



Grand Tour of European Porcelain

*Anna Calluori Holcombe
explores the major European
porcelain centres*

*Left: Gilder. Bernardaud Factory.
Limoges, France.
Right: Designer table setting display.
Bernardaud Factory. Limoges, France.
Photos by Anna Calluori Holcombe.*

A factory was started in 1863 by some investors and, at about that time, an apprentice was hired named Léonard Bernardaud. He worked his way up to become a partner, then acquiring the company in 1900 and giving it his name. In 1949, the factory introduced the first gas-fuelled tunnel kiln in France operated 24 hours a day, a standard in most modern factories today. Although they had to cut 15 percent of their employees in recent years, they successfully continue as a private company, family owned for five generations, considered a leader in innovation and design.

I EMBARKED ON A MODERN VERSION OF THE 17th and 18th century Grand Tour of Europe in summer of 2010 and spent two months researching porcelain (primarily tableware) from historical and technical perspectives. The tradition of Grand Tour promoted the idea of travelling for the sake of curiosity and learning by travelling through foreign lands. On a research leave with a generous Faculty Enhancement Grant from the University of Florida (UF), I visited factories and museums in 10 major European ceramics centres.

Prior to this interest in investigating European porcelain, I spent time studying Chinese porcelains with fascination and awe. On one of my many trips to China and my first visit to the famous city of Jingdezhen, I climbed Gaoling Mountain, where the precious kaolin that is essential to the Chinese porcelain formula was first mined more than 1000 years ago.

Soft paste porcelain, which does not have the durability and translucency found in hard paste porcelain was in popular use in Europe prior to their discovery of hard paste porcelain. There are basically three essential ingredients in porcelain: kaolin (china clay), felspar (china stone) and silica. It is the combination of pure white kaolin and a high firing temperature that long eluded the European producers of porcelain. The 300th anniversary of the development of a workable formula



of hard paste porcelain in Europe made it a perfect time for me to continue my research. I felt the need to explore European porcelain production in order to get a global perspective on its use.

I began in the cities of Dresden and Meissen, Germany, the original sources of European porcelain. Meissen Manufactory celebrated the 300th anniversary of its discovery in a spectacular way. Special exhibitions in Dresden and Berlin complemented what the Meissen Visitor Center and Museum typically have to offer visitors.

The Dresden exhibition (displayed at the Japanese Palais, part of the museum system of the Staatlichen Kunstsammlungen Dresden State Art Collections) was titled *Triumph of the Blue Swords, Meissen Porcelain for Aristocracy and Bourgeoisie 1720–1815*. The museum holds special importance to the exhibition, as it was the original palace that August II, better known as August the Strong (1670–1733), Elector of Saxony and King of Poland, displayed his extensive porcelain collection of Chinese and Japanese export ware and Meissen production. The accompanying 400-page large-format catalogue gives one a hint of the extensive nature of this exhibition. There were 800 pieces on display from 80 international museums (one of these museums, surprisingly, was the Cummer Museum in Jacksonville, Florida). The show was organized by themes, designers and decorators and, although overwhelming for its total size, was manageable if taken one room at a time.

These events commemorated porcelain's discovery by Johann Friedrich Böttger (1682–1719), who, for all intended purposes, was a prisoner of August the Strong. Author Janet Gleason details the story of the King's obsession with 'white gold' in her historic novel, *Arcanum*. It is a story of espionage and intrigue describing the passion that this monarch possessed, what he considered to be his *maladie de porcelaine* for Chinese and Japanese export ware that led to his imprisoning Böttger and even trading troops for porcelain pieces.

In 1708, a practical formula for porcelain was produced and production began in the Dresden laboratories used by Böttger. August the Strong finished building a royal porcelain factory in the city of Meissen in 1710 and the original Dresden factory was transferred there. The first wares were red and are known as 'Böttger stoneware' but by 1713 Meissen was producing white porcelain. Coloured glazes followed within the next few years.

Today, this amazing collection is exhibited in Dresden's *Porzellansammlung* (Porcelain Collection) set in a Baroque palace, the Zwinger. Included in the collection of 20,000 pieces are porcelain wares from the Ming Dynasty in China and Imari and Kakiemon wares from Japan. The thousands of pieces of Meissen porcelain originally

Left: Meissen Porcelain Factory: Tea Bowl and Saucer. 1716–1720. Hard paste porcelain with lustre and gilding. Photo © Victoria and Albert Museum, London.

