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### Colouring the nation

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# **Colouring the Nation: A New In-Depth Study of the Turkey Red Pattern Books in the National Museums Scotland**

SALLY TUCKETT AND STANA NENADIC

*The production of Turkey red dyed and printed cottons was a major industry in the west of Scotland, particularly in the mid to late nineteenth century. Although the extensive works were pulled down in the second half of the twentieth century, our knowledge of this industry is significantly aided by the survival of approximately 200 pattern books, now housed in the National Museums Scotland. These pattern books, examined along with business papers, exhibition catalogues and the Board of Trade Design Registers, are the foundation for a new study into the wider Scottish decorative textile industry. The ongoing examination of these pattern books has shown the variety and longevity of Turkey red dyed and printed patterns, as well as providing insights into wider aspects of the textile industry, including issues of design, manufacture and trade.*

## INTRODUCTION

In his systematic survey of manufacturing in Scotland conducted in the 1860s, journalist David Bremner included a detailed description of the Turkey red dyeing and printing industry in the Vale of Leven, Dunbartonshire. Upon visiting the works of one of the main Turkey red manufacturers, William Stirling and Sons, and seeing the textiles which were mainly intended for export, Bremner remarked that ‘the colours are somewhat “loud” and the designs peculiar’.<sup>1</sup> By this point the Turkey red industry was well-established in the west of Scotland, particularly in the Vale of Leven, and yet the Turkey red printed fabrics were rarely encountered in everyday life in Britain other than by the industry’s workers. Turkey red displays at the international exhibitions from 1851 onwards had meant that the fabrics were reaching a wider audience but even at the first of the Glasgow International Exhibitions in 1888, the Turkey red exhibits generated much commentary, as in this account from 26 September 1888:

On a first glance at the stand of Messrs Henry Marriot & Co, Manchester, one is struck with the peculiar pattern and look of many of the fabrics, and a near inspection reveals the fact that they are not intended for the home market. There are various coloured cottons fitted for the taste of the people of this country, but a large proportion of the case is taken up with goods for such markets as Australia and New Zealand, Brazil, West Coast of Africa ... etc. ... The case is simply a sample of much that goes on in the manufactures of this country. Goods are made and finished in a factory, the near neighbours of which ever rarely see them,

and are exported to the market for which they are destined, and only there seen by travellers who naturally look upon them as foreign productions.<sup>2</sup>

Manufactured in millions of yards and in a huge variety of designs, few of these colourful textiles survive today, other than in the form of samples and designs in pattern books.

Historians of textiles and dress have long recognized the importance of pattern books as sources. Notable examples include Pat Hudson's examination of the woolen industry in the north-west of England, Mary Schoeser's study of silk, and Wendy Hefford's work, which highlights the printed textile samples in the collections of the Victoria and Albert Museum.<sup>3</sup> Particularly pertinent to this study is *Andrinople: Le Rouge Magnifique*, a detailed and beautifully illustrated volume which examines the surviving Turkey red pattern books in the Musée d'Impression Sur Étoffes in Mulhouse, once a major centre for the industry, as well as other artefacts from collections across Europe.<sup>4</sup> More recently, Philip Sykas has produced a systematic survey of surviving textile manufacturers' pattern books in the north-west of England, and in doing so has highlighted the numerous pitfalls that beset any attempt to understand or interpret their often cryptic contents.<sup>5</sup>

Pattern books vary in character and type. For instance, books with patterns intended as models for public consumption were common in the eighteenth- and nineteenth-century furniture trade,<sup>6</sup> and textile designs were also sometimes published in book form in the later eighteenth century, though it was difficult to protect the copyright on designs.<sup>7</sup> The term pattern book can also apply to collections of designs for embroidery for domestic use by women,<sup>8</sup> as well as volumes of fabric swatches preserved by individuals as records of their own dress.<sup>9</sup> By the mid-nineteenth century, attempts to stimulate the textile export industry gave rise to a further subset of pattern book – the volumes of fabric samples collated by John Forbes Watson and published as *The Textile Manufactures of India*. These eighteen-volume sets were distributed to the major textile manufacturing centres in Britain and the Empire to encourage improved production, provide information on Indian markets and to show British manufacturers tried and tested Indian designs.<sup>10</sup> Furthermore, there are the textile patterns books that were kept by manufacturers as records of their designs, manufacturing processes or orders. These varied in character and purpose, as a catalogue maintained by the Norwich Textiles project reveals.<sup>11</sup> It is this final type of pattern book which is the topic of discussion here.

