwich Stuffs is found in the municipal Assembly Book for the year 1595. It is interesting to note that in the early seventeenth century it was the aliens who had been appointed to set down the orders for the making of Norwich Stuffs, but

that they had the right to consult the native English worsted weaver wardens if they thought that it was necessary.[7] However, a 1613 local ordinance makes it clear that the term Norwich Stuffs applied equally to English- as well as alien-made textiles.[8]

The origins of new drapery manufacture in Norwich are to be found in the severe industrial decline of the local worsted industry, events in the Low Countries, changing consumer demands both at home and overseas consequent upon the vagaries of fashion, and to a certain extent the changes taking place in the English wool supply. By the mid-sixteenth century, the local worsted industry had been declining for many years. Exports of worsteds had been falling since the 1520s, and a 1554 statute stated that the making of worsteds 'ys nowe at this presente almost wholye decayed'.[9] It was in these circumstances that the new draperies came to be introduced into Norwich. However, the actual timing of their arrival is inextricably tied to events in the Low Countries. War and religious persecution in the Low Countries initiated large-scale immigration (and with it textile skills) to areas in the south and east of England.[10] At the same time that this was taking place, local Norwich men were seeking a solution to the problems facing their local industry. The Duke of Norfolk headed a group of interested local parties that persuaded Queen Elizabeth to grant a toleration for thirty alien textile master craftsmen to move from Sandwich and settle in Norwich.[11] This was by no means the first attempt to solve the industry's problems by importing foreign skills. In 1554 a smaller group of aliens were brought from the Low Countries to help form a new company to manufacture russells, russell satins, and satin reverses.[12] However, new drapery and stuff manufacture in Norwich only began in earnest after the immigration of 1565. The statute of 1554 stresses the fact that worsted was clearly no longer in demand. Worsteds, the statute contended, were 'out of estimacion and very little worne, either within this Realme or in any other forreine Realmes'.[13] Supple has written that the rise of the new draperies was due to 'an entirely new type of demand' consequent upon wholesale changes in fashion.[14] Fashion had an important part to play in changing consumer demands, but, as will be shown later, it is likely that the home as well as the overseas markets had an important influence on the types of goods that came to be produced. So far as the changes in the English wool supply are concerned, historians, such as Bowden, have argued that English sheep were producing fleeces of longer and coarser fibres, which were particularly suitable for worsteds and new drapery production.[15] According to Kerridge, the

changing nature of the wool supply was connected with the alteration of agricultural techniques, such as the effect of the greater use of clover and hay in the sheep's diet which coarsened their fleeces.[16] Ramsay suggests that the coarsening of wool was due in part to the demands of the urban butchers who preferred larger animals.[17] However, any coarsening of the wool which may have taken place aided rather than initiated new drapery production in England. Similarly the decline of various textile industries in Europe, most notably those in Spain and Italy, may have been partly responsible for the demand which helped the English new drapery industry to grow over our period.

One of the most striking features of new drapery production was the extraordinary variety of textiles that came to be made in the years following 1565. Indeed, over the period 1550–1622, the Norwich textile industry experienced an expansion in the variety of its products unparalleled in its history. Textile production, before the arrival of alien master craftsmen, had fallen into six main categories, that is worsteds, russells, lace, dornicks, linens, and carded woollens. The original letters patent, allowing the aliens to settle in Norwich, permitted them to make 'bayes, arras, saies, tapestri, mockadoes, stamens, carsey and other such outlandish commodities as hath not used to be made within this our realme of Ingland'.[18] However, within a short space of time the variety of alien products expanded well beyond this small group of cloths. A 1611 municipal certificate confirming the good behaviour of the Walloon congregation listed nearly forty cloths that had been, or were being, made by the strangers.[19] Nevertheless, the total number of cloths made by the aliens over the entire period was far higher. Alien textile production itself can be divided into two main categories, which broadly follow the two alien congregations. The division was not absolute as each group made some of the other's cloths. It is not appropriate to provide detailed descriptions of all the alien products in this particular study, for this information can be found elsewhere.[20] As a general rule, the Walloons made the 'dry and cullored stuffes', and claimed in 1575 that 'all white work and whatsoever workes be made of wollen and Lynnen yarne, of right apperteynethe to them onelye'.[21] The Dutch, on the other hand, made the 'wett and greasy drapery', that is, cloths that were made of yarns not scoured before being woven.[22] This contrasts with most Walloon cloths that were made of yarns usually free from oil and dyed before weaving. By far the largest number of textile inventions made by the aliens, and especially the Walloons, were made of either jersey and silk, jersey and linen, jersey, silk, and linen, or jersey alone.

Moreover, cloths bearing the same name could be made of different fibres. Thus, bombasines could be made of jersey and silk, worsted and silk, silk and cotton, linen and cotton, or worsted and linen. The wide use of linen, silk, and cotton is a distinguishing feature of alien textile production, and contrasts sharply with most native English products.

However, the practice of combining different fibres in a single cloth was not unknown to native English Norwich weavers. Locally produced dornicks, which had been made in Norwich from the late fifteenth century, bear many of the characteristics of the alien new draperies. First, dornicks were made of a mixture of different fibres, that is woollen and linen yarn. As one deputy-alnager observed, 'the uff of dornickes ys wollen yarne which is two partes & the warpe lininge which is the third part'.[23] Secondly, as with many alien products, dornicks were woven with dyed yarns. Inventories of Norwich dornicks weavers show that dornicks were made of two, and sometimes three, different coloured yarns. The Norwich dornicks weaver Nicholas Beavis, for example, had a stock of about 30 lb. of yarn dyed into green, yellow, and red.[24] Moreover, the inventories of local people listing dornicks among their possessions confirm the existence of these multi-coloured cloths. Lady Jane Buttes of Thornage, for example, had dornicks coverlets of green and yellow, blue and red, and green and red.[25] Although dornicks remained relatively unchanged over our period, new forms of dornicks called draftes were first regulated in the late sixteenth century.

Yet, despite the similarity of the dornix product to the alien new draperies, it was the native English worsted-making sector of the Norwich industry that was most affected by the alien influence. The late 1570s saw the hastening decline of what contemporaries referred to as the ancient worsteds. These were the worsteds that had been made in Norwich for centuries, and included those listed in a statute dating back to 1441.[26] By the early 1580s 'the wearing and sale of worstedes' was said to be 'out of use'.[27] 'The number of those woorsteed loomes', one Norwich worsted weaver observed in 1606, 'decayed about xxxii or xxxiii years agoe, by the comynge in of Straungers whose invencions drewe the people after them'.[28] By the beginning of the seventeenth century very few worsted broadlooms were operating in either the city or the county.[29] In November 1606, the city worsted weaver Stephen Francklyn deposed that during the last year he had known of only six or seven worsteds that had been made in the county, and had been brought to Norwich to be finished.[30] Indeed, 'dressing' or finishing the ancient worsteds was becoming an increasingly rare skill. Only Thomas Leeman

and Thomas Trull of Norwich apparently knew how to finish the ancient worsteds by the seventeenth century.[31] Yet, as the ancient worsteds fell into decline, there appeared a new range of cloths produced by the worsted and russell weavers. This process began during the 1580s, and gathered pace from the beginning of the seventeenth century.[32] As one Marsham worsted weaver explained in 1602: 'The change of wormanshippe . . . hathe ben used this threeskore yeares and more . . . and theare hathe ben more varyetye of wormanshipp of late yeares than was in former tymes'.[33] Some of the better-known Norwich Stuffs, such as the paragon and the paropus, were products of the second decade of the seventeenth century. Thus, thirty to forty years after the aliens' arrival, the transition from the production of ancient worsteds to Norwich Stuffs was essentially complete. However, the extent of the changes affecting worsted production was the subject of considerable controversy. The city and county worsted weavers argued that their products were just variants of their older cloths. The so-called 'new Inventions', they contended, were derived from ancient worsteds, such as the chamblet, the motley, and the worsted itself. In the worsted weavers' own words, 'theis new stuffes ar but braunches of the same tree, and by revolucion of tyme the auncient stuffes in an other generation as the like thing in other trades will become the new agayne'.[34]

However, there were a number of important differences between the ancient worsteds and the cloths which came to be known as Norwich Stuffs. As the worsted weaver Stephen Francklyn observed in 1606, the worsteds made before the arrival of the aliens 'weare not of the same substaunce and nature that the stuffes and draperies nowe are made of, For they weare stronger in those dayes and woulde have lasted verie neare sixe tymes so longe as anye stuffes or draperies nowe made within' Norwich and Norfolk.[35] Francklyn went on to observe that neither stuffs nor new draperies would 'endure such or the like dressinge or dyeinge that woorsteeds heretofore because they be note of so stronge a substaunce'.[36] This apparent reduction in the strength of textile products may have something to do with the changes taking place in the yarns being used in production. Worsteds, by tradition, were made of worsted yarn.[37] However, there are a number of indications that the production of worsted yarn declined over our period. According to one worsted weaver, the old 'seymed wooffe' was 'almost out of practise the wante for spynnynge' by the early seventeenth century.[38] Indeed, the Norwich census of the poor, 1570, shows that only a handful of the poor spinners were spinning the traditional worsted yarns.[39] The

overwhelming majority, in fact, 343 of the 554 poor spinners listed in the census, were producing white warp.[40] Moreover, worsted yarn 'was allwaies wrought in woorstedds single'. However, the warp of the new draperies was 'all twysted some of twoe thredds and some of three thredds and the yarne ymployed in stockinges ffrynge etc ys all twisted some of twoe some 3 : 4 : 5 or sixe thredds'.[41] One deputy-alnager went on to explain that 'worsted warpe is called mentle warpe and is untwisted and wrought in the Sayme, and the warpe of the newe draperies is twisted and wrought owt of the Sayme'.[42] The old rock-spun yarn was more labour intensive (and therefore more expensive) to produce than yarn spun on the wheel. The variation in the price of different yarns can be appreciated by looking at the inventory of a Norwich grocer. Amongst the 'Cruells in his shoppe' were 'twistred smalluffe' at 2*s*. 6*d*. per lb., 'smalleufe twistred in the grease' at 2*s*. per lb., 'Red & blue cruell' at 2*s*. 4*d*. per lb., 'Corse blacke & whitt yarne' at 20*d*. per lb., and 'Corse greasy yarne' at 13*d*. per lb.[43] The Norwich calenderer, Thomas Leeman, deposed that the new draperies were 'made much thynner and slenderer then the woorsteds', and as a consequence the new commodities were lighter in weight.[44] For whereas the ancient ell broad worsted weighed approximately 7 lbs., many new draperies, such as the silk say, weighed as little as 3½ lbs.[45]

In the course of time the differences between alien and English products diminished. One deputy-alnager went so far as to say that 'ther is Little difference betwixt the stuffes made by the Englishe and Strangers, but the strangers make them A little Longer'.[46] Indeed, so far as the dimensions of the cloths are concerned, there was a general move towards standardization. Many new commodities, English as well as alien, were just over 27 yds. long. There were, of course, some exceptions. Says were 24½ yds. long; tammetts were 54 yds. long; bewpers and boulters were usually between 22 and 24 yds. in length; while other cloths, such as valures and mockadoes, were only 14 yds. long. As the cloths of the different companies came to resemble each other more and more, the number of disputes concerning the right to manufacture and inspect these cloths rose proportionately. In 1578 there was a dispute between the Dutch weavers and the Russell-weaving Company over the production of a cloth called capha, which the russell weavers argued was a figured russell.[47] Some time later, in October 1596, a similar dispute arose concerning the making of 'worsted sayes (so called by the Englishe and by the said Aliens named striped sayes or Busettes)'.[48] One contemporary commented that the only difference between the

worsted and the Flanders' say was that the former was made of rock-spun yarn, while the latter was made of wheel-spun yarn.[49] These disputes appear to have come to a head in 1618, when the aliens claimed that they should have the right to inspect the English-made new draperies.[50]