Right: Zwinger, home of Porzellansammlung. Dresden, Germany.

Photo by Anna Calluori Holcombe.

A number of mergers have taken place in an effort to save some of the better-known factories but, as with every merger, the labour force is streamlined and the management focuses on sales. Most of the factories have taken on new technologies to make their products quicker while using less energy and manpower. Most have visitor centres, shops, outlet stores, museums, cafes and restaurants to attract tourists so that they might purchase their goods. Those that have not been able to bend to this new reality, such as Royal Limoges, seem to be floundering and on the verge of collapse. Only Sèvres can afford the luxury of producing their wares in a traditional way due to their generous government subsidy. On the positive side, I have seen a pride for work and a quality of design and production not easily found in the US.



Top left: Meissen Porcelain Factory, Kändler, Johann Joachim modeler: Vase and Cover. Circa 1745. Hard paste porcelain with applied reliefs.

Photo © Victoria and Albert Museum, London, England.

Top right: Ceramics Galleries Study Collection. Victoria and Albert Museum, London.

Photo © Victoria and Albert Museum, London.

Above: Meissen Porcelain Factory: Flask and Cover. Circa 1715.

Hard paste porcelain.

Photo © Victoria and Albert Museum, London

produced for the furnishing of the Japanese Palais are on display and include vases, tableware such as tea, coffee and chocolate services and a unique grouping of life-size porcelain animals and birds. The collection

itself has an interesting history as, during World War II, it was evacuated, therefore escaping damage in the destruction of Dresden in 1945. After the war, the Red Army 'transported' the collection to the Soviet Union where it stayed until it was returned to Dresden in 1958.

One of the few frustrations of the journey was my inability to arrange a tour of the Meissen factory. Later on, I found that it would have been better to request a tour through the museum curator. Meissen, however, does have an elaborate visitor's centre where there are demonstrations of techniques used in the factory. The three techniques regularly demonstrated are: forming by throwing a thick cylinder then placing it in a mould to refine the shape, the application of underglaze blue and white and the application of overglaze china painting. Visitors are moved along in Disney-like fashion with translation earphones in the tiered auditoriums.

The manufactory itself was taken over by the Soviets after WWII and returned to German ownership in 1950 where it became 'people-owned' and profitable. After the German Reunification it was returned to national ownership. The company has wisely expanded its traditional and yet popular production line with items appealing to contemporary trends in tableware allowing it to maintain quality and desirability of product.

From Berlin, I flew to Edinburgh, Scotland, pausing there briefly and then worked my way to Stoke-on-Trent, England. Known as 'The Potteries' it is made up of six towns considered to be the home of England's ceramics industry. A rail line, plenty of trees, a canal and sources for clay made this an ideal location. Well-known factories including Spode, Royal Doulton, Dudson, Minton and Wedgwood have produced in the area. In recent years, the industry has shrunk due to competition abroad and changes in the contemporary lifestyle. There are many empty factory buildings in the area and, although a few factories appear to be thriving, most have had to merge to stay solvent.

Wedgwood, founded in 1759, was my primary destination. The award-winning Wedgwood Museum and Visitor Center opened in 2008 at the factory location in Barlaston, one of the six towns of Stoke-on-Trent. The museum is more than 5000 square feet of impressive displays of the work produced in the Wedgwood factory. It is organized chronologically and is often in settings of the period representing the extent of its long history.

In 1986, Wedgwood was acquired by the Waterford Glass Company. In 2005, Waterford Wedgwood acquired Royal Doulton. Finding it difficult to compete with cheaper imports, it began closing some factories and went into bankruptcy. The Stoke-on-Trent factory continues in production but with some changes. Wedgwood is primarily known for two of its many types of production, both of these being manufactured to this day: Jasperware and bone china. Jasperware was invented by Josiah





Wedgwood, its founder and namesake, and was popular in the late 1800s. Although I have seen it defined as porcelain, I believe it to be more accurately described as a stoneware clay, highly refined and coloured with oxides. Blue, black and green are the colours primarily used with white clay sprigging for contrast as decoration. Josiah Wedgwood made 5000 tests of Jasperware over three years to develop the final formula and colours. Wedgwood began working in bone china in 1812; about 14 years after its quality was improved by Josiah Spode who started calcining the animal bone separately from all of the other clays in the formula. The qualities of this type of porcelain, particularly its translucency and strength, made it popular among the other potteries in the area as well. Until recent studio practice, it was exclusively a British type of porcelain.

