DEVELOPING AN INTERDISCIPLINARY APPROACH?
THE SKILLED WORKFORCE PROJECT

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The Skilled Workforce Project, or to give it its formal title, 'The Growth of the Skilled Workforce in Early Modern London, circa 1500–1750', is a three year research project, begun in January 1992 and based at the Centre for Metropolitan History, Institute of Historical Research, University of London.

The project's aim has been to account for the expansion of the range and quality of artisanal skills in London between the late fifteenth century and the late eighteenth century and to see what links could be established between the proliferation of skilled occupations and the development of new technology. The project forms one part of a research consortium whose collective imperative is to investigate the comparative basis of technological change across cultures and across historical periods to see whether it is possible to account for the marked propensity of certain places at particular historical junctures to become sites for the propagation and diffusion of new forms of invention and innovation in technology, art and culture more generally. In early modern European history this process of spatial and temporal clustering of technological and cultural innovation is usually associated with the growth of the late medieval Italian city states, and the subsequent spread of the ideas and resources of the Renaissance city to northern European metropolises such as Paris, the cities of the low countries and London.

In the course of the early modern period London was transformed from being an important if small European capital city (with a population of 50,000 in 1500) sited on the periphery of the main centres of trade, heavily dependent on the import of manufactured goods, into being the largest urban site in Europe, the fourth largest city in the world (with a population of over 675,000 in 1750) and the centre of an expanding and aggressive overseas empire, the major European hub for finance and commerce. Less generally acknowledged is that by the beginning of the eighteenth century London was the largest manufacturing centre in Britain (perhaps in Europe), with a continental reputation for the making of a wide variety of goods, especially a range of high quality and intricate goods, including clocks and watches, scientific instruments and navigational aids. In addition a whole new series of industries
developed in the London region during this period which, while not necessarily surpassing the reputation of continental counterparts, at least succeeded in satisfying domestic demand for similar goods in ceramics, glass, paper, furniture and silk manufactures as well as catering to an expanding colonial market. These changes were attended by a multitude of small scale innovations, minute alterations in the way goods were designed, made and marketed. Such innovations nevertheless took place within the context of diverse and slowly changing systems of production which saw the perpetuation of traditional forms of manufacture embodied in the guild milieu of independent handicrafts alongside the increasing use of out-work and workshop forms of production. At its height in the eighteenth century London earned the reputation of being ‘the Athens of the Artisan’.

The Seminar Series
Planning for the seminar series (five held at the Museum of London and one at the Science Museum) began by the drawing up of a list of individuals who were considered to possess specific knowledge or expertise relevant to the subject of the project. They included economic and social historians, historians of science, design historians, specialists in scientific instruments, archaeologists, museum curators and historians. In hindsight, the invited audience could have been widened to cultural anthropologists and to crafts people with an in-depth knowledge of the workplace and the ways things are made. The key aspect of each meeting was to examine object-based, archaeological and other forms of evidence in order to find out what could be learnt about the development and transmission of craft skills as well as the relationship between those skills and technological innovation in London.

One of the Museum of London’s education rooms was booked for the seminars. It was arranged in such a way that four or five tables occupied the centre of the room with chairs grouped around them. The material was laid out on the tables. Speakers were encouraged to talk from, in front of, or next to the objects which they had previously selected from the museum’s collections. Some items were quite small, so slides were prepared in advance. This allowed speakers to explain or refer to minute details of an object. An example of this was the examination of one of the Museum of London’s Tompion watches in the first seminar. There would have been no way that a seated audience could have seen the parts of the decoration of the watch case and the arrangement of the movement without the recourse to slides. Thankfully, in most instances, the material under consideration was fairly robust and large enough to be held up by the speakers and shown to the assembled group; specific relevant characteristics of form, colour and decoration could be pin-pointed directly.