The project detailed in this article, a funded collaboration between the authors and the National Museums Scotland (hereafter NMS), is focused on 200 manufacturers' pattern books that were accessioned to the NMS collections in the 1960s on the demise of the United Turkey Red Company in Scotland, and which have been largely inaccessible ever since.<sup>12</sup> The article shows how close analysis

of the contents of pattern books, along with corroborating evidence from other sources such as business papers, exhibition catalogues and the Board of Trade Design Registers, can unlock some, if not all, of the secrets of these complex documents.

#### TURKEY RED IN SCOTLAND

The production of a colour-fast red dye that could withstand frequent washing and sunlight was a long-standing ambition of dyers in eighteenth-century Britain. Called 'Turkey red' because it originated from the Levant region, the original process, which was time-consuming and expensive, was based on the extraction of alizarin from the madder root, which was then fixed to the fibre using mordants of oil and alum, as well as a host of unsavoury ingredients such as sheep dung, bullocks' blood and urine. First introduced in the west in Holland and then France, variables such as climate and water quality were important for success.<sup>13</sup> Involving complex and often repetitive steps, cotton was the only fibre that could withstand the process which was, after numerous failures, eventually introduced in Manchester and Scotland at the end of the eighteenth century.<sup>14</sup> In Scotland, it was Frenchman Pierre Jacques Papillon, hired by David Dale and George Macintosh, prominent businessmen in Glasgow, who first established Turkey red dyeing in 1785. The partnership was based at Dalmarnock on the River Clyde but it did not last long and from 1797 Papillon worked from his own Turkey red dye house at Rutherglen.<sup>15</sup> Other manufacturers, who saw the potential profit in Turkey red dyeing and established works either on the River Clyde or in the Vale of Leven in Dunbartonshire, soon joined these initial ventures.

The Clyde works were substantial, but it was those in Dunbartonshire that flourished in the longer term. Abundant clean water from the river Leven and the open, available space on south-facing hillsides had attracted textile manufacturers, particularly bleachers, since the eighteenth century. William Stirling and Sons originally came to the Vale as bleachers and calico printers, before establishing themselves as Turkey red printers in the early nineteenth century, bleaching, dyeing and printing their cloth at the Dalquhurn and Cordale works from 1828 onwards.<sup>16</sup> Their main rivals in the Vale were two firms run by brothers John Orr Ewing and Archibald Orr Ewing. John, the elder, had trained as a clerk for a firm which handled Turkey red cloth. He began manufacturing Turkey red dyed and printed cottons at the Croftengea works in the Vale of Leven in 1835, under the name of John Orr Ewing and Co.<sup>17</sup> He appears to have done so well that he sold out to his partner in 1845, but he returned to cotton printing in 1860 and once again traded under the name of John Orr Ewing and Co. The firm was based at Croftengea and Levenfield which later became known collectively as the

Alexandria works. Archibald, the younger of the two brothers, had trained at Croftengea ‘in the mysteries of colour making and calico printing’ and then set up his own business in 1845, the same year that his brother first retired.<sup>18</sup> Archibald Orr Ewing and Co. was based at the Levenbank works on the other side of the river to his brother’s factory, producing dyed and printed cloth, and later also dyed yarn at the Milton and Dillichip works.<sup>19</sup> Although there were numerous other firms in the second half of the nineteenth century, these three were the main producers of Turkey red dyed and printed cloth in Scotland and also among the largest of any businesses in terms of employment and turnover. As well as their massive manufacturing premises in the Vale, all had warehouses and offices in central Glasgow, contacts and agents in Manchester, and agents across the globe who acted as middle men. Each firm produced plain dyed Turkey red cloth and Turkey red dyed cotton cloths with designs produced through discharging and printing. The range of these designs was considerable and they were often aimed at specific foreign markets, such as India from the middle of the nineteenth century onwards, and East Asia by the end of the century.

The late nineteenth century was a highpoint for the industry in terms of output, but also saw increasing foreign competition.<sup>20</sup> India, one of the biggest markets for Turkey red manufacturers, was building its own modern textile industry and the production of alizarin, which had been synthesised in 1868, was monopolised by German chemists.<sup>21</sup> In 1898 William Stirling and Sons, John Orr Ewing and Co. and Archibald Orr Ewing and Co., along with Alexander Reid and Sons of Milngavie, amalgamated to form the United Turkey Red Co. Ltd. (UTR), in an effort to offset the damage to their export market by protectionist tariffs introduced by the Indian government.<sup>22</sup> The UTR continued to produce dyed and printed cottons, although by the twentieth century the original Turkey red process was increasingly being replaced with synthesised red dyes and other colours.<sup>23</sup> By 1961 markets had shrunk, the UTR could not compete and they were taken over by the Calico Printers’ Association (CPA), resulting in the closing of the works in the Vale of Leven and the disposal of surviving plant machinery. At a time when industrial and business archives were not necessarily considered a high priority for preservation it was inevitable that some of the information about the industry would be lost.<sup>24</sup> Fortunately, much has survived and has been divided amongst various institutions across the country. Some of the business papers were deposited in the collections of the Scottish Business Archives at the University of Glasgow,<sup>25</sup> while a number of pattern books for designs were taken to Manchester by the CPA and have since found a home at the Society of Dyers and Colourists in Bradford.<sup>26</sup> The NMS acquired the bulk of the older extant pattern books in 1962.<sup>27</sup>