In a pre-arranged private tour of the Wedgwood factory, the manager was knowledgeable and open with technical information. One of their buildings was more than half vacant and it turns out that Wedgwood now has a factory in Indonesia to make their more production-oriented dinnerware lines. This leaves only the higher end and distinctive wares to be produced in England.

The Wedgwood factory is using many state-of-the-art technologies and, at the same time, maintaining many of the traditional techniques developed by Josiah Wedgwood, who can be considered a true experimenter and innovator. For example, he invented the pyrometer used to this day to measure the heat in the kiln during firing and he invented a type of lathe used for shaping Jasperware from a thickly thrown cylinder. The factory production continues to include hand casting and hand decorating. In contrast, the factory uses such modern technologies as a slipcasting machine on a conveyor that has a built in dryer and uses decals to decorate more quickly. There is an automated donut-shaped kiln, as well as a special tumbler system to smooth ware before it is glazed. Overall, the factory seems to balance the old with the new in a well-run system.

With a longing for the warmth and sunshine of Italy, I had pre-arranged a tour at the Richard Ginori factory. The Doccia Porcelain Manufactory in Sesto Fiorentino just outside of Florence, was founded in 1735 by the Marquis Carlo Ginori near his villa. His three sons took over the factory until 1896 when it merged with the Società Ceramica Richard of Milan and since has been called Richard Ginori. Today it is a private company with often-changing investors, yet it has managed to survive and even prosper in some of its areas of production.

Ginori began factory production by obtaining wax models and casts



Top left: Wedgwood: Prunes and Oriental Fan Teacup and Saucer. 1880. Bone china, enamel colours, gold and bronze.

Photo courtesy of the Wedgwood Museum, Barlaston, Staffordshire. Top right: Josiah Wedgwood and Sons: Teapot. Circa 1790. Jasperware. Photo © Victoria and Albert Museum, London.

Above: Josiah Wedgwood: Trail of Jasper Trials. 1773. Jasper clay body. Photo courtesy of the Wedgwood Museum, Staffordshire, England.



Top left: Richard-Ginori Porcelain Factory: Frutto Italiano (Italian Fruit). Circa 1770. Porcelain.

Photo courtesy of Museo Richard-Ginori della Manifattura di Doccia, Sesto Fiorentino, Italy.

Top right: Mechanized plate making. Richard Ginori Porcelain Factory. Sesto Fiorentino, Italy. Photo by Anna Calluori Holcombe.

Above: Richard Ginori Porcelain Factory: Giochi di Putti (Games of Cherubs). Circa 1750. Coffee pot with transfer print decoration after Jacques Stella, porcelain.

Photo courtesy of Museo Richard-Ginori della Manifattura di Doccia, Sesto Fiorentino, Italy.

that had been used previously by the heirs of major Florentine baroque sculptors for casting in bronze. Instead of bronze, he used a soft paste porcelain to create reproductions of the sculptures rather ambitious in size for works in clay. This work was unique to Europe when first produced. The original porcelain was gritty and grey until his sons took over and

improved the quality to its current high standard of hard paste porcelain. This factory tour was exceptional in that the management is open about its production. It has a show room and store on site. I was allowed to take pictures and videos of all parts of the factory and museum.

Today this is a perfect example of a factory holding on to traditional work while meeting market needs. One section of the factory uses the original moulds from the late 18th and early 19th centuries. The moulds are stored in an impressive warehouse with the oldest moulds on the top shelves. Another section does hand painting of their historic patterns. Another covers their production lines utilizing numerous modern technologies. An extensive mould-making area is part of this production. The fourth section has designers creating digital designs for their in-house decal production and CAD/CAM designs for new forms.