Each seminar started with a short introduction from a member of the Skilled Workforce Project team. Invited speakers then
presented short papers of roughly ten to twenty minutes duration with the object-based evidence in front of them (if possible). Those attending the seminar were given time to examine and study closely the items after the presentation of the papers. The seminar ended with a general discussion about the themes and ideas which had emerged from the papers and from the objects on display.

**Themes and Questions**

Each seminar was designed around themes central to the project's concerns. In order to focus proceedings a series of questions was drawn up and pre-circulated. The seminars began with a consideration of the problems of interpretation, the nature of collections and the ambiguities of dating as well as the possible interrelationships between the study of material evidence and the study of written records. The second seminar went on to look at sites of production. Maps, plans and archaeological plot evidence were used to see what could be learned about the spatial contexts in which the skilled workforce of early modern London plied their trades. New sites of production on the periphery of London were also examined to see if the location and interior layout of such places could reveal anything about possible changes in forms of work organization and the division of labour. The third seminar was devoted to the transmission of skill through apprenticeship, the rôle of immigrants in the transfer of new techniques and what is sometimes called 'skills convergence', that is, the application of skills from established industries or technologies to new ones. An example of this from this period might be the ways in which elements of the skills of the medieval blacksmith and locksmith were carried over into the manufacture of clocks and watches.

Further sessions concentrated on the effects of increases in the division of labour and attempts at standardization on the exercise of traditional skills (leading in some cases, such as gunmaking, to progressive degradation of skills or 'de-skilling'), the use of two dimensional forms of design (such as pattern books), the application of natural philosophy and the rôle of institutions such as the Royal Society in disseminating information in areas such as metallurgy and chemistry, new sources of energy, furnace design and scientific instruments. At the end of the series it was hoped to build up an overall picture of the development of technology in early modern London and to identify the critical factors in the growth of the skilled workforce, comparing developments in London with other European towns and cities for this period.

**Academic Seminars at Museums**

In the past such gatherings in London would have taken place within an academic setting such as the Institute of Historical Research, to which museum curators would have been invited on an
ad hoc basis and would have been seen as the poor relations at the feast. Material evidence would be shown in the form of slides, a minor accompaniment to the proceedings. Such seminars with objects would be very difficult to host at a university. Considerable time and expense would need to be given to packing and transporting the objects from the museum or private collection to the university, not to mention the cost of insurance and the checking of security at the proposed venue. Such object-based seminars seem to be tailor-made for museums to undertake with secure premises and with the collections to hand. No major bureaucratic rules and regulations come into play about the number of objects which can be brought out of store or from the permanent display. Monday was chosen as the day for the seminars – the day that the Museum of London is closed to the public. This allowed for the denuding of some of the key displays in the galleries without inconveniencing the public. Objects were returned early next morning before the museum opened.

Workshop type events involving objects have been held at the Museum of London for quite some time. A small study and handling collection is permanently kept in the interpretation department and this is often used by the interpretation staff in project-based work prior to students visiting the galleries. Specialist workshops are held for the general public to focus on a particular collection or to add insight to an exhibition or display. Object-based evidence is quite commonly presented and displayed at archaeological seminars. However, museum curators have been slightly slow off the mark to arrange seminars involving a range of decorative art and social history material which addresses a particular theme or topic. Individual seminars on a specific maker, type of material or period of history are sometimes held. They have tended to be aimed at the general public, collectors or museum curators, rather than academics. Even these seminars often tend to make use of slides of objects rather than having the objects directly to hand.

It could be argued that an applied art or social history curator’s analysis of the collections in his or her care can be found in the permanent displays or temporary exhibition at the museum. The arrangement and grouping of objects in a meaningful way in terms of type, style or period of history can be seen as a statement of the curator’s intention. Things can become slightly blurred if an over-resourceful designer re-arranges the objects for the curator, deciding what object best goes together or balances with another object. Decorative art curators and social history curators could be seen as being the interior designers of the past in the present, especially in relation to the material culture of the past. The exhibition or collection catalogue is another medium for curators to explore the different ways in which objects can be interpreted and
analysed. Curators can feel threatened when an outsider, often an academic or a freelance consultant is brought in to devise an exhibition around a theme or period of history involving the museum's collections as its basis. Perhaps there is more mileage in developing creative partnerships between curators and outside institutions and individuals to explore the many different academic disciplines and specialisms relevant to material-based study. The skilled workforce project seminars certainly revealed the wide variety of approaches to object-based evidence.