The NMS Turkey Red Collection consists of 200 bound and unbound pattern books – some no more than booklets with a couple of designs, others containing hundreds of fabric samples – plus a large number of loose textile samples of various sizes mounted on card. Many of the books are duplicates containing exactly the same patterns and numbers, which suggests that they were used simultaneously for reference in different parts of what were extensive warehouse and manufacturing complexes. In all there are approximately 40,000 items in the collection, consisting of Turkey red dyed and printed cotton samples, designs painted or drawn onto card, designs drawn on tracing paper, strike-offs or block printed proofs on paper,<sup>28</sup> and some later examples of synthetic dyes and prints. The condition of the pattern books and the individual samples varies considerably. Some pages have been removed from their original binding, leaving them vulnerable to damage, while the bindings that have survived have become fragile due to the combined weight of the leaves and samples. Some of the pattern books were intended as ‘show books’ for potential customers – such examples have slightly larger fabric samples which give a better idea of what the finished product would have looked like, as well as having smart gilt-edged labels. These books are in the minority, however, and it is likely that most of the books were used as manufacturing rather than marketing tools, as indicated by technical notations such as codes for the cloth types available and cylinder sizes and numbers, and by the fact that the samples are not always the best examples, many having skewed alignments. Although covering over a hundred years of textile printing history from the 1830s to the 1940s, the majority of volumes and the designs can be dated to the second half of the nineteenth century, reflecting the peak of production for Scottish Turkey red dyed and printed cottons.

Upon its arrival in the museum in 1962, the collection was examined by Margaret Swain, honorary consultant to NMS, who created a preliminary, partial catalogue of the collection and published her initial findings.<sup>29</sup> Over twenty years later, Naomi Tarrant, then the NMS costume and textile curator, published an important article providing further details on the collection and a history of the industry in Scotland.<sup>30</sup> This previous work has been vital to our project’s understanding of the collection and one of the primary aims of the new study has been to complete the catalogue started by Margaret Swain in 1962. This has entailed a close examination of each pattern book and its samples to provide a basic description of contents and condition, as well as recording any contextual information obtained from accompanying labels or annotations, which provide details such as the type of cloth used, the name of the design, or the intended market for the finished product.

The manufacturers tended to categorise the books according to the main printing method that had been used for the patterns within each book. Turkey red firms employed a number of printing

methods, often using multiple techniques on a single piece of cloth. Block printing, cylinder printing, lead plate printing, copper plate printing and flat press or flat bed printing are all represented in the NMS pattern books. A smaller number of pattern books were categorised according to the intended use of the textiles – such as domestic furnishings, handkerchiefs and border or filling patterns for use in different combinations for saris and scarves.<sup>31</sup> (Fig. 1) This categorisation was used as the basis for the preliminary catalogue in the 1960s and has been maintained and added to as the current cataloguing progresses. To these categories can be added a smaller group of shipping order and home order books which contain textile samples and details of production costs, including labour and dye costs, for specific bulk orders although not, unfortunately, any details of who had placed the order. There are a number of miscellaneous volumes including a volume of designs submitted by William Stirling and Sons to the Board of Trade in London in the 1890s and some early twentieth-century laboratory books containing dye recipes and (now cryptic) trial information. Aside from the pattern books there are also loose textile samples from smaller firms, such as Todd and Co. and Robert Alexander and Co., both of which were taken over by John Orr Ewing and Co. in 1860.<sup>32</sup>

[Figure 1 here: quarter page]

This basic categorisation means that in most cases it has been possible to ascribe some general production information to each pattern book, such as whether it contains cylinder patterns or hand block patterns. But there are many problematic gaps, including accurately identifying which of the firms produced or used each pattern book before it became the property of the UTR in 1898. Just as the Turkey red processes used by each firm were fiercely protected, so too were the patterns. Competition between the Vale of Leven firms was brutal, with much copying and theft of designs among the rivals. In 1877, for instance, John Orr Ewing and Co. accused William Stirling and Sons of stealing a design of theirs. John Matheson Jnr., one of the partners in William Stirling and Sons, defended his firm by saying ‘It has been the Custom as long as I remember for samples of Dyeing and printing to find their way from one work to another. As a matter of fact this is a common practice amongst the Vale of Leven Works, and certainly not less so in that of Messrs John Orr and Co.’s’.<sup>33</sup> Knowing that such design espionage existed makes it harder to definitively say if a pattern book belonged to one or another firm, but some progress has been made.

