**WHAT HAS BEEN LOST THROUGH THE INCORMORATION OF MODERN TECHNIQUES IN JAPANESE CRAFTSMANSHIP?**

The beauty and delicate detail that Japanese artefacts showcase have always impressed me and the way they highlight the skill and precision that the craftsman must possess. Through this project I wanted to discover whether, despite the greater possibilities afforded by modern techniques, the beauty of Japanese craftsmanship has been marred through their incorporation in to the production process. I decided to investigate this by analysing an object created using traditional techniques and by making an object myself using modern techniques. I would then compare them in terms of aesthetic beauty and ease of making to ultimately decide what had been lost, if anything. In order to ensure the integrity of my project I decided to carry out research into the history of Japanese craftsmanship and based on this, define the type of artefact I would be evaluating through researching the materials, construction methods and finishes prevalent both traditionally and in the modern day. As I knew nothing about Japanese craftsmanship I began by researching the different time periods, specifically focusing on design, in order to decide which period would be the most interesting and suitable for my EPQ.

Beginning in 300 BC (the Jomon period), I researched up until 1989 which marked the end of the Showa Period, as I wanted to get a comprehensive understanding of how Japanese craftsmanship had developed. The Edo period (1615-1868) was of particular interest to me as it coincided with a politically peaceful time, stimulating the economy and thereby encouraging a period of flourishing creativity, shown by an abundance of schools in lacquer ware, woodcraft and metal work. Furthermore, the strict social codes surrounding the purchase of lacquer ware were overcome, as the merchant class was profiting from a peacetime that was diminishing the wealth of the Samurai and aristocratic classes, meaning for the first time that lacquer ware became a commodity of everyday life. For me the Edo period exemplifies an era on the cusp of artistic change and the development of new techniques, making it ideal for my project. It shows a period in Japanese history when craftsmanship was at its height, where the skills required were highly valued and the objects produced widely admired. Choosing the Edo period allowed for great contrast with the modern day era of mass production where craftsmen “*have already bid farewell to the traditions of timber building*[[1]](#footnote-1).” The contrasting views and values of these two periods is highlighted in the following quotes: “*in modern technological thinking, the self cuts itself apart from nature and assumes omnipotence*[[2]](#footnote-2)”, in other words modern craftsmen view nature as a body from which resources can be plundered to suit man’s need, whereas “*the technology of traditional craftsmanship does not accept the concept of ‘man vs nature’, but takes on a more mutual and friendly relationship in which man and nature sympathize with each other*[[3]](#footnote-3)”. The objects produced traditionally reflect this belief, making each object unique, possessing a special significance and meaning. Carrying out this research was a very eye-opening experience as it showed me how through the use of modern techniques, the objects produced have lost their unique beauty as they are cut off from their sources, created on the principle that the process holds no significance, reducing the unique meaning of the end result.

Due to the timescale of the project, I decided to produce products of a small scale, more specifically boxes, as they reflect the cultural traditions and habits of Japan, both through their composition and the images lacquered on their surfaces. In order to determine which box type to explore, I investigated the different boxes prevalent during the Edo period, which consisted of writing, incense, Inro and letter boxes. Writing boxes were used to house the implements required for Japanese calligraphy such as the water dropper (suiteki) and the inkstone (suzuri). The latter instrument was key to the writing process as its slightly abrasive surface was used to grind the ink stick (sumi-basami) which when combined with water created the ink. Both incense boxes and letter boxes were typically a part of a wedding trousseau, commemorating the union of two high ranking families. The former consisted of an inner tray and six small containers which were used to store the incense wood, whilst the latter consisted of an elongated box used to send and receive documents. The Inro box, originating during the Momoyama period (16th century), was worn as a part of Japanese dress suspended from a girdle held in place by a netsuke which acted as a toggle. Consisting of multiple containers stacked on top of one another, they were used to store seals, medicines and herbs. I decided to focus on the writing box as its slender proportions and compartmentalised composition intrigued me. Additionally, writing itself has changed culturally, as it is no longer a form of artwork or a skill accessible only to the wealthy classes, but a tool which is key to success in the modern day. Technological advancements have been instrumental in transforming the art of writing into a skill accessible to all. However this in itself has led to many instruments becoming surplus to requirements along with the processes involved, such as grinding the ink, causing them to become lost in a world “*which places 'convenience' above all else*.[[4]](#footnote-4)” By making writing boxes the focal point of my project, it would be bringing in the element of cultural norms in society and demonstrating how these have driven technological change and as a consequence, the loss of meaning of the objects produced.