Something else which leads us to believe that the English-made products altered considerably during our period, is the fact that the price of many Norwich Stuffs fell considerably. Historians have noted for many years that the new draperies were far cheaper than many textiles produced in England during the period.[51] While evidence concerning the prices per yard of the ancient worsteds is limited,[52] an ancient double worsted might have cost between 50*d.* and 60*d.* per yard. However, some of the cloths made by the worsted weavers from the late 1570s were not even worth half that amount. Worsted damask, for example, was produced by one county worsted weaver at 20*d.* per yard.[53] The worsted tammett (which was a form of single chamblet) was even cheaper, costing between 12*d.* and 15*d.* per yard.[54] However, not all cloths made by local weavers fell in price. Norwich russells and satins, for example, remained relatively as expensive as some of the ancient worsteds. One russell made by a Norwich weaver in the early seventeenth century cost 44*d.* per yard.[55] Satins could be sold for up to 48*d.* per yard.[56] The cloths made by the Norwich aliens were relatively cheap in comparison to many of the cloths that had been made in Norwich before their arrival. Single Norwich bays, for example, sold for around 16*d.* per yard, while double Norwich bays were slightly dearer at around 20*d.* to 22*d.* per yard.[57] Nevertheless, some of the new cloths were nearly as expensive. The boratoe, the double bombasine, and the paragon all cost around 40*d.* per yard.[58] Dyed paropus could cost as much as 36*d.* per yard, black paropus 35*d.* per yard, and white paropus 33*d.* per yard.[59] There appears to have been little difference in the price of textiles bearing the same name, and yet made by different weaving companies. Thus, the coloured buffyn found in the inventory of an alien silk weaver, and the double changeable buffyn found in the inventory of another alien weaver were both around 17*d.* per yard.[60] The plain buffyn found in the inventory of a Norwich worsted weaver was approximately 16*d.* per yard, and the green and black buffyns made by a North Walsham worsted weaver were about 14*d.* per yard.[61]

With the adoption of stuffs and new draperies in Norwich, locally produced textiles came to be used for an ever-increasing variety of purposes. Inventories show that Norwich and Norfolk tailors made good

use of locally produced textiles for the clothing industry. The Norwich tailor Giles Cozen, for example, had a good variety including syets, bombasines, silk says, worsted, philip and cheney, philoselles, fustians, and bustians in his warehouse.[62] Inventories give the impression that many cloths made in Norwich before 1565 were particularly suited to making apparel. The worsted, for example, was used in a wide variety of garments such as aprons, cassocks, coats, doublets, jackets, and safeguards, but it was an especially popular material for gowns and kirtles. Dornicks, on the other hand, were different from most Norwich cloths in that they were not really suitable for apparel, but were commonly used for coverlets, curtains, and wall hangings.[63] The new cloths, however, were used for both apparel and more decorative needs around the home. The mockado, for example, was used for cassocks, doublets, gowns, jerkins, and kirtles, but it figured prominently in upholstery as the covers for chairs and stools. Changeable mockadoes were particularly effective as bed and window curtains. The say is a good example of one cloth that was used for a variety of purposes, and it is one of the cloths most frequently found in local inventories. The worsted weavers had contended that their says 'served for apparel'.[64] Indeed, says were used for aprons, cassocks, cloaks, doublets, gowns, kirtles, the lining of cloaks, safeguards, suits, and waistcoats. However, the say became an especially popular fabric for window and bed curtains, testers and valances, canopies and hangings. As with many other new draperies, says were bright and colourful cloths and this may in part account for their popularity. Bed canopies made of say were often of one colour, being either green, yellow, or red. Some of the most popular multicoloured says used for curtains were red and yellow, red and green, blue and yellow, green and yellow, and black and yellow. Another cloth that served a wide variety of purposes, and was popular with overseas markets supplied from Yarmouth, was the damask. Damask was used for bed canopies, testers and valances, chair and stool coverings, curtains, cushion covers, gowns, jackets, petticoats, stomachers, and suits. In a similar fashion, fustian of Naples was used regularly for window cloths, and testers and valances. Grograins were widely used for apparel as aprons, cassocks, coats, gowns, jackets, jerkins, kirtles, and mandillions. Silk grograins were used for similar purposes, but also for clothing such as kirtle facings and upper-bodies. The new draperies were always important as clothing materials. One Walsingham woman, for example, had a gown of black curle, a damask petticoat, and a buffyn petticoat.[65] Another local woman had a camel-hair grograin gown, a bombasine

gown, a buffyn gown, two fore-kirtles of chamblet, an upperbody of silk damask, and one hat of grograin.[66] Yet, as will have been noted from the above examples, it is possible that the new draperies were helping to meet new demands in the market, particularly with regard to textiles used in upholstery and furniture.

Despite the relative success of the new draperies, contemporary deponents give the impression that there were problems with product quality. Poorly made and finished textiles were an ancient and recurring problem in the Norwich industry. The worsted weaver Thomas Sellers deposed in 1606 that 'there have bene and dailie are' stuffs made 'falce and defective in length and goodness as hath bene pitifull to behoulde'.[67] With regard to locally produced lace,[68] one Norwich calenderer deposed that 'the outer ende of peece of Norwich lace ys most usuallie made of much fyner and better stuffe and workemanshippe then the residue therof ys. And this deponent hath often seene lace measured wherein there hath bene two or three yardes wantinge in a peece and in some which amounteth to the losse of a dozen yardes in a grosse or theraboutes.'[69] The quality of hosiery produced in Norwich and Norfolk was apparently no better. One deputy-alnager, who thought that defects in knitting were 'verye common', deposed that 'stockinges manie tymes are made verye defective the feete beinge made of Another sort of yarne and too Little for the proporcion of the Legge'.[70] The rather poor quality of some Norwich lace and hosiery probably has something to do with the fact that these textile manufactures were exempt from the warden search of the worsted weavers.[71]

II

The historian of the Norwich textile industry is fortunate to have quantitative evidence with which to study the industry's output. The receipts of the Bay, Say, and Camiant alien cloth halls allow us to estimate the relative importance of each particular type of new drapery made in Norwich.[72] However, the bulk of the detailed information is only available for the alien industry in the period up to 1590.[73] Taken as a whole, there was a steep rise in alien output, from nearly 1,200 cloths in 1567 to over 38,700 in 1586. Yet, the bulk of the alien industry's output was dominated by a relatively small number of cloths. In the period up to the 1580s, the bay was one of the most important cloths to be produced by the Norwich aliens. At the peak of production in 1582, over

13,600 bays were sealed. Another important alien new drapery was the say. The number of says sealed in the Say Hall rose from just under 3,000 in 1583 to nearly 8,300 in 1585. The Walloons made many different textiles, but the Camiant Hall accounts for the year 1584/5, show that one particular cloth, the ollyet, accounted for nearly a quarter of the 26,076 camiants sealed in that one year. Five other cloths (damasks, bovins, valures, says, and carrells) each accounted for between 10 per cent and 12 per cent of the total number. The Norwich alnage accounts, which record those cloths sealed with the crown seal, tell a very similar story. In the same year they show that four particular cloths (ollyets, damasks, bays, and says) out of the fourteen listed, accounted for almost 70 per cent of the total number of new draperies receiving the crown seal. Six other cloths (plommetts, grograins, syets, caffas, fustians, and tufted mockadoes) accounted for a mere 3 per cent of the total number recorded. We gather from a comparison of the alnage accounts and the various alien cloth hall accounts that English textile makers must have been responsible for the bulk of damask production during the 1580s, but we have very little evidence concerning native English cloth production. Of course, both the Camiant Hall and alnage accounts do not include all the Norwich cloths produced during our period. Russells and dornicks are the two most noticeable omissions from these particular records. The receipts of the Russell Company show that their contribution to Norwich textile output varied considerably over time. At the peak of production in 1581, over 4,100 russells were sealed. However, output of this magnitude was not maintained over our period, and no more than 500 russells were sealed by the company wardens in many years, and especially in the period from the 1580s.[74] Little is known about the size of dornicks production, although contemporary observations and the evidence from the local port books imply that output increased from the late 1580s.

To a certain extent, therefore, the evidence would seem to suggest that there may have been a greater variety of textiles available in theory, than was readily available to the consumer in practice. Norwich textiles were capable of infinite variety, but not all varieties were being offered to the market in similar quantities. Production was dominated by a select number of the new draperies. The alnage accounts for the period 1580–5 show how the quantities of the industry's products changed over time. Some textiles were no longer popular and were on their way out. Some cloths had only just been invented and had not yet reached a stage to warrant mass production. Occasionally, though, the rise and

fall of particular textiles was no more than product mutation rather than product innovation.[75] During the 1580s, for example, the mockado was transformed into the buffyn. Thus, although the number of mockadoes sealed in the Camiant Hall actually fell, the number of mockado-type cloths probably increased in the period to the late 1580s. Nearly 3,000 broad buffyns were sealed in the year ending 1587. Silk and part silk cloths, such as plommetts and syets, were still of comparatively minor importance during the 1580s. Nevertheless, the Camiant Hall accounts show that the number of silk bombasines increased during the mid-1580s, with over 2,600 sealed in 1586. The cloths that formed the biggest proportion of production during the 1580s, that is bays, says, damasks, and ollyets, were those which were not the most expensive or the cheapest textiles being produced in Norwich, but rather those which fell in the mid range of prices.

The 1580s were a turning-point in Norwich alien production. Up until then, the overall trend in production for most types of alien cloths had been upward. From then on, there was a slow decline in the number of cloths produced to the 1620s. The chamberlain's receipts for the profits from the strangers' halls fell from nearly £245 in 1582 to just over £34 in 1622.[76] The biggest casualty of alien cloth production from the 1580s, was the bay. The fall of Norwich bay production was as spectacular as its rise. The chamberlain's accounts of the profits derived from the searching and sealing of bays plummeted from over £70 in 1584 to over £4 in 1600. Similarly, the receipts for the Say Hall fell from over £66 in 1585 to over £5 in 1621. Only the profits from the Walloon Camiant Hall remained relatively stable, between £40 and £60 for the period 1584–1619.

Part of the contraction in alien cloth output can be attributed to the marked decline of the Norwich alien population from the 1580s, together with their gradual absorption into the host population. In 1582 there were at least 4,697 aliens in the city. By 1624 only 999 Dutch men, women, and children were living in Norwich. A decade later, this number had fallen to a mere 678.[77] Yet, while alien textile production was declining, there are certain indications that native English worsted-weaving was expanding. This expansion appears to have begun from the early seventeenth century when there was a massive increase in both the number of worsted weavers taking their freedom and apprentices enrolled to learn the craft.[78] It is difficult to estimate both English and alien output in the period from the 1590s. However, evidence entered in the Mayor's Court Book for the year 1616 suggests that approximately

48,000 new draperies (excluding Norwich russells, dornicks, fringe, and lace) received the crown seal in that year, which is not an inconceivable rise from the 1580s.

The changes taking place in the industry's output were mirrored by alterations in the organization of the industry. Most importantly, there appears to have been a move towards larger units of production among certain alien and English producers. Probate material shows that most worsted weavers bequeathed four looms at the most in the period up to 1580. Thereafter, the number of looms owned by some worsted weavers increased significantly. In 1606 one worsted weaver deposed that, despite ancient laws and customs to the contrary, 'the weavers of these stuffs or Draperies have one man xii or xiiii and some of them xvi lomes a peece'.[79] Indeed, inventories show that some worsted and dornicks weavers had as many as ten looms.[80] A number of weavers were operating even larger alien units of production. The alien weaver Rowland Scallyt, for example, had nineteen looms, a warping mill, and other textile-making equipment worth £26 8*s*. 9*d*, a stock of yarn worth £129 11*s*. 8*d*, and £116 13*s*. 4*d*. worth of finished cloth.[81] As this example shows, working equipment or fixed capital did not involve heavy expenditure. Indeed, many weavers had less than £10 worth of working equipment among their possessions. It was rather the circulating capital, tied up in the form of yarn, finished cloth, and debts owing, which was far more significant. The move towards larger units of production may have been encouraged by a reduction in the number of men needed to operate the new looms. The old worsted broadlooms had required two or sometimes three men to operate them. Indeed, the 1511 Worsted Weaver Ordinance had prohibited any 'woman' or 'maide' from weaving 'any worsted stamnynges ne sayes for that thei be nott of sufficient powre to werke the said worsteddes as thei owte to be wrought'.[82] Most new drapery looms could be operated by one person. The broad say loom, however, was an exception for it required two people to operate it.[83] This meant that a greater number of new drapery looms could be operated by employing the same number of men as had once been employed for the old worsted looms.