John Orr Ewing and Co. was the largest of the three main enterprises<sup>34</sup> and, not surprisingly, the largest number of the identifiable pattern books – forty-nine in all – can be positively linked to this firm. Some have been identified from small stickers attached to the designs which provide extra

information on the sample, such as cylinder numbers or cloth type to be used. Other books have been identified through duplicate pattern books containing identical patterns and pattern numbers. The John Orr Ewing books include thirteen of the home order and shipping order books mentioned above, which contain fabric samples and information regarding the production and manufacturing costs for each order recorded. In total, twenty-five per cent of the NMS pattern books can be firmly attributed to John Orr Ewing and Co.

Five of the pattern books can be linked with William Stirling and Sons, including the largest volume in the collection dating from 1893–1897, containing fabric samples and certificates for registered designs sent to the Board of Trade. The Board of Trade Design Registers, held at the National Archives, London, and dating from 1842 onwards, hold designs submitted by companies and private individuals who hoped to protect their design by placing it under copyright. All three of the main Vale of Leven firms submitted designs for copyright protection and research is ongoing to determine the number and frequency of designs submitted by each firm before the creation of the UTR in 1898.

At this stage only four pattern books have been identified as belonging to Archibald Orr Ewing and Co., along with a number of loose textile samples separated from their original bindings and which include some of the earliest examples of Turkey red printing from the late 1840s. Two of the Archibald Orr Ewing and Co. pattern books have been identified by cross-referencing with designs from 1879 held in the Board of Trade Design Registers.<sup>35</sup> (Fig. 2) With twenty-six of the pattern books post-1898 creations and thus the property of the amalgamated UTR, this means in total, on present research, just forty-one per cent of the NMS volumes can be securely connected with a specific Turkey red manufacturer.

[Figure 2 here: full page]

Dating the pattern books has been a further challenge to understanding the collection but knowing the history of the manufacturers involved can be helpful in placing a pattern book within a particular timeframe. William Stirling and Sons, for instance, started Turkey red dyeing in 1828 and before this were involved in bleaching and other types of printing.<sup>36</sup> The books connected with John Orr Ewing and Co. could not have been created until after 1835 and those of Archibald Orr Ewing and Co. are post-1845. As the UTR ceased trading in 1961 it is safe to say that this was the latest date for any of the books. However, changes in dyeing processes and the collapse of foreign markets means that the majority of the Turkey red pattern books were created before the First World War.



Earliest possible start dates for some of the books can be established by details contained in the bindings, including local stationers' labels that can be crosschecked with business records or local Post Office directory entries for those types of firms, many of them short-lived.<sup>37</sup> In some cases dates have been attached to individual patterns and samples; cylinder patterns often include labels or notations which give the dates the cylinder was in use, offering some sense of the relative market success of the different designs, as well as the dates of production. Dating, however, is complicated by the long-standing popularity of many patterns, especially those intended for the Indian market, where designs based on cultural and traditional preferences were thought to be less likely to change than those intended for fashionable British tastes.<sup>38</sup> The shipping and home order books are the only ones in the NMS collection which are consistently dated and it has been possible to match some of the samples from these books with other pattern books: for example, a handkerchief design with a black dog's head overprinted on a red and white ground was first produced in the early 1860s and it also appears in two of the home order books dating from 1872 and 1873.<sup>39</sup> Continued close scrutiny of the books and textile samples, and the use of other sources such as the Board of Trade Design Registers and other business records, will doubtless generate further secure dates and firm attributions in due course.

#### INTERPRETING THE PATTERN BOOKS

The history of the Turkey red cotton industry in Scotland can, of course, be told from business records but, as our project is showing, close analysis of the pattern books in conjunction with other sources casts a new light on the industry. Although the shipping and home order books provide frustratingly little detail on the source of the orders or specific information about the intended markets, they do include indexes in the front of each volume detailing the types of printed fabric produced and in some cases, their intended use. Many are listed as 'garment' fabrics— a term used to indicate a dress fabric as opposed to a furnishing textile – including five-colour border garments, fabrics for *cholis* (blouses worn under saris) and fabrics for yellow and black garments, with a note on the printing method used. Each order lists the order number, the number of pieces required, the style (often including a swatch of the fabric), the cost of printing, the dye costs and the labour costs. Such information has great potential for understanding the economics of the industry.

