

The Design Process in British Ceramic Manufacture 1750-1850.

Introduction

Any discussion of ceramic design would be incomplete if it failed to take into consideration the technical aspects of pottery and porcelain. I will, therefore, be introducing ideas based upon experiments undertaken in the course of my role as a museum professional (Keeper of Ceramics, Potteries Museum) and a close association with the ceramic industry of North Staffordshire. Indeed, I strongly believe that an understanding of how pots were made is important in providing, for example, an insight into factors associated with their identification, especially those that result from a knowledge of the materials available for their body and glaze compositions, the making practices in use at a given period or geographical location, and the market for which the wares were intended.

If there are two words that identify a coordinating theme in the work to follow they are prescriptive and opportunistic. Taking prescriptive first it is obvious that if an industrial designer is to realize a concept the manufacturing process has to equate with the idea. In other words design practice is less effective in a situation that permits unanticipated variation. An important facet of this relationship was the early designer's knowledge and control of materials, an association I will attempt to evaluate because skills in its practices were a necessary prerequisite for a prescriptive approach to manufacture.

Opportunism in production has a much longer history. I am using this term to identify the use of materials that often, without modification, made possible a desired effect. Typical of this approach was when the maker of, for example, slipwares in the seventeenth century used naturally coloured clays that, apart from the removal of decayed vegetation and grit, could be used in the process of creating trailed decoration. At the opposite extreme an enameller who created a palette capable of reproducing the natural colours found in flowers was being impressively prescriptive. In both these examples there is a clear emphasis on decoration. However, an ability in eliminating what the late Professor David Pye identified as the 'workmanship of risk' was often a required outcome e.g. from the standpoint of a vessel's capacity or surface treatment. That the latter demand was, prior to the invention of transfer printing, an elusive ideal is made apparent via the examination of certain products. As the range of possible examples is infinite I have chosen two significantly different items for comparison. For this exercise I am focusing on two pots decorated with a simulated marbled surface; see plates 1 and 3. The clays used for this purpose were in all probability chosen for their natural colour qualities when fired, colours that were probably not dependent on the use of oxide additives. Therefore, identifying the objects in these photographs with the term prescriptive is totally inappropriate in connection with the pattern on either piece because a repeatable configuration was almost impossible to pre-determine at the design stage. Ironically, perhaps, in view of its industrial origins, the body of the vase was thrown (a traditional craft procedure) while the earlier dish was moulded with the result that the form of the vase was less easy to pre-determine, in its every detail, than the shape and size of the dish. In his use of a mould the potter both dispensed with the need for a skilled thrower and concurrently introduced the opportunity for standardization in shape and size thereby anticipating aspects of the 'workmanship of certainty'. In developing the use of mould technology industrial potters were not only achieving a greater degree of standardization they were also facilitating developments that later resulted in mass production.

Although there is a clear emphasis on design/manufacturing practices in the British ceramic industry I have chosen throughout to refer to European and Oriental traditions; to have done otherwise could have led to an over insular interpretation of the subject. I have also possibly gone against the grain of more recent trends in ceramic history in making frequent reference to the career and products of Josiah Wedgwood (1730-1795), an emphasis which I believe is, nonetheless, justified because despite the inestimable number of words devoted to his wares and career there are aspects of what he achieved that have gone unrecognized, and have even been misinterpreted.

Another matter that perhaps invites an explanation is the apparent bias towards developments in Staffordshire. Put simply there is no other European ceramic-producing region that provides such a comprehensive body of evidence.

Chapter 1: The Nature of Ceramic Design

The history of design practice is often described in terms that suggest an almost standard procedure irrespective of the medium, the common denominator being the issuing of instructions, or a diagrammatic representation for the workteam to follow.¹ It will be argued that this blanket use of the word design is unacceptably simplistic because it fails to pay due consideration to the possibility that some trades and industries are more technically complex than others. For example, a comparison involving wood and clay will reveal that, given a certain level of technical knowledge, clay is more receptive to modification. A composition that is too plastic can be tempered by the addition of non-plastic materials, or a body that is not suitably white may be altered by the introduction of calcined flint. In contrast, while wood may be coloured by staining or, depending on requirements, 'bleached' with chemicals, the potential for radical alteration is far less than becomes possible when clay is combined with other materials.