Research has shown that many worsted weaver families maintained close links with the trade over many generations. Examples of textile craft dynasties are to be found in both the city and county. The Barker family of Norwich, for example, was involved in worsted-weaving for at least three generations. The two sons of the worsted weaver John Barker, that is Thomas and Edward, were apprenticed into the craft,

and the three sons of Thomas subsequently took up the trade. In the county, the Exham family of Buxton maintained close links with the industry throughout the period. Edmund Exham, who made his will in 1556, must have been weaving worsteds during the first half of the sixteenth century. His three sons, Thomas, Robert, and Nicholas, were all apprenticed into the trade, and the family's association with the trade was continued by Raphe Exham who made his will in 1620. It was mainly these families, with a long history of involvement in the trade, that essentially dominated the wardenship of the company.

The Norwich census of the poor confirms the fact that the families of many adult male weavers (and other textile workers as well) usually took an active part in the industry. However, preparatory work undertaken by women in the form of spinning and carding was going on in households where the adult male was not involved in textile making. Indeed, families where the adult male made or finished textiles accounted for only 23 per cent of the households involved in carding and spinning. Over a quarter of married women, for example, had labourers as their husbands. Seventy-seven other forms of work were undertaken by male household heads where at least one member of the family was involved in preparatory work. The Norwich census of the poor also reveals the fact that many children took part in the preparatory stages of textile production. Some children, such as the 8-year-old child of one russell weaver, sorted or, in contemporary terms, was said to 'pyk wolle'.[84] Relatively young children are even known to have woven alongside their parents. In the family of the dornicks weaver William Yxforth, not only did William's wife weave lace, but his two children aged 7 and 5 years old respectively wove lace as well.[85] In fact, neither old age nor physical infirmity necessarily precluded participation in the industry. Joan, the wife of the labourer William Bell of Norwich, for example, was 'lame of one arme', but she still managed to spin white warp.[86] The widow Jane Forcet, aged 100 years, 'as she seith', spun white warp as well.[87]

Estimating the actual size of the textile industry in Norwich is no easy task. Most evidence from the period refers to specific sections of the industry. Thus, one worsted weaver believed that during the 1550s, when the old worsted industry was declining, there were between 160 and 180 worsted broadlooms in Norwich and approximately 80 to 90 in Norfolk. As each worsted broadloom could require up to three men to operate them, there may have been as many as 540 men in the city and 270 men in the county solely concerned with the art of weaving

worsteds. Just how many worsted weaver masters were in charge of these weaving operations is difficult to determine, but as many as 100 worsted weavers attended their craft assemblies in the county during the first half of the sixteenth century.[88] In 1606 (and some time later in 1618) a group of worsted weavers estimated that there were probably over 400 worsted weaver masters in the city and county. On top of these 400 worsted weaver masters there were approximately 100 Norwich 'English' lace weavers. In 1568 there had been 30 alien lace weavers operating 78 looms. Just how many alien lace weavers there were at the end of the period is not certain. However, by 1622, there were 111 alien weavers making a number of different textiles.[89] The number of craftsmen dedicated to the finishing of these cloths is difficult to determine. We know from a survey of Norwich householders compiled in 1589 that there were at least eight dyers, four calenderers, fifteen shearmen, and one clothworker.[90] Furthermore, the 1622 Norwich alien 'census' reveals that there were at least seven dyers and two fullers.[91] In the period to the 1580s, there had been as many as eleven fullers, but their number plummeted with the collapse of bay production.[92]

III

New drapery and stuff production within Norwich was geographically concentrated in particular areas of the city.[93] Examination of probate material reveals that worsted weaving was especially concentrated in the city wards north of the river Wensum, that is, Coslany, Colegate, and Fybridge.[94] Yet even within these wards, many worsted weavers congregated in particular parishes. The evidence taken from worsted weaver wills and the 1570 Norwich poverty census suggests that many congregated in the parishes of St Mary Coslany, St George Colegate, and St Michael Coslany. Many dornicks weavers appear to have been located in the parish of St Martin at Oak and other nearby parishes along the river Wensum. The 1622 alien census shows that alien weavers were located in similar parts of the city as the English weavers. However, unlike native English weavers, the city's biggest concentration of alien weavers was found in West Wymer, with progressively smaller numbers in Coslany, Colegate, and Fybridge. It is perhaps not surprising that the area with the largest number of weavers also possessed the largest number of twisterers. Spinners listed in the Norwich poverty census of 1570 were to be found in all the city's wards, but

approximately 40 per cent of them were located in Ber Street, West Wymer, and Fybridge. Within these wards, St Peter Permountergate and St Augustine's had the highest proportion of poor spinners.

So far as textile activity in the belt of Norwich suburbs is concerned, research has revealed that very few weavers, or those involved in finishing, were found in the parishes immediately to the west, east, or south of the city. Spinning, on the other hand, certainly went on in these areas. The Norwich suburbs adjoining the northern wards of the city, however, were involved in weaving. Yet, the city's demands on the county extended far beyond its influence over the nearby parishes immediately outside the city walls. Some of the city's preparatory work was certainly being put out to the county. Norwich also met its needs for additional manpower to power the city's looms by drawing upon the male population of the county. The Norwich apprenticeship registers show that apprentices to the craft were increasingly drawn from the county. Most of these apprentices were drawn from within a fifteen- to sixteen-mile radius of the city. By and large, they came from areas already engaged in textile activity, such as Aylsham, North Walsham, East Dereham, Wymondham, Thetford, and many other smaller parishes in the county.

The geography of new drapery and stuff production in the county is not so easily studied in the period 1550–1622. Yet, as the maps devised by Dr B. A. Holderness illustrate, the worsted-weaving areas in the county were highly localized. By the beginning of our period in 1550, worsted-weaving had been going on in the county for centuries. Worsted-weaving was found in the areas around Holt, East Dereham, and Wymondham, and in some of the county's larger towns, such as Yarmouth, King's Lynn, and Thetford. The exact importance of worsted-weaving in these areas is not easy to estimate. However, a 1523 statute gives the impression that worsted-weaving may have been expanding in the county at this time. It was stated that the making of worsteds, stamyns, and says 'hath moch encreaced and ben multeplied in the Citie of Norwich and in dyvers Townes and Places in the Countie of Norffolk'. The inhabitants of Great Yarmouth and Lynn were said to 'dailly practyse and use the makyng and drapyng of the said Clothes of Worstedes Sayes and Stamyns more buselie and diligently then they have done in tymes past'.[95] However, it is not certain how important these areas remained during our period. A list of nearly 100 county worsted weavers who had not paid their subsidy and alnage in 1602, suggests that north-east Norfolk was still the most important area of the county to be involved in worsted production. Indeed, the loam region

in north-east Norfolk was certainly the most concentrated area of worsted-weaving activity in the county. Worsted-weaving had been going on in the loam region for centuries, most notably at Cawston, North Walsham, Aylsham, Scottow, Tunstead, Catton, Honing, Dilham, and Sloley.[96] Probate material taken from the period 1550–1622 suggests that the bulk of the activity in north-east Norfolk was concentrated in a group of parishes within a six- to seven-mile radius of Swanton Abbot.

What factors may have encouraged stuff production in north-east Norfolk? Most historians have drawn attention to the fact that worsted yarn was supposed to have been developed at Worstead, one of the loam parishes. Stuff production in the loam region was certainly aided by the presence of wool-combing and spinning. Textile production in the loam area took place on some of the most fertile land in the county, and incidentally in one of the areas of Norfolk least affected by the sheep fold-courses.[97] Thirsk has rightly pointed out that it is perhaps somewhat unusual for an area so actively engaged in agriculture to take such a prominent role in textile production.[98] However, dairying was particularly prominent in the loam region, and the link between textile activity and dairying is something that appears right across the county. On a more practical note concerning manpower, the loam region incorporated some of the biggest towns in the county, including North Walsham and Aylsham. The loam region was also served by good road and river communications. A main road ran from Norwich into the middle of the worsted-weaving area at Aylsham, and the navigable river Bure wound its way from Yarmouth right into the heart of the north-east Norfolk worsted-weaving district. It is perhaps no coincidence that the main worsted-weaving parishes were located on or near to the tributaries of the river Bure. Norfolk port books show that the ports on the eastern side of the county exported far more new draperies than those to the north or north-west.

Inventories show that the largest accumulations of looms operated by individual masters were located in those regions of Norfolk where the worsted weavers were most prominent, that is, in the loam and north Norfolk regions. Some masters in these areas operated up to five or six looms, although smaller accumulations may have been more common. In other areas of the county where linen-weaving was more prominent, such as the wood pasture, the number of looms rarely exceeded two per master. In other areas, such as the breckland, where weaving and textile activity in general was less evident, the number of looms per master

rarely exceeded three.[99] The city was certainly the innovative centre of the county, but many city and county worsted weavers manufactured several different types of cloths. The Norwich worsted weaver Paul Geyton, for example, had pieces of pearles, tammetts, buffyns, russells, broad and narrow says in his inventory.[100] Likewise, the Norwich alien weaver, Rowland Scallyt, had pieces of buffyns, paropus, narrow and broad says listed in his inventory.[101] However, it would probably be true to say that county worsted weavers did not make the same range of new draperies and stuffs as their counterparts in the city. Nevertheless, some cloths appear to have been invented in the county. In the early 1580s, for example, some county worsted weavers claimed to have invented certain new worsteds.[102] In the period 1550 to 1622, some of the most popular Norwich Stuffs were certainly being made in the loam and other Norfolk parishes. One particular worsted weaver, James King of Worsted, is known to have made philoselles, damasks, paropus, calimancoes, and plommetts. A North Walsham worsted weaver manufactured coloured buffyns, and Thomas Bubbyn of Deopham also made coloured buffyns.[103] County production, however, did not usually extend to products incorporating silk in the period up to 1620. In the county stuffs, such as damasks and buffyns, formed the mainstay of county production.

The importance of the county's wool supply in the location of the industry probably diminished over time. At the beginning of our period the worsted weavers jealously guarded their wool supplies, and parliamentary statutes prohibited its export. Yet, already by the early 1570s, four Norwich aldermen were given leave to secure wool supplies from other counties. One of these Norwich aldermen, Simon Bowde, apparently bought 'great quantities of wooles within the towne and shire of Northamptonshire'.[104] By the turn of the century, a Privy Council ruling in a local dispute between the combined group of the Hosier's Company and the spinners and the opposing interests of the Combers Company confirmed the fact that local wool supplies were totally inadequate.[105] Contemporary deponents do not give the impression that the Norfolk wool supply was important to the success of the local industry. One Norwich clothier, John Cocksedge, for example, asserted that 'neither halfe nor a quarter of the Stuffes or draperies made' in Norwich and Norfolk 'are made only of Norfolk woolle'.[106] Cocksedge went on to assert that 'Norffolk wooll ys or may be aswell converted into broade Cloth or other Cloth as into Newe Draperies . . . and ys more used for broade and other Cloth then for Newe Draperies by a great

deale, For the greatest parte thereof ys sould into Suffolke and other places to the use of Clothinge'.[107] The deputy-alnager Nicholas Gyrdeler thought that 'most of Norffolk wull is convayed into Suffolk and Imployed for the makinge of Broade cloth and carsyes'.[108] Wool was being imported into Norfolk from a variety of nearby counties. One worsted weaver reported that 'the trades men do weekely buye or use divers other Cuntry woolles as Northamptonshere woolle and Lincolnshire woolle Whereof the deponent hath seene great score brought to Norwich as allso of woolle brought allmost everye weeke from London in great quantitie, which is ymployed with in the said Cittye and Country for the most part in the making of stuffes or Newe Draperies'.[109] Norfolk wool was not, therefore, essential to the continued success of the city or county industry.