Having specified the most appropriate time period and the type of artefact, I began investigating the manufacturing techniques used during the Edo period in order to compare them to those used in an era of mass production. I broke down my research into three strands: materials, construction methods and finishes. I initially struggled to discover what is typically referred to as ‘lacquered wood’ in reference to exhibits, for instance at the Metropolitan Museum of Art in Washington. However, through a consultation with Anouska Hempel, a renowned interior designer and collector of lacquer ware, I discovered that Japanese Box wood, otherwise known as Buxus Harlandii – Hance, was generally used due to its lightweight property which is a key feature of traditional lacquer ware objects. Furthermore, its physical hardness meant a stable structure which is fundamental as “*the life of the lacquer ware depends on the substructure’s stability*.”[[5]](#footnote-5) This meant that construction methods also played a critical role in the making of the products. Japanese joints are classified as being either “Kumi-te”, joints that bind or “Tsugi- te” joints that extend the length of an object[[6]](#footnote-6). Through looking at a case study of the typical joinery work in boxes, I was able to view the most popular traditional joinery for boxes of the Edo period, all of which showcase “Tsugi-te” joints. The stopped dovetailed box joint (tsutsumigata-ari-kumi-tsugi) , concealed dovetailed box joint (kakushigata-ari-kumi-tsugi) and stopped lapped butt joint (tsutsumigata-aikake-uchitsuke-tsugi) were of particular interest to me due to the complexity of the joint itself. In addition to highlighting the immense precision and skill required, the intricacy of the joints also shows the value that the craftsman placed upon them. They are viewed not merely as a means of stability but as a part of the aesthetic beauty of the product, showcasing the spirit of Japanese craftsmanship: TEMA HIMA (time and effort.)[[7]](#footnote-7) This philosophy is reflected in the objects produced, with great time and care being taken over each one to allow for the object to reach its full potential. Efficiency to a traditional craftsman correlates with the idea of using ‘Force’ where “*force means destruction of the cycle*”[[8]](#footnote-8), an idea in great contrast to the mechanised production of the modern day where the environmental impact of processes are not properly considered.

During the Edo period, lacquer ware flourished and was subsequently the most prevalent form of finish used and it was on this process that I focused my research, discovering a wealth of techniques that explained the beauty of Japanese lacquer. The lacquer originates in the form of a sap, urushiol, obtained from the urushi tree, a toxicodendron species meaning it is poisonous to touch until dry. It acts as a skin irritant, resulting in possible allergic reactions. This highlights an area where technological advancements have been beneficial to the craft as modern day lacquer can be easily applied by novices without the risk that Urushi lacquer possesses. The application of the traditional lacquer involves much delicacy and precision, beginning with the use of a funzutsu (bamboo tube with a silk or gauze net) to lay the powder whilst a tsumeban, made of tortoiseshell or water-buffalo horn is used to apply the lacquer paint after which the design is transcribed. ‘Makie’ is the name given to the techniques where designs are created by scattering metallic or coloured powder onto the lacquer of natural wood, allowing for a variety of different effects to be created. In regards to writing boxes a Nashiji (pear-skin) background was often used as it allowed for uniform decoration to be created in areas of less value such as the inside of the box. The effect produced was speckled and could either be of uneven texture or flat depending on the way in which the lacquer was applied. Other techniques were used to accentuate the design such as Togidashi-makie (burnished makie) which accented the gold creating, a vivid colour and Hiramakie (flat makie) which gave the appearance of flat gold. Takamakie (raised makie) allowed for variety in texture and relief whilst Nanban makie, developed during the early Edo period, combined mother-of-pearl inlay with hiramakie to create an iridescent effect. These techniques allow for the production of intricate images on objects which are artworks in themselves due to the immense delicacy that they possess. Learning about the traditions of Japanese craftsmanship was an wonderful experience, which opened my eyes to the complexity of the manufacture behind each artefact and the pride with which was carried out.