Finally, to return to the object-based evidence and the different approaches and disciplines which can be brought to bear upon our understanding of the collections under a curator's care. The writing of catalogues and the arranging of exhibitions can be quite solitary tasks (though they can be team projects). Usually, they tend to be museum or 'curator-centred'. The various types of categories of information which are addressed such as form, colour, weight, feel, iconography, maker's marks etc, need to be set against the theorizing about the raw materials, production, retailing, style, place, use and re-use (re-use finally in a museum, or maybe objects are seen by some people as coming to the end of their life once they enter museums). Now, the disciplines of the economic and social historian, the historians of science, archaeologists, the design historians, cultural anthropologists and others have a worthwhile, probably an essential contribution to make on how curators interpret objects. Further events, seminars, conferences, exhibitions need to be arranged which tackle these issues (perhaps based around particular themes).

In this seminar series, the question of skill and innovation in the workplace has been the central point of discussion. However, there are many other similar types of themes (not normally on the main agenda of the applied art or social history curator) which would benefit from such partnerships of interdisciplinary discussion and argument.

_Problems of Developing an Interdisciplinary Approach_

Before going on to assess the positive results of the seminars it might be helpful for anyone else trying to organize a similar exercise to concentrate on the shortcomings of the series. Many of the problems encountered were engendered by the different methodological traditions of the parties involved; social and economic historians, decorative and applied art historians, curators and archaeologists, historians of science, all coming to the seminars with discrete professional and intellectual specialisms whose boundaries are sometimes difficult to transgress. Put bluntly it is sometimes difficult to get people to think in a different way than they normally do.

Decorative and applied art historians, concerned with internal stylistic changes, problems of classification, typology, provenance,
influenced in part by the demands of the contemporary decorative art market, tended to direct their attention towards identifying individual makers within their given field of expertise, concentrating on the best practice of the luxury end of the market. Comparatively little attention was given to diachronic accounts of the impact of technological change on methods of production and the organization of industry at a more general level. This specialization in particular sectors of the decorative and applied arts traditions, while producing fine detailed studies, placed limits on what could be said about the nature of change in early modern London as a whole. The limits of specialization are, of course, not confined to the decorative and applied art traditions of scholarship. A similar problem of 'internalism' exists in a number of domains of knowledge and scholarship, and to be fair it has be stated that all participants at least attempted to break through these disciplinary limits.

If it was difficult for specialists to generalize then it was equally true that generalists found it hard to engage in discussion with the attention to detail which is the hallmark of the best museum-based scholarship. Economic and social historians, concerned with giving generalized accounts of long term historical change, tended to be less interested in the details of material culture, and were often ignorant of the barest details of the ways in which artefacts were manufactured. Thus these contrary methodological influences meant that discussion of the objects tended to be somewhat askew. Detailed descriptions of a limited range of objects within a given specialism tended to get lost in later discussion of subjects closer to the hearts of economic and social historians but far away from discussions which were relevant to the objects on display. These difficulties seemed to be inherent in the language used when trying to describe the element of skill as embodied in the objects on display. For economists skill is a scarce resource, or a factor in the costs of production which is measured by the place it holds in the total costs of production. For historians of labour it is a collectively possessed property right, usually controlled by groups of men organized in guilds, journeymen's organizations and trade unions. Trying to get at these aspects of skill through an examination of objects proved difficult. Instead the aesthetics of the connoisseur seemed to provide the only language which could be deployed to describe the aspects of skill embedded in the objects on display. The term 'skill' is a peculiarly English cognate which the group had some difficulty defining. Is it an inherent trait or latent talent that runs in families, groups and individuals? What kind of a value judgement are we making when we describe an object as skilfully made? How much can the concept of skill as a socially constructed and culturally determined phenomenon be integrated with our descriptions of the technical basis and material forms of artefacts?
Coming up with working answers to these questions within the context of the series was problematical. Though the presence of objects from the past, rare, precious and everyday, exerted an enormous pull on the audience, empathizing with and understanding their makers was an elusive goal.

