



Fashionable Accessories: Tradition and Innovation in Button Manufacturing in Northern Italy, Seventeenth to Eighteenth Century

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As a result of new methods tried first in France and England, European production of buttons began its gradual transition to industrial forms in the second half of the seventeenth century. These creations were in demand in Italian markets, and the importation of foreign buttons was steadily rising. Many consumers found an alternative to precious buttons in English- and French-style metal buttons. In this essay, I analyze these innovations in the context of northern Italy and discuss their interaction with more traditional products, strictly regulated by corporative systems often connected to the goldsmith's art. This process was parallel to, and contemporary with, the spread in Italy of the early production of *bijouterie* (fake and plated jewels). I focus on the concession of privileges by political powers in order to stimulate innovation, counterbalancing the rules imposed by the corporative system. The cases discussed concern the manufacture of Venetian glass buttons, in which the innovative processes were mostly developed within the corporative system, and metal button production in Turin, Milan, and Bergamo, more strongly influenced by the importation of new techniques.

The earliest use of buttons in the fastening of European clothes dates back to the thirteenth and fourteenth century. In this early phase, buttons were mainly used by aristocratic and well-to-do families.¹ They were generally

¹ In the early phases of their introduction, buttons were exclusively used to fasten sleeves. Later, probably under the influence of Turkish style, they were used as a fastening method along the entire length of a garment or coat. On the origins of

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the product of skilled goldsmiths, and between the end of the Middle Ages and the beginning of the early modern period, buttons remained a sought-after product, a sign of social, sometimes even gender, distinction, directed toward a consumer elite.²

Scholars have documented that the passage from the “button as a jewel” to the “mass button” was not an abrupt one. In the early modern period, the transition was effected through a series of innovations in work procedures and materials that opened the possibility of a wider range of creations, overcoming the boundary of the “button as a jewel.” This process was accompanied by the weakening of sumptuary legislation and by the growing popularity of fashion, which resulted in the spread of

buttons and their use in clothes fastening, see Stella Mary Newton, *Fashion in the Age of the Black Prince: A Study of the Years 1340-1365* (Woodbridge, England, 1980), 6-30; and Chiara Frugoni, *Medioevo sul naso: occhiali, bottoni e altre invenzioni medievali* (Bari, 2001), 102-3. Frugoni distinguishes between the appearance and the spread of the button: the former, in European clothes-fastening, dates to the thirteenth century, but its further spread occurred beginning in the fourteenth century. On the button as a precious, functional jewel see Paola Venturelli, “I gioielli e l’abito tra Medioevo e Liberty,” in *La Moda, Storia d’Italia, Annali 19*, ed. Carlo Marco Belfanti and Fabio Giusberti (Turin, 2003), 94-99. See also Vittoria De Buzzaccarini and Isabella Zotti Minici, *Bottoni & Bottoni* (Modena, 1995), 9-13; Rosita Levi Pisetzky, *Storia del costume in Italia*, 4 vols. (Milan, 1964), 2: 77-82, 136-40, 395-96; 3: 203-7; 4: 263-64; and Levi Pisetzky, *Il costume e la moda nella società italiana* (Turin, 1995), 146, 169, 185.

² On the persistence of institutional conditioning, which gave clothing the precise function of representation and identification in the moment when important innovations were being introduced in clothing, between the fourteenth and fifteenth century, see Carlo Marco Belfanti, *Civiltà della moda* (Bologna, 2008), 17-19. The use of buttons between the fourteenth and fifteenth century fell under the rules of sumptuary legislation in various Italian cities. On this theme see Levi Pisetzky, *Il costume e la moda nella società italiana*, 32-33, and Levi Pisetzky, *Storia del costume in Italia*, 2: 139-40; she remarks, however, on how the usefulness of buttons conditioned legislators; they often showed a singular lenience toward this kind of ornament. Regulations were limited to the specification of the maximum number and value, allowing the use of noble metals as long as legal limits were not overcome. In the following centuries, buttons were used in different ways in male and female clothing; see p. 263 on how buttons were rare in women’s clothing, while of great importance in men’s clothes. In Pamela Zanieri, “Splendide illusioni: il fascino dei bottoni gioiello,” in *Appesi a un filo: Bottoni alla galleria del costume di Palazzo Pitti*, ed. Dora Liscia Bemporad and Caterina Chiarelli (Livorno, 2007), 126, we read that jewel-buttons, just like buttons in general, were for many centuries typical of men and not of women.

consumer behavior and tastes, touching customers from different social classes at the same time.³