IV

Who were the industry's customers? Norwich and Norfolk inventories show that a very wide cross-section of local society used new draperies to clothe themselves and adorn their homes. In general, inventories give the impression that it was the richer clientele of Norwich and Norfolk who were able make the greatest use of the variety of fabrics being woven in Norwich looms. New draperies were particularly prominent among the furnishings of the local gentry. In the parlour of the Buckenham esquire Thomas Godsalve, for example, were two carpets of tapestry, one low stool covered with red and green valure, a little chair for a woman with a back and seat of tufted mockado, two window cloths of striped fustian of Naples, and five cushions of tapestry. In the aptly named Green Chamber the bed curtains, the wall hangings, and the window curtains were all of green say. The bed in the Inner Chamber had a tester and valence of fustian of Naples, and one dornicks coverlet.[110] Indeed, it is only in these more affluent households that such a wide variety of the different cloths are found. This group's propensity to consume must have put them among the industry's most important customers. Their wardrobes were among the largest in the local community, and the replacement rate for the new draperies was far higher than for the older worsteds. One Norwich gentleman, for example, had a flanders grograin gown lined with bay, one black tuft-mockado gown lined with bay, one black cloak lined with bay, one satin doublet, one grograin gown, one grograin kirtle, and two satin doublets amongst his possessions.[111]

Of course, the gentry formed only a small percentage of the entire population, and it is unlikely that the demand exerted by this particular group would have been enough to sustain the industry's fortunes. Demand came also from those lower down the social scale, from those engaged in commerce, manufacturing, and the professions. One Norwich barber-surgeon, for example, had five bed curtains of blue and yellow say, one gown of buffyn, and one satin doublet.[112] Another group that certainly used the products of the industry in their homes were those described in inventories as yeomen, but they do not list the same wide variety of cloths as those further up the social scale. The inventories of lesser farmers or husbandmen in Norfolk list even fewer varieties of cloths, and the more expensive textiles are notably absent from the lists of their goods. Nevertheless, inventories confirm that those well down the social scale wore clothing made of the new draperies, and used them to furnish their homes. One Norwich woman, whose inventory was valued at over £4 in 1593, for example, had a black waistcoat of say and a black petticoat of say.[113] While inventories of local people at the lower end of the social scale do not list the same variety of fabrics produced by the industry, it is possible that this may have had more to do with the way in which these inventories were compiled, for only the inventories of the gentry really contain extensive detail of the textiles used for both clothing and furnishing.[114]

In the locality, Norwich Stuffs and new draperies were marketed by grocers, mercers, chapmen, and weavers themselves. The Lyng chapman Richard Trendall, for example, had black mockado, changeable mockado, and white carrell among his list of cloths.[115] So far as the aliens are concerned, they were prohibited from retailing their commodities in Norfolk towns and villages. The extent to which this prohibition was actually observed in practice is questioned by the fact that successive local government ordinances were required to discourage the Norwich alien community from selling their wares in the countryside. Although the domestic trade in new draperies to areas outside the county does not lend itself easily to study, some information is available. The coastal trade from Yarmouth took locally made cloths to ports as far apart as Newcastle and Plymouth. The actual quantity of new draperies sent coastwise, however, was probably very small compared to the total trade. More important was the trade plied by itinerant mercers and chapmen who distributed new draperies to other parts of England. One Lincolnshire mercer, for example, had bought silk, rashes, grograins, perpetuanas, says, and serges and other stuffs in a variety of towns

including Norwich.[116] Far more significant, however, was the overland trade to London. A group of Norwich men specialized in buying stuffs in Norwich and then selling them in the capital. The Norwich merchant John Skottowe, for example, sent stuffs to London on a weekly or sometimes fortnightly basis.[117] Many stuff merchants kept a factor in London to transact business on their behalf. These cloths were either consumed in London, redistributed to other areas of the realm, or sent overseas through the port of London.

Examination of the records of the two major Norfolk ports, that is Great Yarmouth and King's Lynn, together with those of London shows that the trade in new draperies was dominated by a select number of cloths. In the period up to 1590 the single most important new drapery export leaving Yarmouth was the bay.[118] Although the Yarmouth Water Bailiff's Books are by no means an adequate guide to new drapery exports from the area, they do show that in certain years between 1570 and 1590 up to 3,000 bays were exported annually out of Yarmouth, which could be as much as a third to a half of the yearly Norwich bay output. Smaller quantities of other new draperies, such as mockadoes and grograins, and a number of old draperies were exported as well. During the 1590s the picture remained very similar, although the number of dornicks exports grew steadily: around 3,500 dornicks coverlets were exported in some years. By 1612 exports had increased to nearly 5,500 coverlets. The growing importance of these exports was noted by the dornicks weavers in their company book. In 1612, they observed that due to 'the Change of tymes much more sale and vent thereof to forren parts is had, then heretofore have byn'.[119] During the first quarter of the seventeenth century, there was an expansion in both the quantity and type of new draperies being exported out of Yarmouth, King's Lynn, and London. Damask was without doubt the most important new drapery to be exported from Yarmouth, with over 7,100 being exported in 1619. The quantity of new draperies exported from London was, however, far more significant. In 1595, for example, 10,976 bays, 4,256 says, 10 bombasines, 232 durances, 65 buffyns and mockadoes, and 32 ollyets had been exported from London.[120] By 1619 the number of new draperies exported from London had increased to around 95,000 cloths. Moreover, other locally produced textile manufactures, such as worsted stockings, expanded with as much vigour as the new draperies. London had exported 33,455 pairs of worsted stockings in 1595, but this had risen to 267,000 pairs by 1619. The rise in worsted stocking exports from London was mirrored in the stocking trade from Yarmouth.

In 1605, 2,700 were exported, but this had increased to nearly 70,000 by 1621. Indeed, customs receipts for cloths leaving Yarmouth increased four times between 1605 and 1612.[121] However, the actual quantity of textiles leaving Yarmouth was not great compared to that leaving other English ports, perhaps no more than 11,000 or 12,000 new draperies during the 1610s. This period saw a gradual rise in the export of silk and part silk cloths, such as syets, rashes, and figuratoes out of Yarmouth and London. Yet, they still formed only a small proportion of the total number of the new draperies sent overseas. Exports were still dominated by well-established new draperies, such as bays, says, damasks, and perpetuanas. In the year to Christmas 1619 nearly 13,000 double and over 33,000 single perpetuanas were exported by alien and English merchants alone.

As the number and types of cloths being exported expanded, so too did the overseas markets for which they were bound. The Yarmouth trade concentrated heavily on the Low Countries. In 1612, for example, most of the trade went to the port of Rotterdam, with smaller quantities heading for Flushing and Campen. Some new draperies, however, went directly from Yarmouth to southern Europe. The bulk of these cloths arrived at the ports of Lisbon, Seville, Cadiz, and Marseilles. However, the actual quantity of exports from Yarmouth to southern Europe were not great. New draperies from London, on the other hand, went to a vast array of southern European ports, including Bordeaux, San Sebastian, Viana, Porto, Vigo, Faro, Lisbon, Ayamonte, Cadiz, Seville, San Lucar, Malaga, Marseilles, Genoa, Naples, Leghorn, and Venice. The 1619 London port books show that some new draperies even went to the port of Constantinople. Moreover, new drapery exports reached as far as the Atlantic Islands of the Azores, the Canaries, and Madeira. The London draper Richard Beere, for example, sent out twenty broad russells, thirteen single says, ten pieces of philip and cheney, seven double and one silk rashe, seven half-pieces of counterfeit Dutch says, forty half-pieces of English fustians, three double bays, sixty dozen kersey stockings, 124 pairs of short coarse woollen stockings, and 250 pairs of short worsted stockings to the Azores on board the *Margaret* of London in the spring of 1619.[122] Despite the variety of destinations there was a heavy concentration on the ports of southern Spain and Portugal, especially Lisbon, San Lucar, Seville, and Malaga.[123] After southern Spain and Portugal, the Italian ports were the major destinations for English new draperies in the Mediterranean. Leghorn was certainly the most important Italian port to receive new draperies from

English merchants in the year 1619. Contemporaries themselves acknowledged the growing importance of the Italian market. In 1594 it was noted that 'the trade of Baies dayle doth increase it must be graunted because it is come to be a great trade to send Baies into Italie in great quantitie which about x yeares past was an unknowne comoditie unto them and in no use'.[124] New draperies leaving London, however, were not just sent to southern Europe. A number of ports along the shores of the Baltic, the Channel, and the Atlantic coast of France received new draperies. In quantity, individual Atlantic coast ports could not match those of southern Europe, but taken as a whole we perceive that these markets further north were still relatively important.

While the demands of the more southerly areas of Europe probably encouraged the move in production from the more bulky worsteds to the lighter new draperies, it is likely that the rise of the new draperies in the region had as much to do with the changing demands of the home market. The textile industry in Norwich had become a substantial producer of new draperies long before they had become a major export. Some historians look upon the development of the new draperies in England as a classic case of import substitution. Yet, even while new drapery production was expanding in England, imports of mixed fabrics coming into London were rising. Although the evidence available is far from adequate, two London port books for the years 1588 and 1621 give us an indication of the changing nature of cloth imports. They show that London was importing an ever-increasing supply of mixed fabrics, despite the fact that the home economy was producing more and more as time passed. Between 1588 and 1621 the value of mixed fabrics imported by English merchants may have doubled.[125] To take one example, grograin imports rose twelvefold from 10,849 yards to 131,275 yards.[126] To a certain extent the new draperies did reduce the need to import mixed fabrics, but they did not make England self-sufficient in these products.

V

The rise of the new draperies in Norwich illustrates the successful adoption of new products by a declining provincial industry. Yet, some historians have questioned the importance attached to the role of the alien community in the adoption and expansion of the new draperies in England. Kerridge, for example, has written of the 'strange tendency to

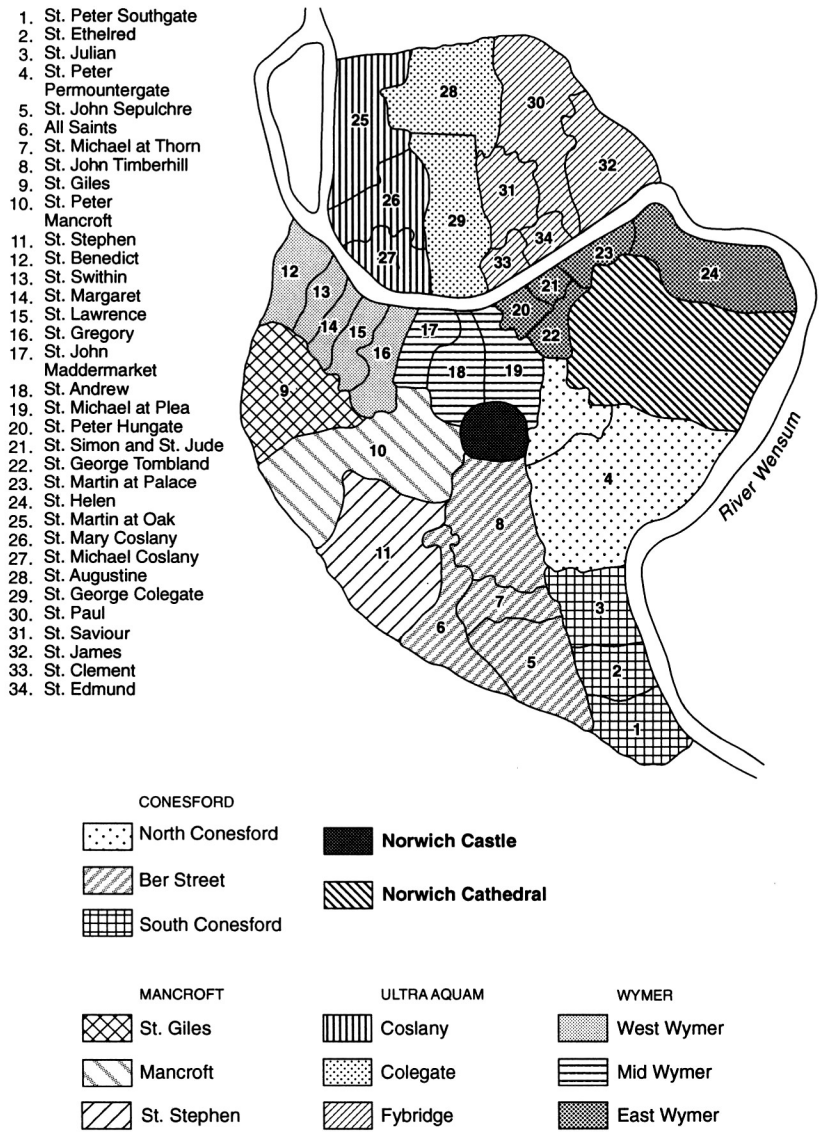
credit immigrants with having made most of the technical innovations that preceded the so-called "Industrial Revolution" and especially the introduction of the "new draperies" '.[127] A number of contemporaries, however, viewed the situation rather differently. In 1606 one worsted weaver affirmed that 'the first invencion of makinge these latter Stuffes called Newe Draperies was devised and practised first . . . by Strangers about thirty yeares agoe'.[128] It seems very unlikely that without the alien influence, the new draperies in Norwich would have been so varied. Yet, the Norwich aliens brought not only their new cloths, but the good name associated with the quality of their products. As one governmental official observed in 1582, the cloths the aliens used to make in 'armentiers in Flaunders . . . were in very greate estimation in many countreys and as I am infourmed they made L thousand clothes in a yeare and never sought merchauntes or clothiers ani further to the maert Towne at andwarpe'.[129]

These seventy years saw changes in the industry's product, its personnel, its organization, and the markets it supplied. The Norwich industry was able to regenerate by adapting itself to meet the changing needs of both the home and overseas markets. The textiles that came to be made during the period from 1565 were somewhat different from the textiles that had been produced in Norwich up to that point. In general, they were cheaper, more colourful, lighter in weight, and less durable than the ancient worsteds. Yet, part of the success of the new draperies is surely that they provided such a wide variety of cloths at different prices. Some Norwich textiles were cheap enough for the broad base of the population to buy, while other cloths were considerably more upmarket, and could appeal to the more affluent of society.[130] The new draperies also benefited from the increasing demand for textiles used for furnishings inside the home. As the new draperies became more and more popular, their production spread to other parts of the country. One late sixteenth-century observer commented, 'The tymes are altered . . . Then the trades of making bayes, serges, Buffin, Durance, rash, worsterd stockins and such like inferior stuffes made of wolles was but in Nuecastle and Norffolke onely, and now they be sett upp in an hundreth severall townes and places which [be] in many countyes of the realme'.[131] Nevertheless, the sheer diversity of textile products that came to be made in Norwich and Norfolk singles out this region from most. Indeed, the seeds of textile innovation sown by the strangers, but developed by both the alien and native English textile communities, produced a veritable crop of new textiles in the city. That the textile

harvest was so bountiful had much to do with the alien influence, and the fact that the Norwich industry was ripe for change.