The global markets for Turkey red dyed and other printed cottons, and the importance of India in particular in both the rise and fall of the industry, is well demonstrated by the pattern books, confirming but also enhancing what is known from business records. One book, belonging to William Stirling and Sons, is named 'Bombay Patterns' and dates from 1853 to 1869.<sup>40</sup> It contains textile

samples and notes copied from agents based in India who provided the company with information and advice about the subtleties of the Indian market and remarked on designs that had been sent out to India for ‘market-testing’ in advance of production. In 1859, a design painted on card showing images of peacocks, cows being milked by women in saris and men in eastern dress was sent by William Stirling and Sons to one of their agents in Bombay. (Fig. 3) The design was returned to Scotland and logged into the Bombay pattern book with the brief remark ‘unsuitable’ and as far as can be gauged, it never entered production. No further explanation emerges for what made the design incompatible with the Indian market – perhaps it was the image of the cow which offended religious sensibilities, or the proximity of men and women – but the exchange supports David Bremner’s observation made in the 1860s that Scottish designers were bound by ‘conventional rules’ and had ‘no scope for the creation of original patterns.’<sup>41</sup>

[Figure 3 here: half page]

A further illustration from the ‘Bombay Patterns’ demonstrates the lengths to which firms went to obtain a profitable design, including copyright infringement and outright industrial espionage. Many of the samples sent to Stirling and Sons were initially produced by their rivals in the Vale of Leven and in Manchester; each sample came with information about who made it, how popular it was and how much it was selling for – the implication being that Stirling and Sons would do well to copy popular designs.<sup>42</sup> It is no wonder that these firms were frequently locked in bitter legal disputes with one another, or that they jealously guarded their workers, in some cases threatening to sack whole families if one member intimated their wish to leave.<sup>43</sup>

The importance of the Indian market for the Scottish Turkey red industry is evident in the predominance of Indian or South Asian inspired motifs and patterns in the NMS pattern books. When David Bremner described the patterns produced by William Stirling and Sons in the 1860s he noted that:

The dress-pieces made for people of the Hindoo religion have a broad border of peacocks round the skirt, the upper part bearing a spotted or diaper pattern. The groundwork of all is Turkey red, but the birds and other designs are produced in blue, yellow, and green. The Mahometans consider it sinful to try to imitate nature too closely; and though peacocks figure in the designs prepared for ladies of that faith, they are drawn in the rudest fashion and worked out in mosaic. None of the designs of these Indian garments would find admirers in this country.<sup>44</sup>

The 'mosaic' design mentioned by Bremner in such disparaging terms was an imitation of the ancient craft of tie dyeing. In the Scottish fabrics, stylised patterns were made up with mosaic-like small squares produced through discharging and printing on the dyed red cloth, rather than the traditional and highly labour-intensive method of resist dyeing (or tie dyeing) which is still seen today in Indian craft textiles. There are vast numbers of imitation tie dye patterns in the NMS pattern books in figurative, geometric and abstract formations that would have been suitable for the Hindu and Muslim customers identified by Bremner. (Fig. 4) Such patterns mainly date from the 1860s onwards but there are some earlier examples. Other popular patterns for India include variations of the so-called paisley cone, small floral motifs which were common in the filling patterns, animals such as the peacock and the parrot, and geometric or abstract patterns such as the 'wave', based on the *leheria* tie dye technique.<sup>45</sup> The use of Indian place names for individual designs further points to the significance of this market as well as hinting at more precise destinations for the products. Lucknow, Surat, Shoolapore (now Solapur) and Delhi patterns are just some of the names listed in the pattern books.