While this particular comparison of characteristics might suggest that clay is more versatile than wood reference to other factors reveals that both materials possess advantageous and disadvantageous properties. Take an obvious difference between wood and clay that arises from the need to fire clay products under conditions that involve subjecting them to high temperatures in a potentially hazardous environment. Most traditional processes in cabinet making are, in contrast, carried out with hand tools and treatments over which the craftsman has a high degree of control. In examining this subject further additional differences become apparent.

The eighteenth century designer who worked with wood might have suggested the use of one species of timber or several thereby introducing a convenient flexibility in interpretation. There were, on the other hand, certain situations where optimum effect was dependent on the availability of varieties with a particular grain pattern and colour while hardness or a resistance to decay were important for more demanding applications. Such considerations apart it was generally possible to operate without the constraints that inhibited those with similar responsibilities for ceramics. The clearest illustration of these differences may be made with reference to pattern books for furniture or silver which do not include directions or specific recommendations.² Pl.14. This is not to suggest that every idea developed for pottery and porcelain was based upon a rigid and highly specific concept. It does, however, recognise the potter's greater dependency on experiments, tests, and chemistry in general. For a fuller understanding of the issues identified by such comparisons it is necessary that one differentiates between what I have chosen to identify as non-participatory design and prescriptive practices.

Prescriptive design is when the completed product realizes in every detail the originator's intentions, while non-participatory design covers a wider field with the emphasis on artistic as distinct from practical needs. In some instances the maker of a product adopted ideas from a source that was prepared without any ceramic intentions. For example, the subjects depicted in Italian istoriato maiolica were often taken from contemporary prints.³ Given that their primary function was to illustrate a text adaptation to ceramics was clearly outside the engraver's control, in other words we are presented with an example of non-participatory or indirect design. ⁴ Needless to say such sources played no part in aiding the complexities of ceramic production.

It must be said that identifying actual designs is somewhat complicated by the manufacturer's practice of compiling shape and pattern books.⁵ Pattern books served the purpose of providing a record of designs issued over what was often a long period,

and which could be referred to in the event of the wholesaler or retailer's need to re-order previously supplied products. There is no reason why records in this form could not have served more than one purpose given that they often include details identifying the glaze and colours used in any painted or printed decoration.

While a diagrammatic representation is the most usual version of a concept other methods of instruction and communication were occasionally necessary, especially in connection with the passing on of complicated details or in instances when the desired effect was not easily conveyed in a graphic form. Under these latter circumstances it might have proved necessary to include personnel in a supervisory role. In breaking down production into stages it is possible to identify three sectors of responsibility, the first being concerned with artistic skills and consisting of;

Modelling, free-hand painting, copper plate engraving followed by the scientific and technical practices that underlay the formulation and control of bodies, glazes, throwing, turning, pressing and other craft skills

In identifying these three groups of activities it is possible to attribute the method of direction to one of the following;

The provision of instructions in a diagrammatic form for the benefit of ware painters, gilders and pattern makers.

Written directions referred to when weighing out materials for the preparation of bodies, glazes and enamels.

Instruction by example involving personnel with technical or practical skills.

Uniting these different procedures was the specialisation of labour and separation of processes. A later chapter will investigate the relationship of design to production in greater detail. At this point it is appropriate to consider some of the measures adopted by potters to co-ordinate design with the means of production.