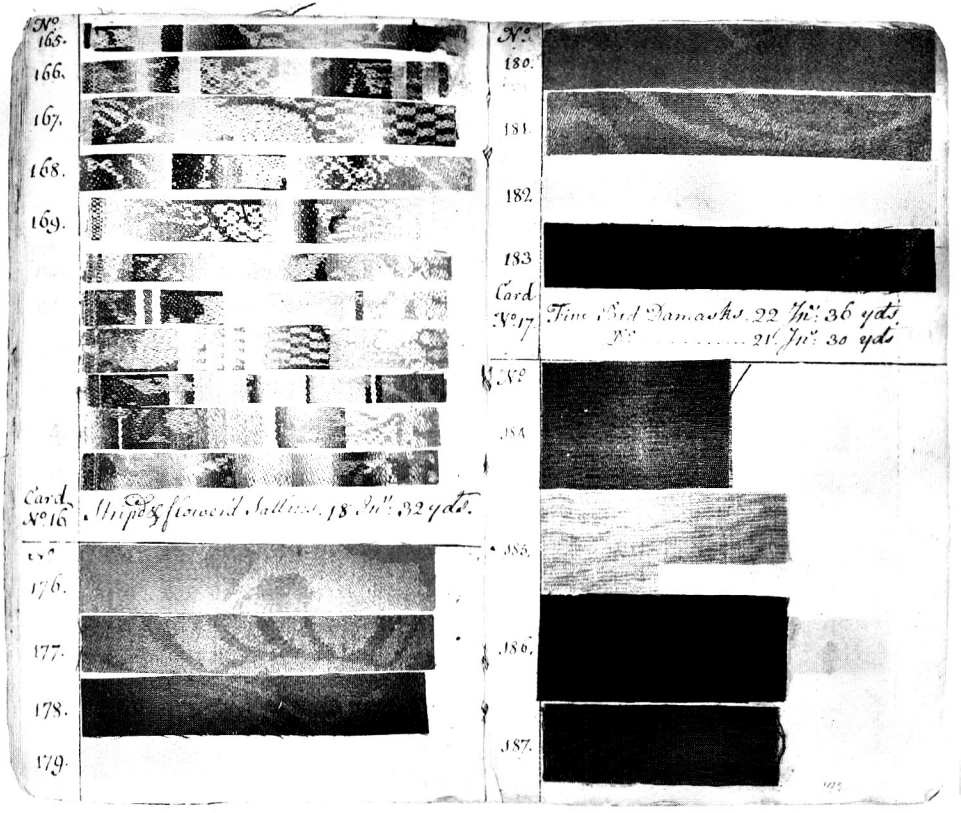
NOTES

1. My grateful thank to Dr B. A. Holderness who kindly read this paper before publication, and made some useful suggestions.
2. James (1857); Pilgrim (1939); Pilgrim (1959–60), 36–59; Pilgrim (1972); Allison (1955); Corfield (1976).
3. NRO, Case 16 d 3; MAB, 1553–83, fo. 280^{v}.
4. During the period from the last quarter of the 16th cent. there was a long-running dispute between the Norwich and Norfolk producers and the patentees of the alnage and subsidy who were trying to enforce their cloth inspection tax on Norwich textiles.
5. Kerridge (1985), p. vii.
6. NRO, Case 16 a 15, MCB 1615–24, fo. 179^{v}. The alien congregation was made up of Dutch and Walloons.
7. NRO, Case 16 c 5, AB 1585–1613, fo. 289^{v}.
8. NRO, Case 16 d 5, MAB 1613–42, fos. 12–14^{v}.
9. *Statutes of the Realm*, 1 & 2 Phil. & Marie c. 14. Similarly, in 1564 it was written that 'woorsted makynge is greatlye decayed'. NRO, Book of Orders for the Strangers, 1564–1643, fo. 1.
10. As contemporary Norwich documents explain, the 'straungers came over for refuge ageynste the persecution then raysed ageynste them by the power of the Duke Alva, principall for the Kynge of Spayne'. NRO, Case 17, Book of Orders for Strangers 1564–1643, fo. 16.
11. According to the Acts of the Privy Council, the 'reasons that moved the State ... to plaunte' alien craftsmen in Norwich were 'principally for the benifite and inriching of the cittie it self, and the bringing in of the new manifactures and outlandish commodities thereunto'. The 'reliefe fo the strangers' was only of secondary importance. *APC*, James I, vol. i (1613–14), 357. More aliens arrived in Norwich over time, although their numbers had fallen considerably by the 17th cent. This was a mixture of the ravages of plague and assimilation into the host population.
12. At that time, the Mayor, a group of Norwich aldermen, citizens, and merchants had come together 'at their greate costes and chardges, as well in bringing of certeine Strangers from the partes beyonde the Seas into the Citie, as also in making of Loombes and all other provision for the same' and put them with eight 'persons of the most discrete and worthy men of the misterye of Worstedd weaving within the sayd Citie', bringing the total number to 20 persons. *Statutes of the Realm*, 1 & 2 Phil. & Marie, c. 14.

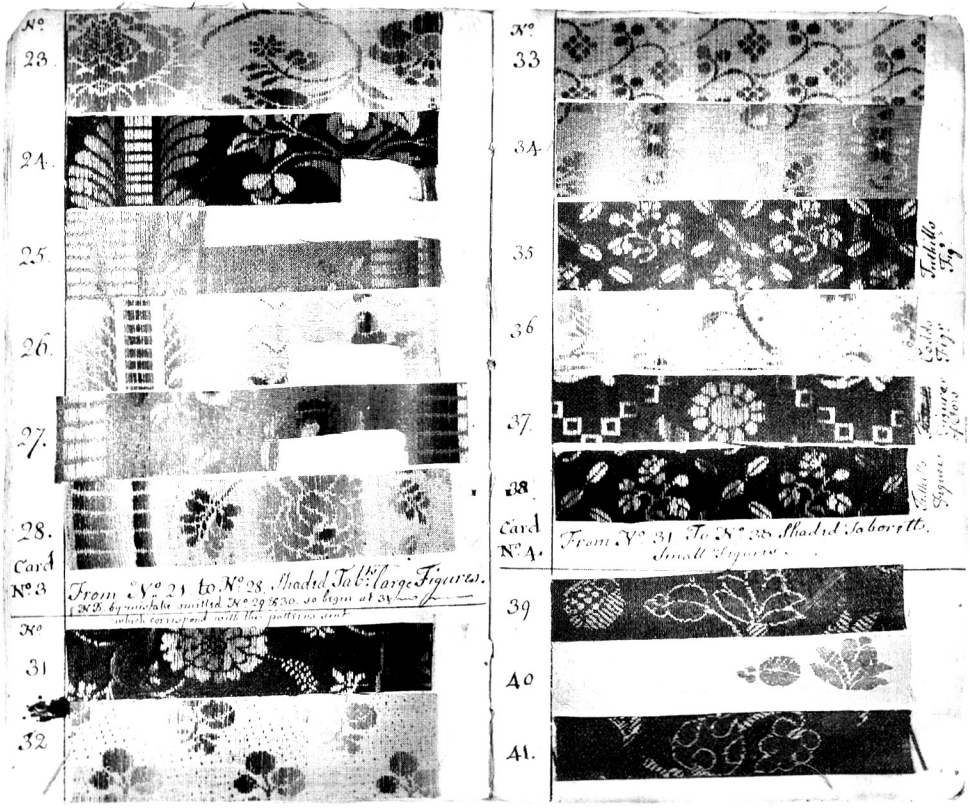


MAP 7. The parishes, petty, and great wards of Norwich

13. *Statutes of the Realm*, 1 & 2 Phil. & Marie, c. 14.
14. Supple (1959), 153.
15. Bowden (1962), 44–5.
16. Kerridge (1972), 25.
17. Ramsay (1982), 14–15.
18. BL Lansdowne MSS vii. 81.
19. The aliens were sometimes referred to as the 'strangers' in local documents.
20. For descriptions of the various textiles, see Kerridge (1985), chs. 5–9; NRO, Case 17, Book of Orders for Strangers 1564–1643. More evidence is to be found in the Muncipal Assembly Books.
21. NRO, Case 17, Book of Orders for Strangers 1564–1643, fo. 81.
22. Ibid., fo. 107^{v}.
23. PRO, E133/80/20, No. 66, W. Parsleye, Ans. 35.
24. NRO, NCC inventory (hereafter, Inv.) 21/66.
25. NRO, NCC Inv. 11/14.
26. *Statutes of the Realm*, 20 Hen. VI, c. 10. These ancient worsteds included bedds (of the greatest, mean, and least assize), monks cloths, cannon cloths (of two assizes), worsted (double and single), ten yard stamyns, says, chamblets, and bustians.
27. *APC*, vol. xii (1580–1), 63.
28. PRO, E133/80/20, No. 66, T. Sellers, Ans. 14.
29. Ibid.
30. These were apparently the work of John Lesingham of Horseforde or John Bereaway of Hayneforde.
31. PRO, E133/80/20, No. 66, S. Francklyn, Ans. 7.
32. One group of russells known collectively as durables included scallop shells, ollyet holes, mackerel wales, and eylets.
33. PRO, E134/44–45 Eliz.I/Mich.1, W. Gedney, Ans. 4.
34. BL, Add. MSS 12,504, fo. 64 (i).
35. PRO, E133/80/20, No. 66, S. Francklyn, Ans. 17.
36. PRO, E133/80/20, No. 66, S. Francklyn, Ans. 6.
37. Worsted yarn was so called 'bicause that manner of spynning was first practiced in Worsted in the countie of Norfolk'. *SPD* 15/33/71.
38. PRO, E133/80/20, No. 66, S. Francklyn, Ans. 33.
39. Pound (1971).
40. Ibid. There were, in fact, two types of white warp, that is wheel-spun and rock-spun. PRO, E133/80/20, No. 66, T. Sellers, Ans. 33.
41. PRO, E133/80/20, No. 66, T. Leman, Ans. 34.
42. PRO, E133/80/20, No. 66, N. Gyrdeler, Ans. 5.
43. NRO, NCC Inv. 28/8. The higher price of worsted products is also seen in relation to stockings made from long fibres. One hosier's inventory contained coloured woollen boys' hose at 6*d*. per pair, women's coloured hose at 16*d*. per pair, coloured wheel-spun hose at 2*s*. 2*d*. per pair, and coloured jersey hose at 3*s*.