The active engagement with the material evidence from a past society was provoking from the point of view of the document-bound historian. This encounter with the past demonstrated the need for a fundamental reworking of the way in which historians see material objects. For the traditional economic and social historian material objects are a by-product of the effects of larger social and economic forces which they study. The objects are viewed as end results of such demand/supply effects such as the growth of demand in a nascent consumer culture or changes in the supply of raw materials and labour. This way of seeing material objects is being broken down by the growing body of historians working with and within museums and other collections, who have attempted to reverse this cause and effect relationship between social processes and material culture. Here the study of material culture comes first. Yet most of this work tends to begin with the study of material objects and their social context after the point of production, when the objects enter the ‘world of goods’ and become icons of exchange, representations of such cultural values as gentility, domesticity and pecuniary emulation. Greater emphasis could be given in the study of artefacts as material evidence of the skills and labour of those who made them.

The seminars thus cast up an abundance of material evidence for the development of artisanal skills in early modern London, though fitting this evidence into an overall picture of technological change proved an enigmatic task. Nevertheless certain generalizations emerged over the course of the series. The first was that the process of technological innovation was slow, small-scale and incremental. Technological change took place in the context of slowly changing patterns of work organization in which the primacy of economically independent artisans, working in a domestic setting, only very gradually gave way to integrated workshop manufacture made up of an increasingly subdivided but interdependent workforce. Innovation did not consist of dramatic discoveries and subsequent rapid diffusion characteristic of the period of the industrial revolution but instead the process of change was made up of step-by-step alterations in techniques, design and marketing methods which in important ways perpetuated earlier forms of production. These changes were often carried out by little known or anonymous artisans. Documentary sources reveal little about the exercise of their skills. Artefactual evidence presented at the seminars from excavated ceramic and glass finds from the London area in the sixteenth and seventeenth century, alongside better
preserved specimens from collections, showed a continuous history of minor attempts at copying foreign wares, such as glazed tin ware and façon de Venise glass. This emphasis on individuals exercising the skills of imitation points to another feature of this period which the seminars highlighted; the growth of new skills and the refinement of traditional handicrafts in London were crucially influenced by developments elsewhere. New technologies, new skills and new methods of marketing came to England via London through the movement of migrants, travellers and industrial spies. Technologies and the skills which produced artefacts were transmitted through face to face contacts between individuals and groups. Importantly it was in the nature of such contacts that they were not explicitly recorded in archival sources. Detailed presentations of artefacts thus helped build up a working chronology of the introduction and selective adaptation of imported technologies in ceramics, glass and metal ware, where a breadth of information found in the traditional documentary sources for the historian are lacking. Ultimately the difficulties encountered in the series may have been inherent in the subject we chose to study. For what came across forcefully in the series was the extent to which the exercise of manipulative skills has a tacit, unspoken element. This feature of skill emerged particularly in our discussion of the forms of training in artisanal trades. Such training relied on a process of learning by doing, of active engagement in the act of making, which in a sense defies the historian’s attempts at retrospective definitions. Only very rarely do we get a glimpse of this world. It is therefore perhaps not surprising that written records are relatively reticent on the attitudes of makers towards the objects of their creation. The challenge was to make artefactual evidence fill the spaces left by archival silence. The problems that the series encountered are the strongest argument for greater interdisciplinary collaboration.