There were occasions when the working drawing possessed a value that was limited to the sketching out of directions for a single stage of the production process such as in connection with the preparation of a copper plate engraving. The factory owner, whenever possible, took advantage of any technique that reduced the potential for error, and inappropriate variation in the item being manufactured. This was achieved via what I identify as prescriptive practices e.g. slip casting in moulds and transfer printing. Alternatives to these production methods involved throwing on a wheel and hand painting. Both these skills fall under the heading of what the late Professor David Pye identified as the 'workmanship of risk'.⁶ It was in the manufacturer's interest to limit unacceptable variations that might result from free workmanship. For example, by the use of plaster-of-Paris moulds the potter was able to reduce the occurrence of variations in quality, form and capacity that might otherwise have resulted from procedures that were dependent on skill.

In working through the different stages in the production cycle it is possible to identify skills and practices that depended on the provision of diagrammatic instructions. It has been shown that ware painting and gilding were often guided by the use of drawings. However, the employee who worked with moulds or who applied transfer prints was far less likely to need diagrammatic or written directions. Even the ware painter was often assisted by instructions that went beyond the format of an idea outlined on paper.⁷

In a small workshop staffed by a few workers there was probably less need for detailed directions. However, an analysis based upon scale alone could prove misleading. There is an alternative approach to the subject that is likely to lead to a better understanding of design practice using technical complexity as a basis. For example, the making of a simple holloware form requires less detailed directions than

the production and putting together of an elaborate mechanical appliance. An engine consisting of numerous mutually dependent components must be prepared and assembled in a particular way if they are to function efficiently. In contrast, the functional requirements of a ceramic article are clearly less demanding and much less complicated. Perhaps more than any other single factor it is these differences in technical complexity that account for the marked variations in procedure we collectively term design.

We attach so much importance to design because the activity is associated with creativity and invention that, in certain cases, has reached and continues to achieve the designation of individual genius. Since the Renaissance the best designers have been accorded celebrity status, if only in retrospect.⁸ Status and authorship were often more important than any practical benefits brought to a project by the designer's contribution. The role in all areas of ceramic manufacture played by non-participatory design has already been identified. For instance, the maiolica painter's borrowing from contemporary prints drew on both the original artist's interpretation of a subject and the celebrity value that this association conferred.

The celebrity factor was not overlooked by potters during the eighteenth and nineteenth centuries. Josiah Wedgwood recognized the benefits to his reputation and products achieved through the freelance services of John Flaxman. In the following century Herbert Minton prospered via the publicity brought to his company through an association with some leading names in art and design whose contributions were essentially artistic rather than technical.⁹ These examples, plus references to engines and other mechanisms, highlight the great variations in procedure embraced by the word design. Clearly, some areas of the practice were purely artistic while others had a much greater relevance to technology and invention.

In adopting a subject from a printed source it was often necessary for the ceramic decorator to carry out modifications to it to render it applicable to particular format.¹⁰ Even pots from antiquity clearly called for judgement in the marrying of decorative subject matter to their respective forms. While, for example, ancient Greek red figure pottery was obviously created without the benefits of printed graphic imagery the actual exercise of spacing human and animal subjects to occupy the surface area of an amphora, kylix or krater involved judgement and a degree of risk.¹¹ Although it is not possible to attribute the readily apparent success in carrying out such procedures to an exercise involving drawing on paper it is obvious that some prior planning was necessary. In these instances problems were probably solved by making a fully realised pattern which not only introduced the opportunity for experiment but also led to the creation of a three-dimensional design prototype.

This suggested relationship between technical/graphic complexity and design contrasts with situations where potters were concerned with the production of simple wares such as those produced by rurally-located workshops. While their making practices were rarely documented it is possible that a new idea was made real in the form of a prototype thus avoiding the need for a design on paper.¹² Some contemporary studio potters prefer to carry out the creative process via throwing or modelling, an approach that has a long history even in the industrial sector. A letter from Josiah Wedgwood to his business partner, Thomas Bentley states:

'I have done a C- with the new sprigs in green and gold, and am very much mortified to find it does not look so well as I expected. The gold ground kills the green and gives the sprigs a kind of littleness which I must endeavor to get over.' ¹³