2. Pages from the earliest surviving pattern book of Norwich stuffs, the counterpart of samples assembled by Stannard & Taylor of Norwich for their agent, John Kelly, to take to Spain in 1763 (*By courtesy of the Board of Trustees of the Victoria and Albert Museum*)



1. Pages from the earliest surviving pattern book of Norwich stuffs, the counterpart of samples assembled by Stannard & Taylor of Norwich for their agent, John Kelly, to take to Spain in 1763 (*By courtesy of the Board of Trustees of the Victoria and Albert Museum*)

8*d*. per pair. NRO, NCC Inv. 28/131. However, not all new draperies were made of worsted yarn. Many alien new draperies were made of wheel-spun yarn, particularly jersey yarn which was made of long combed wool that was spun on a small spinning-wheel. 'Garnesey or Jarsey yarne' was so-called 'bicause that manner of spynning was first practiced in the Isle of Garnesey or Jarnesey, whereof also there be divers sortes'. Jersey yarn was said to make 'warpe for the finest stuffes. It is often used for the uffe to silke warpe, bicause it maketh best with silke bothe for his fines and softnes'. *SPD* 15/33/71.

44. PRO, E133/80/20, No. 66, T. Leeman, Ans. 6.
45. NRO, Case 10 b, 'New drapery in Norwich'.
46. PRO, E133/80/20, No. 66, W. Parslewe, Ans. 10.
47. Case 17, Book of Orders for Strangers 1564/1643, fos. 91–91^{v}.
48. NRO, Case 16 a 13, MCB 1595–1603, fo. 101.
49. PRO, E134/ 44–45 Eliz. I/Mich. 1, R. Hothe, Ans. 7.
50. NRO, Case 16 a 15, MCB 1615–24, fo. 179^{v}.
51. Most of the evidence for this study of cloth prices comes from probate inventories. In the strictest sense, these prices are valuations of goods. Yet, they do represent the prices that would probably have been obtained in a sale. To this end, this study has been particularly careful to select evidence from either producers themselves or those who retailed the products.
52. Despite the problems of inflation and the accuracy of contemporary pricing, inventories are the only available evidence to provide the extensive information of all the various types of cloths made by the local makers and workers.
53. NRO, NCC Inv. 28/115. See also Invs. 5/139, 15/65, 31/112.
54. NRO, NCC Inv. 27A/82, 27B/144, 28/157.
55. NRO, NCC Inv. 28/157.
56. NRO, NCC Invs. 20/47, 26/252, 28/131.
57. NRO, NCC Invs. 8/154, 12/20, 15/159, 16/190, 19/178, 24/300; *SPD* 12/250/47.
58. NRO, NCC Invs. 16/195A, 20/4; PRO, Req. 2/392/69.
59. NRO, NCC Invs. 28/7, 28/8, 28/115, 31/112; PRO, Req. 2/392/69.
60. NRO, NCC Invs. 19/117, 30/137.
61. NRO, NCC Invs. 19/119.
62. NRO, NCC Inv. 23/72.
63. Similarly, coarse worsteds, such as bedds, were used for hangings.
64. BL, Add. MSS 12,504, fo. 64 (i).
65. NRO, NCC Inv. 21/181.
66. NRO, NCC Inv. 26/284.
67. PRO, E133/80/20, No. 66, T. Sellers, Ans. 29.
68. Norwich lace was apparently introduced to the city by one of the Sotherton family, probably sometime during the 1570s. The worsted weaver Stephen Francklyn explained how 'greate Sutterton whoe beinge a Grocer in Norwich came to London upon his occasyons and bought downe with him a Silke weaver

whom he ymployed in makinge of Saye lace and other lace then not used to be made in Norwich' (PRO, E133/80/20, No. 66, S. Francklyn, Ans. 25). Norwich lace was 'for the most part made all of small wooffe except Stoole lace which is made of White warpe ground' (PRO, E133/80/20, No. 66, S. Francklyn, Ans. 26, 27). Norwich lace was sold by the gross, each gross containing twelve dozen yards. A gross of lace was made of four pieces, each piece containing 36 yards. S. Francklyn, Ans. 27.

69. PRO, E133/80/20, No. 66, T. Leman, Ans. 27.
70. PRO, E133/80/20, No. 66, N. Gyrdeler, Ans. 28.
71. PRO, E133/80/20, No. 66, S. Francklyn, Ans. 31.
72. The hall where the Walloon caungeantry was sealed.
73. Printed in Williams (1951–2). NRO, Duties on Articles Manufactured; 'Measures Book of Alnage Accounts, 1580–1649'.
74. Hudson and Tingey (1910), 412–13.
75. Coleman (1969).
76. For a table of the accounts see Allison (1961), 67.
77. NRO, Case 10 h 11.
78. Within these broad trends of rises and falls in specific forms of textile production there were fluctuations. Sometimes the causes of these fluctuations were specifically the result of local conditions. The 1579 plague, for example, had a significant impact on the number of cloths produced by the alien community. Alien cloth hall receipts fell significantly in 1579 and did not recover for several years. A variety of sources give the impression that there was a significant slump in alien and native production during the 1590s. Millican (1934); Millican and Rising (1959).
79. PRO, E133/80/20, No. 66, T. Sellers, Ans. 16.
80. Kerridge (1985), 187; Priestley (1985), 191–2.
81. NRO, NCC Inv. 27A/148.
82. Hudson and Tingey (1910), 378.
83. The lace looms that were often present in worsted weavers' inventories could be operated by women and children.
84. Pound (1971), 87.
85. Ibid. 54.
86. Ibid. 59.
87. Ibid. 49.
88. Allison (1955), 379 n. 4.
89. Moens (1887–8), 153–7, 183–93, 207–16.
90. NRO, Aylsham Collection, No. 156.
91. Moens (1887–8), 153–7, 183–93, 207–16.
92. NRO, Case 16 a 10, MCB 1576–81, fo. 746.
93. Pound (1988), 53–4.
94. See Map 7.
95. *Statutes of the Realm*, 14 & 15 Hen. VIII, c. 3.

96. Hudson and Tingey (1910), documents lxiv, lxv.
97. Allison (1957), 14.
98. Thirsk (1967), 45.
99. Kerridge (1985), 187–8.
100. NRO, NCC Inv. 28/157.
101. NRO, NCC Inv. 27A/148.
102. *APC*, vol. xii (1580–1), 63.
103. PRO, E133/80/20, No. 66, T. Sellers, Ans. 29.
104. *APC*, Elizabeth I, vol. x (1577–8), 25.
105. In a dispute between the Hosiers Company and the spinners and the combers the Privy Council allowed wool and yarn to be imported into Norfolk from nearby counties, such as Suffolk and Essex, for they realized that local wool supplies were insufficient to meet the needs of all the different wool-producing industries in Norfolk. *APC*, James I, vol. vi (July 1621–May 1623), 295, 329, 455.
106. PRO, E133/80/20, No. 66, J. Cocksedge, Ans. 22.
107. PRO, E133/80/20, No. 66, J. Cocksedge, Ans. 23, 24.
108. PRO, E133/80/20, No. 66, N. Gyrdeler, Ans. 23.
109. PRO, E133/80/20, No. 66, S. Francklyn, Ans. 22.
110. NRO, NCC Inv. 4/114.
111. Moreover, he had a tuft-mockado cushion cover, a tester, a valence, and five bed curtains of yellow and red say. NRO, NCC Inv. 9/45. Another Norwich gentleman, Stephen Atkins, possessed a hanging of dornicks worth 26*s*. 8*d*. in his Great Parlour, old hangings of green say in the Little Parlour, together with one coverlet of tapestry, one doublet of rashe, one jerkin of silk grograin, one doublet of bombasine, one black gown of grograin, and one coverlet of Pulham Work.
112. NRO, NCC Inv. 19/149. The Norwich rough mason, John Heach, whose inventory was worth over £93, had an apron of green wadmol, an apron of purple buffyn, a fore kirtle of Norwich damask worth 2*s*., a stamell petticoat, and a cap of velvet. NRO, NCC Inv. 8/277.
113. NRO, NCC Inv. 10/13.
114. Inventories of those lower down the social scale often list items of clothing, without mentioning the fabrics, while inventories of those higher up the social scale usually provide far more detail.
115. NRO, NCC Inv. 12/210.
116. PRO, Req. 2/396/41.
117. PRO, Req. 2/392/69.
118. The trade in new draperies helped to revitalize textile exports which had been falling steadily from the 1520s to the mid-century. According to Williams only 62, 90, and 38 worsteds were exported from Yarmouth during the first three years of Elizabeth's reign. Williams (1988), 64.
119. NRO, Case 16 d 5, AB 1613–42, fo. 395^{v}.

120. *SPD* 12/253/122.
121. Michell (1978), 162.
122. PRO, E190/22/9, fo. 31^{v}.
123. Robert Sporle, for example, sent out 10 pieces of double paropus, 12 double narrow Norwich grograins, 4 double pieces of broad Norwich russells, 4 double pieces of narrow Norwich russells, 20 broad perpetuanas, and 240 pairs of short worsted stockings to Malaga in 1619. PRO, E190/22/9, fo. 101.
124. *SPD* 12/250/47.
125. Of course the figures compiled by Millard do not take changes in the value of cloths into account.
126. Millard (1956), Tables 6, 8.
127. Kerridge (1985), p. vii.
128. PRO, E133/80/20, No. 66, S. Francklyn, Ans. 20. See also PRO, E133/80/20, No. 66, T. Sellers, Ans. 20.
129. *SPD* 12/155/80 (I).
130. As Coleman has written, the introduction of the new draperies may have had a 'price effect because lower prices tapped the demand of poorer consumers hitherto excluded, or an income effect because increased incomes amongst the same group brought them into the market.' Coleman (1969), 423.
131. *SPD* 12/261/63.

9

NORWICH STUFFS, 1600–1700

URSULA PRIESTLEY

THE term 'Norwich Stuffs' was applied by contemporaries to a diverse range of light-weight fabrics derived, in the main, from varieties of the new draperies introduced by Walloon refugees in the sixteenth century, and elaborated and refined in the seventeenth. They were textured and patterned worsteds and worsted mixtures, colourful and often highly finished, with a wide range of uses, both for clothing and furnishings. The success of the Stuffs brought great prosperity to the city in the late seventeenth century and established Norwich as a leading centre of textile manufacture.[1] From their inception Norwich Stuffs were popular as fashionable dress materials in the home market, but, in parallel, an extensive foreign trade built up in the first half of the century as merchant trading companies opened up new markets in the Far East and the Levant. Later, domestic sales far outstripped exports as Norwich Stuffs hit a fresh wave of popularity in the post-Restoration years, probably motivated by the growth of fashion-consciousness among a newly affluent middle-income group, weary of the austerity of Commonwealth dress. This was a new market which, for a time, brought unprecedented boom conditions to the industry. It was a boom that was relatively short-lived, soon to be undermined by competition from imported Indian cottons—a direct threat to some of the finer Norwich fabrics. Decline in home demand induced a shift to overseas customers, a change which was, in the long term, to alter radically the character and structure of the industry. The object of this essay is to examine the origins, nature, and development of Norwich Stuffs, and to consider those aspects of the industry's highly urbanized and, in many ways, unique organization and individual marketing mechanisms which may have contributed to the success of the Stuffs during the heyday of their popularity in the late seventeenth century.[2]

It is impossible to arrive at a comprehensive definition for the expression 'Norwich Stuffs'. It seems to have come into common use, perhaps significantly, not long after the introduction of the New

Draperies to East Anglia. For instance, the steward's accounts of a gentry household in north Norfolk, dated 1588, record a tailor's charge for 'altringe the gentlewomens gowns of Norwich stuff'—an interesting entry since it implies that even by that date these were fabrics considered appropriate for inclusion in a gentlewoman's wardrobe.[3] Subsequently, the term was in customary use by manufacturers and dealers for more than two centuries, but its scope was never formally defined,[4] and, inevitably, its coverage would have changed over time as new products were added and others dropped out of the range. The matter becomes more confusing in the late seventeenth century when the expression was sometimes used to refer to the whole gamut of Norwich manufactures, and sometimes, in a specific sense, for the worsted-based mixed fabrics for which the city became famous.

Taking the term 'Norwich Stuffs' in the latter sense, exactly how and when did they originate? To explain their nature and development it is first important to emphasize the seventeenth-century distinction between the cloth trade and the stuff trade. They were regarded as quite separate industries, involving different manufacturing processes.[5] In the simplest terms, 'cloth' used short-staple, carded wool in both warp and weft and, characteristically, it was fulled during finishing so that it became thick, felted, and uniform in appearance. 'Stuff', on the other hand, was made from long-staple, worsted yarn, combed and rock-spun, often incorporating subsidiary fibres such as linen and silk. It was never fulled, so that the weave remained visible in the finished product, contributing to its texture and character, and giving scope for variation and invention in design. (Between these two extremes, of course, were many hybrid fabrics such as bayes and serges, which were mixtures of wool and worsted yarn, but which usually had the finished appearance of 'cloth'.) Although bayes, serges, and other wool and worsted mixtures were also made in Norwich, the city's principal business, at least since the time of Edward III, was stuff manufacture.[6] It would be wrong to use the word 'cloth' in connection with the trade; in fact, the words 'cloth' and 'clothier' are never found in seventeenth-century archives relating to the Norwich industry.