Across the parking lot from the factory is the Museo Richard-Ginori della Manifattura di Doccia where I was given a thorough and informative private tour with the museum curator. Organized chronologically, the first room has the Carlo Ginori original moulds and clay sculptures. The main room has much of the production ware with special items such as a table setting for an Egyptian ruler. The last room has the work of Gio Ponti, architect, who from 1923 to 1930 served as Richard Ginori's Art Director. He had a major effect on the factory and its stature with his International Art Deco style.

I ended this first leg of my journey with the Herend Porcelain Manufactory tour arranged through the International Ceramics Studio in Kecskemét. Herend was a latecomer to the industry, founded in 1826 in the town of Herend, Hungary. The tour was led by one of their master designers, beginning in the private showroom with examples of their production lines.

Herend's specialty is 'luxury' hand-painted porcelain. (There is not a decal to be found in the factory.) Instead, one finds room after room with rows of decorators all china-painting colours and gilding. Their 'technology' involves armrests and special stands that allow them to move the work easily as they decorate. Other parts of their production, such as kilns and slip making, are modern in contrast.

After the fall of communism in Hungary the factory was privatized



and currently its management and workers own 75 percent. Today, the Herend factory and visitors centre has an air of success about it with its clean modern interiors in a park-like setting that includes a small museum, shop and restaurant. Aside from the evident quality in decoration, the whiteness, translucency and versatility of Herend's porcelain body make it ideal and the finest I have seen in Europe.

In September, I headed to France to attend the 2010 Assembly of the International Academy of Ceramics (AIC/IAC) at UNESCO in Paris. The biennial assemblies typically have pre- and post-tours and I signed up for the pre-tour to the cities and areas of Bourges and Limoges. Limoges, of course, was of particular interest to this research. In 1768, a woman from the nearby village of Saint-Yrieix La Perche discovered a soft, white clay. The story goes that she used it to bleach her linens. It was later identified as high quality kaolin. This discovery, coupled with the nearby forests and the Vienne River that runs through the area made this one of the most important centres of European porcelain.

Royal Limoges, established in 1816, is the oldest existing porcelain factory in Limoges today. It was a family run business until 2001 when a factory fire forced them to liquidate and reorganize. Operations continue today as Porcelaine GDA-Royal Limoges, a limited partnership. It was reported in an article in *Business Week*, Paris, from October 27, 2009, titled "Limoges Porcelain: Fragile Times" written by Leona Liu that, "Recession, the strong euro and changing tastes have devastated France's china makers."

Royal Limoges' financial difficulties were evident in their factory tour where many areas remained idle or under staffed. Safety and cleanliness seemed not a priority. One could see a more mass-produced product versus the fine production of its historic past. All of the European factories have had to deal with the reduction in demand but this factory seemed to be coping poorly with this new reality.

Interestingly, the factory was using a rather new technology called laser sintering, which is used to eliminate the third firing. Later in the day we visited the company, Cerlase, known for their patented technology on both the process and device used for marking objects by the laser sintering of mineral powders on ceramics, glass and metal. There was a demonstration of how the laser's heat actually fires on the sprayed overglaze.

Another important Limoges factory for porcelain production, Bernardaud, is a relative latecomer to porcelain production manufacturing. A factory was started in 1863 by some investors and, at about that time, Léonard Bernardaud was hired as an apprentice. He worked his way up to become a partner, then acquiring the company in 1900



Top left: Herend factory decoration room. Herend Porcelain Manufactory Ltd. Herend, Hungary.

Top right: Herend factory showroom. Above: Herend sculpture in showroom.

All photos by Anna Calluori Holcombe.



and giving it his name. In 1949, the factory introduced the first gas-fuelled tunnel kiln in France operated 24 hours a day, a standard in most modern factories today. Although they have had to cut 15 percent of their employees in recent years, they successfully continue as a private company, family owned for five generations, considered a leader in innovation and design. I was impressed with this factory and it is clear from the tour and the company web site that design is a priority. The tour included a museum (built within the factory) that houses their production line by designers as well as an exhibition of contemporary ceramic jewellery.