[Figure 4 here: full page]

The Indian market was the mainstay of the Scottish Turkey red industry until the end of the nineteenth century, but manufacturers, conscious of growing international competition, were constantly seeking alternative markets, and this is reflected in the pattern books for the last twenty years of the nineteenth century. A cylinder-produced design from the 1880s, for instance, depicts a lion holding a sabre, with a sun rising over the lion's shoulder. These were the national emblems of Iran's Qajar dynasty and point to the likely destination of the finished fabric. There are several patterns that can be linked to the opening of the Suez Canal in 1869, for both the Egyptian and Turkish markets, and to celebrate the event at home with commemorative handkerchiefs and tableware. The Scottish firms also targeted the East Asian market. The second half of the nineteenth century saw a growing exchange of ideas, designs and styles between Japan and Britain, with much of the initiative being driven by Glasgow businessmen, particularly in engineering.<sup>46</sup> In 1878 the City of Glasgow received ceramics, furniture, lacquer ware, textiles and paper from Japan, in return for industrial samples and knowledge.<sup>47</sup> Most of these items, which included woven silks and painted fabrics, were put on display in the Glasgow Corporation Galleries from December 1881 to April 1882 and were viewed by large numbers of students from the Glasgow School of Art.<sup>48</sup> The influence on the Scottish Arts and Crafts movement is certain. Whether any of the Turkey red entrepreneurs or their designers also visited the exhibition is unknown, but East Asian styled designs do appear in the NMS pattern books within a few years of the

exhibition. They include plain red grounds with various white-stencilled designs of waves, bridges and oriental writing. More elaborately coloured designs include one with a samurai leaping in the air, and one depicting an archer taking tea. (Fig. 5) Chinese motifs also appear in a design painted on paper dating from 1888, comprising two three-clawed dragons and two golden pheasants, placed in a central motif surrounded by stylised butterflies on a red ground.<sup>49</sup> All three emblems were commonly found in imported Chinese textiles – the dragon symbolic of the imperial court and government officials, the butterfly signalling joy and the golden pheasant representing beauty and fortune.<sup>50</sup> It is uncertain from the pattern book evidence which of the three Scottish firms produced this design, but sales books kept by Archibald Orr Ewing and Co., which are now housed in the Scottish Business Archives, Glasgow University, show exports to China and Japan between 1895 and 1898.<sup>51</sup> The other firms probably also exported to East Asia. A further significant market was Indonesia, where products were still being sent in the early twentieth century. A relatively late pattern book, which was in use from 1906 until 1930, contains designs for Indonesian sarongs and ‘slandangs’ or selendangs.<sup>52</sup> Similar patterns to these appear in earlier pattern books and a sales book of William Stirling and Sons from the 1880s, listing merchants in Batavia (present-day Jakarta), shows that the trade with this market had been established in the nineteenth century.<sup>53</sup>

[Figure 5 here: quarter page]

Despite Bremner’s claims that the Scottish Turkey red industry produced textiles for which there were few admirers in the home market, even a passing survey of the NMS pattern books reveals many patterns that were suitable for the British and European consumer, which suggests that these markets were not as insignificant as commonly thought. Numerous floral shawl and handkerchief designs, for instance, would not have looked out of place in a British woman’s wardrobe or within the British home. Similarly, the designs which show an East Asian influence would have been fashionable in Britain at a time of growing interest in China and especially Japan, which can be seen also in other areas of luxury production for the British market, including textiles, silverware and ceramics from designers such as Christopher Dresser.<sup>54</sup> Owen Jones’s *The Grammar of Chinese Ornament*, published in 1867, was one of many devices that raised awareness of Chinese motifs for use in domestic furnishings. Imported Chinese embroidered silks were out of the range of most consumers, but at a time of rising living standards in Britain and more disposable income to spend on domestic comforts and decoration, ornate Turkey red dyed and printed cloths in imitation of embroidery met this demand. Indeed, Turkey red displays at the great industrial exhibitions of the later nineteenth century show a

new stress on the domestic home wares market and a shift towards the emulation, through printed colour, not only of luxurious Chinese embroidery, but also of luxury home-produced textiles such as linen damask.<sup>55</sup>

Household furnishings were a major and growing dimension of the Scottish Turkey red 'home' market by the later nineteenth century and seven of the NMS pattern books are listed as 'Two Red Furniture' by the original manufacturers. The two-red process produced exactly what it described – two shades of red on one piece of cloth, one shade being the typical dark red which was associated with the Turkey red process, the other a lighter pink shade, giving an imitation of the shimmer achieved with damask. (Fig. 6) These two reds were also commonly used in patterns that incorporated white and/or yellow floral designs in imitation of fashionable glazed chintz. From the 1870s Turkey red dyed and printed fabric was frequently mentioned in newspaper advertisements placed by drapers or furniture retailers as suitable for home furnishings. There was even mention of Turkey red-dyed lace curtains, alongside tablecloths and bed covers, aprons and dusters. British retailers, such as Booth and Fox, who sold down quilts and skirts made of Turkey red dyed and printed fabric, emphasised the bright, bold colours and the washable and durable nature of the fabric as selling points.<sup>56</sup> This, along with exhibition displays and the evidence supplied by the NMS pattern books, all suggest that Turkey red printed cottons were a now underappreciated feature of the furnishing and decoration of Victorian and Edwardian homes.