In general, it is true to say that 'Norwich Stuffs' (again using the term in the specific sense) stemmed from the introduction of the new draperies to this country, and primarily, from the 'new inventions' brought by the particular group of Dutch and Walloon 'Strangers' specially invited to settle in Norwich in 1565 with the avowed object of stimulating the city's trade.[7] But this is a misleading statement without

some qualification. In the first place, it begs the question, since 'new draperies', like 'Norwich Stuffs', is an expression incapable of precise definition. Secondly, it underestimates the basic strength and expertise of the long-established indigenous stuffs industry. As long ago as 1465, Sir John Paston wrote of Norfolk worsted 'almost like silk';[8] and slight stuffs of fine quality had been made in Norfolk and Norwich throughout the fifteenth and sixteenth centuries. The Letters Patent authorizing the settlement of the Low Countries immigrants in 1565 were themselves misleading.[9] The newcomers were expected to exercise 'the faculties of making bayes, arras, saies, tapestry, mockadoes, stamens, carsey and other outlandish commodities as hath not been made within this our realm of England'. But 'saies and stamens', far from being outlandish, had long been in regular production in Norwich. Moreover, such complex fabrics as figured russells, satins, and satin reverses, which surely would have been regarded as new draperies, had been made there at least since 1547, when a syndicate of Norwich aldermen and merchants brought a small contingent of Flemish craftsmen to the city to foster trade, resulting in the formation of the Russell Company soon afterwards.[10]

However, even if doubts must remain about the wisdom of trying to find a direct chronological link between the new draperies and Norwich Stuffs, the influence of the 1565 refugees on the future development of Norwich textiles was, of course, profound. Undoubtedly, the Strangers improved the techniques of worsted weaving and finishing, and extended the range of the city's products. At the same time, they may have brought to bear an element of entrepreneurial flair and energy that had been lacking in the flagging industry.

Some of their inventions were indeed new to Norwich, notably the range of tufted fabrics such as mockadoes and velours,[11] and worsted damask, introduced by the 1565 settlers or their immediate successors, which was to become a Norwich staple. Woven on the drawloom (probably an innovation in the city) worsted damask imitated the elaborate floral designs of expensive silk damasks.[12] It was extensively manufactured throughout the seventeenth century, especially in silk and worsted mixtures, finding a ready market both for dress material and furnishings.

Many of the later Norwich Stuffs evolved from a range of fabrics made by the small Walloon community, and known collectively as the 'Caungeantry' from the 'changing' or shot effect obtained by using different colours, and sometimes different types of yarn, in warp and

weft.[13] The Caungeantry used pre-dyed yarn, which distinguished them from the Dutch 'Baytrie', which were woven white and then dyed. This was an important distinction. Obviously, weaving in colours, and with mixed yarns, greatly enhanced the opportunities for devising textured, patterned, and striped fabrics, so giving scope for the increasing diversity that was to become the hallmark and the market strength of Norwich Stuffs in the later years of the seventeenth century.

By the early 1600s Norwich Stuffs were being made in enormous and bewildering variety, and the advantage that their potentiality for diversification gave them in the competitive world of fashion was already recognized. In a document dated about 1611, Norwich wares are described as being 'of infinite varietie of Sortes, Figures, coullors and prices'; and the dangers of imitation are stressed: 'Our Trade is most benefitted by o(u)r newe Inventions and the varyinge of o(u)r Stuffes which is contyn(ually) profitable so longe as we can keepe them secrett and ceaseth to be when they are more discovered.'[14] The constant search for novelties to keep ahead in the capricious market of female fashion was vital. This led to a proliferation of names, accepted and encouraged by the City Council as a promotion ploy;[15] it was common to attach a new and eye-catching name to a product only minimally different from a predecessor, to boost sales. As Thomas Fuller put it in 1662: 'Expect not I should reckon up their several names, because daily increasing, and many of them are binominous, as which, when they begin to tire of sale, are quickened with a new name.'[16] This custom made classification of Norwich Stuffs by content or weave more and more difficult; and the maintenance of adequate standards of manufacture and the prevention of fraudulent practices was a recurrent problem, despite repeated efforts at control by the Weavers' Company.[17]

Norwich manufactures continued to advance during the second half of the seventeenth century, with the elaboration of fabrics already in production, and the addition of innovations such as druggett and crape. Norwich Stuffs became remarkable for their extreme fineness: 'Our stuffs are so thin they will not bear seals; they drop off commonly', explained a stuffs dealer protesting that his goods were re-searched by customs officers while in transit to London,[18] and Celia Fiennes wrote of Norwich weavers in 1697: 'They are arrived at a great perfection in their worke so fine and thinn and glossy.'[19] Glossing, practised by the Walloon craftsmen, was revived and improved. The shine was achieved by hot-pressing between iron plates, and sometimes even by applying beeswax. It was used increasingly for some of the more sophisticated

fashion fabrics, accentuating the brilliant colours of, for example, callimancoes. Some of the plainer products, such as camblets, were embellished by 'watering' to give a moire or wavy effect, or stamped with embossed patterns by pressing over a carved wooden block.[20]

The introduction of crape was an important development. In its various forms it was to become one of the most popular of Norwich products. The black, and black and white, versions were universally worn for mourning, but crape was made in colours too and was widely sold for stylish gowns.[21] It has been said that crape was introduced to Norwich by Huguenot refugees after the revocation of the Edict of Nantes in 1685,[22] but this is not borne out by the facts. Probate evidence shows that crape was being made in the city in the 1670s,[23] and, moreover, there is little to indicate an influx of immigrant weavers in 1685. There is every reason to believe that they were deterred by the hostile reception accorded to an advance guard in 1682.[24]

A notable development in the last few decades of the century (but one again that should not be credited to a Huguenot invasion) was the much increased use of silk as a subsidiary fibre. This factor may have had considerable significance at a time when polite post-Restoration society was setting a trend for luxury in dress. From the 1670s on, Norwich weaving shops were turning out 'silk' versions of a whole range of conventional worsteds, for example, 'silk sayes', 'silk callimancoes', 'silk camblets', 'silk tammetts', as well as 'silk druggetts' and 'silk crapes'.[25] Although some of the silk used was the expensive thrown kind from Piedmont and Messina, the great bulk was the much cheaper and inferior quality raw silk from Bengal, which at that time was being imported in vast quantities by the East India Company. Norwich weavers evidently had the skills to make the most of it, probably adding it as an extra fibre in the worsted warp to give a decorative lustre or sparkle, since it would not have been strong enough to be used on its own in the loom. Its ready availability and cheapness provided an opportunity to imitate the appearance of more luxurious fabrics without appreciably adding to manufacturing costs, boosting the appeal of Norwich Stuffs for making fashionable clothes. At all events, by the 1690s Norwich was acknowledged as the leading manufacturing centre in the country for silk and worsted mixtures, by comparison with London and Canterbury, described as specializing in pure silks, and Colchester, still making plain worsteds.[26]

The industry had become highly specialized, with the bulk of production orientated towards the dress trade. As the City Assembly

emphasized in 1719, when petitioning Parliament about the serious effect on the local economy of the intrusion of Indian cottons: 'The greatest branch of the Norwich trade is in light stuffs for womens and children's apparrell.'[27] (There was a secondary but significant market in furnishing fabrics, since many Norwich Stuffs were equally suitable for curtains and hangings.)[28] Not surprisingly, in the 1670s and 1680s, when manufacture for home consumption was at its height, the expertise needed for making the more complicated and highly finished stuffs seems to have been confined to the city itself. There is only occasional evidence for the production of anything but the plainer weaves in the county of Norfolk, and almost none for the use of silk, although spinning for the Norwich industry continued to be carried on extensively in the surrounding countryside.

Probably in consequence of the skilled and specialized nature of the stuffs trade, a distinctive and essentially urban-based industrial organization had evolved in Norwich. The city's many weaving businesses were independent and self-financing units, presided over by the owner. Apart from a minority operated at a noticeably higher entrepreneurial level, which will be discussed later, most were small-scale. A typical Norwich workshop housed perhaps no more than two or three looms, worked by family and apprentice labour. (Putting out was practised but it was exceptional.)[29] The master would expect to exercise day-to-day surveillance of all stages of manufacture, from choosing yarn of suitable type and quality to supervising the finishing of the stuff and finding a market for it. Since the saleability of the finer Norwich Stuffs depended so much on texture and colour, the choice of raw materials was crucial, and the availability of worsted and silk yarn of the right quality probably dictated the design of the fabric to be woven. The very varied stocks of finished stuffs held by some weavers suggest that switching from one type of fabric to another was not difficult.

Most workshops were equipped to carry out some of the processes of yarn preparation, including the scouring of worsted yarn bought in the greasy state from the wool-comber, and the winding of raw Bengali on to the hexagonal reels known as 'silk swiftes'—probably a cost-cutting operation. The elaborate patterns of worsted damasks and flowered and striped callimancoes required expertise in setting up the loom, and, although professional pattern-setters were probably at work in Norwich by the late seventeenth century, it is likely that many masters were able to carry out this task for themselves.[30]

Some of the simpler procedures needed to prepare stuffs for the

market were, like yarn processing, a common function of weavers and their apprentices; workshops usually contained the 'screw presses for stuffs' and the 'frames to make up stuffs' which were used for the shaping of wares coming off the loom. In addition, some masters were evidently qualified to handle the more skilled finishing techniques of hot-pressing and calendering, thus bypassing the specialist craftsmen by then established in the city.[31]

Overall, the probate inventories relating to Norwich master weavers suggest that the manufacture of Norwich Stuffs, especially the ubiquitous silk and worsted mixtures, required not only expertise but versatility, calling for a comprehensive workshop system not found elsewhere.

The majority of weaving workshops were located in what might be called an industrial zone in the north of the city, underlining the integrated character of the trade. The weaving community was tightly knit, its members working in self-contained workshops but cheek-by-jowl with one another. Affinity was strengthened by kin connections, since many of the masters belonged to families with a long tradition of textile-working and their businesses were bonded by networks of relationship. The weavers, moreover, could maintain contact with the dyers and finishers who lived close at hand, and could keep abreast of changing consumer fancies through those local manufacturers who were familiar with the London markets. It was an organization in which easy communication and flexible working conditions would have favoured the exercise of initiative and ingenuity, encouraging the diversification which was the motive power behind the success of Norwich Stuffs.

Nevertheless, weaving was a precarious occupation, exceptionally vulnerable to downturns of demand in a notoriously fickle trade. In Norwich master weavers were self-financing; no capitalist clothier held the purse-strings. The whole system depended on an elaborate web of credit with, at its centre, the wool-comber or yarn-merchant, whose manipulation of worsted prices could, at times, exert a stranglehold over the industry. The Norwich master weaver, juggling his supplies of raw materials to keep his looms in profitable operation and having to find his own outlets for his finished wares, was dangerously reliant on steady sales, quick turnover, and favourable credit terms to maintain his livelihood. There is plenty of evidence of insolvency at all levels of the trade.[32]

One important aspect of the industry's organization was the strong marketing connection that had been established between some of the wealthier manufacturers and the London merchants. The practice of

direct sales had grown up in the sixteenth century when Norwich weavers had been in the habit of selling to stuff dealers from their own warehouses in the capital or from inns situated near to the terminus of the main trunk route from the Eastern Counties. It had been resolutely continued in the face of vigorous opposition from the Corporation of London, who argued that Norwich Stuffs, like all other woollen manufactures coming to London, should pass through the hands of the factors at Blackwell Hall. It may be a reflection of the prestige of Norwich and its major industry that the Privy Council upheld the manufacturers' case in 1638, conceding that the system of direct sales could continue and accepting that the diverse and complicated Norwich Stuffs were adequately searched locally.[33]

This valuable ruling established a principle and set the pattern of distribution to be followed for the rest of the century. It placed Norwich weavers in an impregnable position, absolving them from the payment of hallage dues at Blackwell Hall and the attentions of a chain of middlemen, and strengthening existing links between the local manufacturers and the London merchants. This may have had vital advantages for the trade in the buoyant post-Restoration years when London was not only the fastest growing centre of consumption in the country, but also the prime arbiter of style and taste, dictating preferences elsewhere.[34] London dealers were at the hub of the distribution network for the home market, and direct contact with them ensured speedy co-ordination of supply and demand, especially when backed up by a well-tried and apparently quick and efficient carrier service between the two cities.[35] Lewis Roberts was to write in 1700: 'This trade is chiefly managed in partnership between the London and Norwich merchants.'[36]

In fact, the term 'Norwich merchants' in this connection is something of a misnomer, since there is little evidence for the existence of a distinct stuff-merchanting class in Norwich.[37] The wealthy individuals who maintained well-stocked and fully staffed London warehouses were manufacturers. In probate documents they are always described as 'worsted weavers', never as 'merchants' or 'clothiers', presumably because the supervision of operational workshops in Norwich was regarded as their primary activity.[38] But whatever their nomenclature, these men can be seen as merchants in the sense that they were almost certainly buying up the wares of lesser weavers in the city and county to sell alongside their own products. They are likely to have played a key role in the chain of distribution, underpinning what was in many ways an unstructured and haphazard marketing system.