In order to compare the techniques used traditionally with those in the modern day use, i.e. with mass production, I investigated numerous case studies from Japanese manufacturers which showcased varying materials, construction methods and finishes. Writing is no longer seen as a piece of art work, it is viewed as a necessity of everyday life with the process itself embodying the epitome of ease and convenience. Due to this, writing boxes have evolved into stationery boxes as the various instruments previously required to write are combined in a single pen or pencil, allowing the remaining space to house other items such as rubbers or sharpeners. In order to investigate the variety of manufacturing methods I explored different stationery boxes, each demonstrating a different material, construction method or finish. Bento boxes are typically used as food storage to facilitate packed lunches, however the compartmentalized construction mimics that of a traditional stationery box, making it perfect for my case study. Through using a polymer, typically ABS, the box is both scratch resistant and lightweight, making it both easily portable and easy to preserve. Furthermore, as it uses a thermoplastic, the box can be moulded from one piece through injection moulding or press-forming, negating the need for joints and thereby making it a more secure structure. At the other end of the spectrum, manufactured boards are also used to great effect in the modern day, particularly plywood as it is cost-effective and does not warp or twist due to its layered composition, making it easy to mass produce as well as being a stable material. Typical joints include a mitre joint, whereby “*boards are cut at corresponding angles then fitted together*” [[9]](#footnote-9)and box joints whereby the pieces are “*secured perpendicularly by means of enmeshing notches*.”[[10]](#footnote-10)Both of these joints are simple to produce and have sufficient strength to maintain a stable structure making them ideal for use in mass production. In regards to finishes, technological advancements have allowed designers to push the boundaries as to what decorations can be achieved. Printing itself allows for crisp images showcasing vivid colours to be produced on almost any material, as seen in the Bento box design, whilst the invention of the laser cutter allows for designs of incredible intricacy to be produced at relative speed by complete novices at very low cost. As these two case studies demonstrate, the materials, construction methods and finishes are chosen based on the ease and cost-effective possibilities they bring to the manufacturing process, highlighting the huge change that has occurred in society’s approach in regards to craftsmanship. Although areas of Japan such as Tohoku still cling to the crafts and traditions of the Edo period, in an era dominated by the idea of convenience, “*the progression away from the comparatively complex traditional method of timber construction can no longer be stopped, even in Japan*.”[[11]](#footnote-11)Technological advancements present huge possibilities to the modern day but at the cost of Japans cultural heritage where the traditions of the craftsman are slowly being lost and forgotten.

Having looked in great detail at both traditional and modern production techniques, it seems to me that the use of polymers and injection moulding make output fast and efficient and allow for a high degree of quality control. However, the resulting products have a plastic look, lack definition and sharpness of line and feel cheap. These losses are all symptomatic of the fundamental point: that the objects being mass produced today are cut off from their link to nature through the hand and extraordinary expertise of the craftsman. In comparison the traditional processes seem meditative in their approach, where it is a joy to create, producing artefacts wherein “*there lies the definition of true affluence and the pith and marrow of genuine beauty that people today are starting to lose*."[[12]](#footnote-12) I take hope from the fact that there is a growing desire today, among cultured individuals, to own something that is unique, original and hand-crafted. Japanese craftsmanship and lacquer ware are returning to something highly prised as they once were in the age of the samurai, giving them value in a world of mass production.

1. Zwerger, K. (2012) Wood and Wood Joints: Building Traditions of Europe, Japan and China. 2nd edn. Walter de Gruyter [↑](#footnote-ref-1)
2. The Craftsman - A Reflection of the Japanese Spirit, Available at : <http://www.att-japan.net/en/culture/guide/EC000040> (last accessed: 6th November 2014) [↑](#footnote-ref-2)
3. The Craftsman - A Reflection of the Japanese Spirit, Available at : <http://www.att-japan.net/en/culture/guide/EC000040> (last accessed: 6th November 2014) [↑](#footnote-ref-3)
4. TEMA HIMA : the Art of Living in Tohoku, Available at: <http://www.2121designsight.jp/en/program/temahima/message.html> (last accessed: 23rd November 2014) [↑](#footnote-ref-4)
5. Lacquer, Available at: <http://www.bishopmuseum.org/research/pdfs/cnsv-lacquer.pdf> (last accessed 23rd November 2014) [↑](#footnote-ref-5)
6. Koizumi, K (1986) Traditional Japanese Furniture. (ed.) Tokyo: Kodansha international [↑](#footnote-ref-6)
7. TEMA HIMA : the Art of Living in Tohoku, Available at: <http://www.2121designsight.jp/en/program/temahima/message.html> (last accessed: 23rd November 2014) [↑](#footnote-ref-7)
8. TEMA HIMA : the Art of Living in Tohoku, Available at: <http://www.2121designsight.jp/en/program/temahima/message.html> (last accessed: 23rd November 2014) [↑](#footnote-ref-8)
9. Koizumi, K (1986) Traditional Japanese Furniture. (ed.) Tokyo: Kodansha international [↑](#footnote-ref-9)
10. Koizumi, K (1986) Traditional Japanese Furniture. (ed.) Tokyo: Kodansha international [↑](#footnote-ref-10)
11. Zwerger, K. (2012) Wood and Wood Joints: Building Traditions of Europe, Japan and China. 2nd edn. Walter de Gruyter [↑](#footnote-ref-11)
12. TEMA HIMA : the Art of Living in Tohoku, Available at: <http://www.2121designsight.jp/en/program/temahima/message.html> (last accessed: 23rd November 2014) [↑](#footnote-ref-12)