[Figure 6 here: quarter page]

Another often overlooked product for the European and British markets were the cheap and fashionably designed handkerchiefs, which were produced throughout the life of the industry, and were manufactured in vast numbers in other forms of printed cotton in the eighteenth century. These handkerchiefs were a variation of the larger bandannas, which also feature in the NMS pattern books. Bandannas were square pieces of hemmed cloth that had been dyed red with a simple pattern of white circles, diamonds and striped borders discharged from the cloth by a press. Henry Monteith and Co., based at the Dalmarnock works on the Clyde, was perhaps the most famous for producing bandannas. According to an account of 1831, Monteith and Co. had perfected a semi-mechanised discharge process to the extent that sixteen presses could produce 224 items every ten minutes.<sup>57</sup> Bandannas were an export staple for the Scottish Turkey red firms, who sent them to Europe, Indonesia, the West Indies, and North and South America,<sup>58</sup> where they were used in numerous ways according to local fashions and conditions – on the head, as neckwear, as slings for carrying babies or for wrapping and carrying

goods. They were also common accessories in British working-class wardrobes. In 1846 an unidentified woman who had drowned in the river Clyde was described in the local press as wearing a lilac printed bed gown, a striped drugget petticoat and a Turkey red handkerchief, or bandanna, around her neck.<sup>59</sup> Bandannas remained popular into the twentieth century, with one UTR worker in the 1930s recalling that they were popular as working wear among the male factory hands who made them, worn as neckerchiefs to absorb sweat.<sup>60</sup>

In addition to the large bandannas, the NMS pattern books from the 1860s onward include a number of complex figurative handkerchief designs, many with images of dogs and horses, recreating nostalgic or bucolic hunting scenes reminiscent of book illustrations such as those by John Leech for the Surtees 'Jorrocks' novels in the 1850s. (Fig. 7) Handkerchief designs often commemorated a particular event or prominent individual. For the Great Exhibition of 1851, William Stirling and Sons produced a Turkey red handkerchief showing the Crystal Palace and motifs appropriate to the themes of art, industry and the world. It was reported as being sold for such a small sum that 'nothing but the sale of thousands of yards ... can reimburse the manufacturer'.<sup>61</sup> In short, it was a loss leader intended as much for advertising as for profitable sale. Examples of commemorative handkerchiefs from the NMS collection include a design to celebrate Queen Victoria's Golden Jubilee in 1887, intended for both the British and Empire markets. There are also handkerchiefs with images of military heroes Admiral Dundas and Marshal St. Arnaud, produced in the late 1850s to commemorate the end of the Crimean War. These comprise of large white areas discharged from the red ground and portraits based on well-known newspaper images of the two men overprinted in black, probably with a copper plate. John Orr Ewing and Co. produced these and several other designs to mark Crimean battles and successes. Unlike the ever-popular paisley motifs and imitation tie-dye patterns, the commemorative handkerchiefs, though highly designed and sophisticated, were ephemeral and aimed at specific audiences at particular moments in time.

[Figure 7 here: half page]

The study of the pattern books conducted so far has confirmed our understanding of the extensive export markets of the industry, as well as highlighting the hitherto little acknowledged domestic market for Turkey red dyed and printed cottons. Further examination of the books and the corresponding sources will hopefully shed further light on the latter topic in particular.

Bremner's assertion that Scottish manufacturers were aware of the cultural demands and design conservatism of the various foreign markets they supplied has become a commonplace in studies of the Turkey red industry.<sup>62</sup> The 'Bombay Patterns' book in the NMS collection shows how traditional Indian designs were collected and recorded, whilst the popularity of Owen Jones's *Grammar of Ornament*, published in 1856, or John Forbes Watson's *The Textile Manufactures of India*, published and distributed ten years later, both highlight the availability of a certain type of design information in Britain. Copies of Forbes Watson's *Textile Manufactures of India* were sent across the country to various bodies, including the Industrial Museum of Scotland in Edinburgh and to both the Glasgow and Paisley Chambers of Commerce.<sup>63</sup> Indeed, the Glasgow Chamber of Commerce announced the arrival of the volumes in the press in October 1866, as well as advertising the conditions and procedures for viewing them, which involved a letter of recommendation from a member of the Chamber, whose numbers included the great textile manufacturers.<sup>64</sup> Many of the patterns in the NMS collection show marked similarities with those in Forbes Watson's volumes, but as the 'Bombay Patterns' predate Forbes Watson, and include many similar designs, it is just as possible that the NMS patterns came directly from India via company agents. Certainly there is much evidence of 'tradition' influencing design practice, yet analysis of the NMS pattern books reveals much more variation in design than is commonly supposed. Agents in India, for instance, gave accurate information on designs for which there was a known historic and culturally-specific market, but they also constantly demanded and tested new designs for their established markets, as well as seeking out new potential customers. Furthermore, none of the Asian markets was static, though little is known as yet as to how fashion innovation was promoted on the ground. Asian populations were also growing and migrating, leading to diasporic shifts that yielded new opportunities for British manufacturers and for the middlemen they employed to distribute their goods.