During the fashion-conscious years of the last few decades of the seventeenth century there seems to have been a sudden new awareness in the London textile markets of the commercial possibilities of Norwich Stuffs. Despite their long history they were hailed as recent innovations: 'Norwich Stuffs were never heard of till within these twelve years', declared a stuffs dealer appearing before the House of Lords in 1691.[39] It looks as if the widening range of silk and worsted mixtures being made in Norwich by this time were seen in London as a new line with the potential to meet the challenge of a profitable fashion boom. As novelties, they could create as well as satisfy a new and growing consumer market.

Who exactly were the customers who were absorbing the city's increasing output? Some contemporary writers, among them Sir Josiah Child, saw a hankering for elegant clothing spreading down the social scale. In his words: 'Formerly gentlewomen esteemed themselves well-clothed in a serge gown which a chambermaid would now be ashamed to be seen in.'[40] (The corollary is that a gentlewoman would wear stuff.) Sir Josiah's provocative argument probably overstated his case. Customers for Norwich Stuffs are likely to have been found, not so much among servant girls, as among the newly urbanized and socially ambitious minor gentry, with the addition perhaps of the wives of merchants and of a few of the wealthier yeomen.

Country landowners were rapidly developing a taste for town life, taking advantage of the greater opportunities for travel which the spread of private coach ownership afforded them. Many towns, including old-established incorporated towns, spa resorts, and small county towns, were becoming centres of entertainment and commerce, with amenities geared to gentry tastes and pursuits.[41] In this milieu clothes played a key part. The pressing round of town engagements called for a more extensive wardrobe than did a cooped-up existence in a country manor-house; and, of course, eye-catching gowns were part of the essential trappings of marriageable daughters, now exposed to a wider market. Also, and perhaps significantly, private coach travel, which underpinned the development of urban leisure centres, enabled women to participate more fully as personal shoppers.

However, any ideas about the identity of the consumers of Norwich Stuffs can only be speculative, as there is no way of knowing who actually bought and wore them. Literary works rarely describe clothing below the level of the wealthy nobility, and, similarly, museum survivals tend to be the cherished best gowns of the well-to-do. Probate

inventories, usually so informative about the possessions of the middle-income group, are unhelpful, as they do not as a rule include detailed descriptions of clothing. Such probate information as there is suggests that a gentlewoman or a merchant's wife would be more likely to own a stuff gown than the working spouse of a yeoman.

Some limited circumstantial evidence about possible purchasers may be found in the location of mercers supplying Norwich Stuffs. Gentry patronage was a strong stimulus to retail trading in many towns in the late seventeenth century, and mercers and drapers were among the most thriving and wealthy of local tradesmen.[42] At least one substantial mercer was present in all the larger towns, usually stocking small quantities of sophisticated silks and stuffs, some of the latter identifiable as probable Norwich products. Mercers were widely spread throughout smaller towns too and, most significantly, in the so-called gentry towns. The small Sussex town of Petworth will serve as an example.[43] Petworth was a fashionable place around 1700. The mansion of the Earls of Northumberland was adjacent to the town, and there was a high density of gentry residences in the vicinity. There was evidently enough custom to support three prosperous mercers supplying a range of textiles, including stuffs and silks. The 'worsted crape', 'worsted and half silks', 'camblet', 'callimanco', and 'damask and half damask' listed in Thomas Bysshe's inventory dated 1711 could well have been made in Norwich. Mercers of similar standing and offering similar high-class merchandise were to be found in other small towns which, because of their status as commercial, social, or diocesan centres, could be expected to be frequented by leisured society—among them Lichfield, Lincoln, Abingdon, Banbury, Buckingham, Shrewsbury, Ilminster, and Wolverhampton.[44]

The London mercers, as might be expected, offered the widest choice of Norwich Stuffs. They were in a different class from their provincial counterparts, not, like many of the latter, general storekeepers, but specialist businessmen, purveyors of high fashion, who dealt exclusively in dress materials and accessories for dress. It is interesting to find Norwich Stuffs among their expensive stocks of silks, brocades, and velvets, since this is confirmation that, despite their relative cheapness, the Stuffs were considered fashionable and saleable merchandise.[45]

While the principal business of the London mercers is likely to have been catering for the requirements of London residents and the hordes of visitors from the provinces, their trade-cards indicate that they were wholesalers as well as retailers.[46] The fact that the majority operated

from inn yards in the capital, giving easy access to the main long-distance coach and carrier services, suggests that they may have been an important source of supply for out-of-town mercers, although there is no direct evidence for this.

Indeed, the pattern of distribution of Norwich Stuffs outside the capital is very difficult to establish, partly because, in general, the mechanisms of seventeenth-century wholesaling have been little studied, but also because the exemption for Blackwell Hall eliminated what might have been a valuable source of records. Scraps of unrelated evidence show that the London connection, although the most important, was not the only channel of sale. There must have been many opportunist dealers, picking up stuffs as and when they could, either from the London warehouses, or direct from the weavers in Norwich by correspondence or through local agents, to resell at the great fairs or from temporary premises in provincial inns. The case history of Giles Pooley, described by T. S. Willan, illustrates the multifarious activities of one such dealer.[47] Daniel Defoe noted that enormous quantities of Norwich Stuffs were offered for sale at Sturbridge Fair (although his figure of £20,000 may be an exaggeration).[48] Travelling salesmen were evidently regular visitors to Bristol, at least by the early eighteenth century; their advertisements announce fresh consignments of Norwich Stuffs for sale at inn warehouses and also at Bristol Fair.[49]

Seemingly, the absence of resident stuff merchants in Norwich meant that local weavers had to rely on a miscellany of outlets for their wares. Marketing must have been a chancy and unmethodical business, heavily biased towards the London merchants and their dealings with a few wealthy manufacturers, and geared to a high level of consumer demand in the home market. Sales mechanisms lacked the structural framework to be found, for example, in Yorkshire, where there were established channels of communication between weavers, clothiers, factors, and merchants, and where goods were regularly displayed for sale in the local cloth halls.[50] This deficiency may have proved to be a fundamental weakness when the Norwich industry faced competition on the domestic front from imported Indian cottons and, to a lesser degree, from the penetration of Yorkshire textiles into the lower end of the market.

The spectre of serious rivalry brought a frenzied reaction from the city weavers—confirmation of the crucial importance of a strong home market for the well-being of the industry. It was the import of Indian cottons that was most feared, since they were attractive, cheap, and

practical, and found immediate favour as dress materials—an obvious substitute for light-weight worsteds. As calico became the rage at all levels of society, Norwich weavers, no doubt with justification, became alarmed at the looming danger to their livelihood within the city's over-specialized economy. The lack of progress in closing loopholes in protective legislation was much resented, and Norwich Corporation was in the forefront of a nation-wide campaign to lobby Parliament in 1719.[51] Feeling in the city ran high. Ladies wearing the detested calico were attacked in the streets and shops offering it for sale were ransacked.[52] But effective legislation, when it came, could not stem the tide for long. The challenge from Indian and, later, home-produced cottons (with the added threat from Yorkshire worsteds) was in the long term to force a change of direction towards exports, and the once dominant home market lapsed into second place.

NOTES

1. Corfield (1972), 263–310.
2. The detailed work on which this paper is based is described in Priestley (1985), 183–21.
3. UEA Bacon database, 4/7470. I am grateful to Professor A. Hassell Smith for allowing me to quote this entry.
4. In the preamble to the 1650 ordinance regulating the manufacture of Norwich Stuffs they are simply referred to as 'worsteds and other stuffs'. Firth and Rait (1911), 451–8.
5. Note Sir Josiah Child's distinction between them in Child (1693), 132–4.
6. Hudson and Tingey (1910), ii, pp. lxvi–lxx.
7. Ibid., pp. lxxviii–lxxxviii; James (1857; 1968 edn.), 104–19.
8. Gairdner (1873–5), ii. 235.
9. James (1857), 107–9.
10. Hudson and Tingey (1910), ii, pp. lxxv–lxxvii; James (1857), 101–4; Kerridge (1985), 46–9.
11. Ibid. 68–9.
12. Ibid. 50–1.
13. Allison (1955), 653–8.
14. NRO, MS 15950: 'Exceptions against the Londoners practize to bring us to a hall'.
15. NRO, Norwich MCB 20, fo. 235^{r}.
16. Fuller (1840), 488.
17. There was improvement for a time after the incorporation of the Weavers' Company in 1650. See n. 4.

18. HMC 17, *House of Lords MSS*, 1692–3, 37.
19. Morris (1949), 149.
20. A near contemporary description of the processes appears in *Chambers Cyclopaedia*, 1731, quoted by James (1857), 228.
21. Kerridge (1985), 55, 84–5.
22. James (1857), 166–7, quoting D. Defoe, *Review*, 20 Dec. 1704.
23. PRO, PCC, Prob 4/1789 and Prob 4/580.
24. Blomefield (1806), iii. 48; *CSPD* (1685), 363.
25. Priestley (1985), 185–7 and app.1.
26. *Journal of the Commissioners for Trade and Plantations* (Nov. 1718–Dec. 1722), 113.
27. NRO, Norwich Assembly Book, 1714–31, fo. 103.
28. Ibid., fos. 153, 153^{r}.
29. NRO, ANW 23/3/200.
30. An advertiser in the *Norwich Mercury* for 14 Aug. 1756 thanked 'all gentlemen who had employed him as a pattern drawer and loom mounter for over 25 years'. He specialized in 'flowered worsted weaving'. Since flowered damasks were extensively manufactured in the late 17th cent. it seems likely that the services of such craftsmen were available earlier.
31. NRO, INV 70/152.
32. Priestley (1985), 194–5.
33. Hudson and Tingey (1910), 259–66.
34. Wrigley (1976), 60–1.
35. Allison (1955), 79.
36. *The Merchant's Map of Commerce*, quoted by James (1857), app., p. 7.
37. On the evidence of Millican (1934).
38. See e.g. PRO, PCC Prob 4 4/580, 1789, and 3602.
39. HMC 17, *House of Lords MSS*, 1692–3, 37.
40. Child (1968 edn.), 7.
41. Borsay (1977), 561–99; Clarke (1984), 13–61.
42. D. Davis (1966), 147; Willan (1976), 99–100.
43. Kenyon (1960), pt. ii, pp. 92–5.
44. Lincoln: Lincolnshire Archives Office, INV 202/170; Abingdon: Berkshire Record Office, DAIA/196/135; Ilminster, PRO, PCC, Prob 4/8598; Wolverhampton: Lichfield Joint Record Office, John Hickman, 1701; Buckingham: Buckinghamshire Record Society, 24, No.150, p. 289. I am grateful to Mrs Nancy Cox for supplying me with information from her computer records about mercers in Lichfield, Shrewsbury, and Wellington, and to David Vaisey for the Abingdon reference.
45. See e.g. PRO, PCC, Prob 4/8070.
46. BM, Ambrose Heal collection of trade cards and shop bills. Other examples are held by the Museum of London and the Guildhall Library.
47. Willan (1976), 146–7.

48. Defoe (1928 edn.), 82.
49. Bristol Reference Library, *Farley's Bristol Newspaper, 1725 and 1726*. I am grateful to Trevor Fawcett for supplying me with this reference.
50. Wilson (1971), 55–6.
51. Rothstein (1964), 3–21.
52. Hudson and Tingey (1910), p. xv; Blomefield (1806), 437.

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