In Paris, as part of the IAC Assembly program, we visited the Manufacture Nationale de Sèvres, the porcelain factory at Sèvres, a suburb of the city of Paris. In 1740, a factory was created in the Château de Vincennes, east of Paris, with the support of Louis XV and the encouragement of his mistress, Madame de Pompadour. Originally, it produced soft-paste porcelain wares. In 1756, the factory was moved to Sèvres, in 1759 it became a state financed royal factory and, eventually, an imperial one. Today, the factory is operated by the Ministry of Culture.

Hard-paste porcelain was not made at Sèvres until the late 1760s, when, as previously mentioned, kaolin was found in the Limoges region. The success of the factory was tenuous until the appointment of Alexandre Brongniart (1770–1847) in 1800 who served as the administrator of the factory until his death. Trained as both an engineer and a scientist, he successfully influenced every aspect of the factory management and production during those five decades.

An informative tour of the Sèvres factory revealed that the mission is to preserve the traditional techniques. Photographs were allowed and the employees graciously shared information. It was obvious that mass production was not the priority as one potter worked all day to make one Tasse Ruhlmann (Ruhlmann Designed Cup from 1930).

David Caméo, Director of Sèvres – Cité de la Céramique, spoke at the IAC Assembly about the Sèvres factory's history, heritage and future. Curious as to how much national support the factory receives to be able to create its line utilizing traditional techniques in limited production, I asked this question of Monsieur Caméo. He stated that the Ministry of Culture supports the factory for 80 percent of its production costs. This information helps to explain why they have the luxury to work traditionally on a special order basis and not be concerned about sales.

Sèvres has worked with many contemporary artists and designers and this work can be found in the museum and on their web site. They also hire an artist to work as an employee for one year's time, designing and creating new work for future production. This helps to keep their

Top left: Sèvres Porcelain Factory: Cup, Second size. Circa 1780. Hard paste porcelain with gilt decoration.

Photo © Victoria and Albert Museum, London.

Top right: Factory workstation. Manufacture Nationale de Sèvres, Sèvres, France.

Photo by Anna Calluori Holcombe.

Above: Unknown (Florence, Italy): Flask. 1575–1587. Soft paste porcelain, underglaze blue ('Medici Porcelain').

Photo by Anna Calluori Holcombe.



rather traditional line fresh and contemporary.

Although it will take some time for all of the information I have gathered to be mentally processed, I have rather quickly been able to come up with some aspects of European porcelain factory production that I find to be both unique and similar. How the factories are coping with the global economic shift from manufacturing to service industries, the decline of the use of fine china by the consumer and the economy in general are noticeably different. Herend continues to hand paint their decorations exclusively, making their product desirable for its handmade qualities. Wedgwood has expanded into the Asian market for their more pedestrian lines and has kept the quality, 'Made in England' production at home. Richard Ginori has expanded their production by working for such designers as Missoni for the Missoni Home line. Meissen is producing such wares as *Sushi – Set* to meet current entertaining trends.

A number of mergers have taken place in an effort to save some of the better-known factories but, as with every merger, the labour force is streamlined and the management focuses on sales. Most of the factories have taken on new technologies to make their products quicker while using less energy and manpower. Most have visitor centres, shops, outlet stores, museums, cafes and restaurants to attract tourists so that they might purchase their goods. Those that have not been able to bend to this new reality, such as Royal Limoges, seem to be floundering and on the verge of collapse. Only Sèvres can afford the luxury of producing their wares in a traditional way due to their generous government subsidy. On the positive side, I have seen a pride for work and a quality of design and production not easily found in the US.

Although Paris was the final city in my Grand Tour of European Porcelain, it is not the end of my research on the subject, as I am now in search of the perfect porcelain slip to use in the studio. I have learned many traditional decorative techniques and I am currently experimenting with raised gold and polishing matt gold. As for new technologies, I have had good results in testing the laser sintering technique that I saw in Limoges on the laser cutter in the UF Art and Architecture Fabrication Lab. I also realize that I have yet to find a cure for my personal *maladie de porcelaine*.

Left: *The Potteries Museum and Art Gallery*. Stoke-on-Trent, England.

Right: *Replica of an 18th Century Porcelain Room*. Ceramics Galleries. Victoria and Albert Museum. London, England.

Photos by Anna Calluori Holcombe.

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