Designers have always been crucial to any new product development, but, apart from the 'Bombay Patterns', the rest of the collection yields very little information on this subject. Indeed, there is some question over whether or not the Scottish Turkey red manufacturers were actually very aware of the symbolic meaning of some of the designs they used, or, for that matter, whether or not they cared about such things.<sup>65</sup> Designers and managers may have known of the subtleties of meaning, but those working on the production line almost certainly did not. An illustration is furnished from surviving recollections by one of the pattern block cutters for Archibald Orr Ewing and Co. in the late nineteenth century. A particular design that he remembered working up was known as 'The King' on the

production line, because it included a human figure with a crown, but in reality, and unknown to the local workers, this was a female figure dressed in a sari.<sup>66</sup>

Names of designers have been found in other collections, such as in a pattern book held by West Dunbartonshire Council, which contains a peacock design with a notation saying 'Designed by James Lindsay', followed by a further reference to his son, John Lindsay.<sup>67</sup> Like other textile manufacturers who procured their designs from London or even Paris, the Turkey red manufacturers would also have purchased some of their designs.<sup>68</sup> In April 1898, after the creation of the UTR, the Cordale plant which was still operating under the name of William Stirling and Sons, paid £4 10s in cash for designs.<sup>69</sup> It is possible that many of the designers were divorced from the production line, based in Glasgow and perhaps also abroad in India, where by the mid-nineteenth century there were Scots-founded technical colleges in places like Madras. The fine end of the Scottish textile industry, such as damask linen, did make use of well-known freelance designers such as Joseph Paton, father of Scottish artist Sir Noel Paton, and Agostino Aglio, who mainly worked for the Manchester firms.<sup>70</sup> But the Turkey red industry provides no evidence so far that this was the practice in that sector, though some of the designs are very fine and intricate. The chances are strong that the Turkey red industry made use of women designers, who were a significant group in the output of design students from the several Scottish art schools, and were probably employed as freelancers.<sup>71</sup>

Looking at what was produced, much of the pattern book evidence points to design conventions that focussed on copying and adapting rather than innovation. Such design copying was probably true for the overseas market and also for those designs intended for home consumption. Hunting scenes based on popular book illustrations, as mentioned above, scenes of Crimea battles or portraits of celebrities such as famous generals, all appear in the NMS pattern books, having been produced by designers influenced by commonly available popular images viewed in books or magazines or print sellers shops. Whether they did this to the order of manufacturers, or speculatively in the hope of selling a design is not known, though our continuing study hopes to better understand this process.

## CONCLUSION

The NMS patterns books are yielding a more subtle understanding of the Turkey red textile industry in Scotland than was formerly possible, particularly when the details they contain can be linked to other sources, showing us the rich and diverse character of this little understood industry. Cross referencing the NMS patterns with the registers of the Board of Trade in London has proven useful for identifying original manufacturers and users of the NMS pattern books, but the Board of Trade Design Registers



also contain designs which have not survived in the NMS collection, such as the design for a handkerchief submitted by John Orr Ewing and Co. to commemorate the accession of George I to the Greek throne in 1863.<sup>72</sup> The Design Registers provide dates for the surge of design innovation, or the parallel fear of design theft, among the Scottish firms, with, for instance, peaks of registration by William Stirling and Sons from 1893 to 1897 by a firm that had been registering its designs since at least 1876.<sup>73</sup> Newspapers provide information beyond what can be gleaned from the NMS pattern books, including evidence of the growing importance of the home market.<sup>74</sup> Reports of theft from factories and warehouses were often included in newspapers, as were notices of fires, which give an idea of how dangerous the industry could be. Business letter books and personal recollections for the later years of the industry also cast further light on the information contained in the NMS pattern books. The information yielded by these multiple written sources, along with technical information gained from chemical analysis of the fabric samples and dyes, will be incorporated into an online exhibition hosted by the National Museums Scotland, along with an annotated catalogue, intended to bring a wider understanding of an aspect of the Scottish textile industry which had a global impact.

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