During the early modern period the concurrence of these processes, which affected both the supply and the demand sides, was essential in the creation of a product different from the initial “button as a jewel.” The original precious button, made of gold or silver and often found entered in wills and postmortem inventories where jewels are listed and described, could have its own life, independent from a garment; more precisely, it could be fitted in different articles of clothing. It could easily be detached from a garment, and it was very often inserted and extracted through button holes, as with cufflinks. The button made of precious metal was kept and stored in a different place from the garment. It was easily moved, but also easily stolen. People could use and show it on clothes of different cut and material.⁴

In the seventeenth and eighteenth centuries, together with the persistence of older “jewel-like” productions, we observe the establishment of the manufacture of buttons as “fashionable accessories,” specifically designed for the garment in which they would be inserted. In these creations the decorative element was emphasized, personalized, and enriched, and the buttons were suited to the design and colors of the specific fabric.

French fashion strongly contributed to the birth and spread of a real craze for buttons made of fabric or spun materials, which were still relatively rare in the first centuries of the early modern period.⁵ The button made of knitted cloth, a French fashion exported to the rest of Europe in the seventeenth and eighteenth centuries, was created from the

³ See De Buzzaccarini and Minici, *Bottoni & Bottoni*, 18-26; and Levi Pisetzký, *Il costume e la moda nella società italiana*, 146, 169, 185.; David S. Landes, *La ricchezza e la povertà delle nazioni* (Milan, 2000), 293-95; Neil McKendrick, John Brewer, and John H. Plumb, *The Birth of a Consumer Society: The Commercialization of Eighteenth-Century England* (London, 1982), 68-73; Maxine Berg, *Luxury and Pleasure in Eighteenth-Century Britain* (New York, 2007), Part II, 154-92; and Daniel Roche, *Il linguaggio della moda* (Turin, 1991), 241. On the gradual process which led fashion to become a social institution and the relevant weakening of sumptuary legislation, see Belfanti, *Civiltà della moda*, 11-115. On the variety of button manufactures produced in early modern Europe, see the essays contained in Liscia Bemporad and Chiarelli, eds., *Appesi a un filo*.

⁴ See Levi Pisetzký, *Storia del costume in Italia*, 2: 136; 3: 203; and De Buzzaccarini and Minici, *Bottoni & Bottoni*, 12.

⁵ Cloth or thread productions were rare in the fourteenth century; see Levi Pisetzký, *Storia del costume in Italia*, 2: 136-39.

same piece of fabric used for the garment itself.⁶ In those two centuries, courageous English entrepreneurs copied a gilding procedure from the French and experimented with a sort of rough serial production of buttons inside factories, where casts and other sophisticated machinery were used.⁷ These entrepreneurs studied the behavior of their customers and tried to anticipate and direct their tastes; they collected the designs of their models, and very probably created a sort of catalogue, or updated sample collection, of their creations.⁸ These productions could be imitations of more traditional precious metal buttons, but they were less expensive because they were made of metal alloys with limited amounts of gold and silver. The imitation effect could be emphasized in products by using painted, colored, or decorated covers, and consequently the “fake” button could become an object of confusion when first seen. Creations that used brass with false gilding and burnished copper were particularly bright and created a strong effect. The use of sophisticated casts allowed the manufacturer to imitate not only the typical decorations of goldsmiths and silversmiths and the ancient intertwined thread of Huguenot manufacturers, but also, and with great ease, the motifs (spikelets, lines, squares) of new fashionable clothes, in muslin and printed cotton.⁹

My object in this essay is to study the spread in Italy, in the late centuries of the early modern period, of working procedures of button manufacturing that lead to the identification of a sort of middle phase between the production of the early centuries of the period, almost exclusively done by goldsmiths, and the more markedly industrial production of the late nineteenth century. My analysis is particularly centered on a series of productions—metal alloy buttons, which tended to imitate older gold and silver buttons, and colored vitreous paste and enamel buttons—that were the result of a mix between the skills of local craftsmen and the importation of new work procedures. These creations were less expensive than the luxury productions so common in Renais-

⁶ On this subject see “L’art du brodeur et du boutonniere,” and “Les plaisirs de l’étoffe,” in *L’homme paré, Connaissance des Arts* special issue 262 (Oct. 2005): 13 and 14-16. On the English production of cloth, embroidered fabric, and gold and silver thread buttons, see Isa Tarchi, “Fili e intrecci,” in Liscia Bemporad and Chiarelli, eds., *Appesi a un filo*, 26-31.

⁷ See Landes, *La ricchezza e la povertà delle nazioni*, 294-96.

⁸ For example, Boulton collected the designs of his creations in pattern books: see Maria Cristina Bergesio, “Scintillio metallico: I diamanti di Woodstock,” in Liscia Bemporad and Chiarelli, eds., *Appesi a un filo*, 138.

⁹ See De Buzzaccarini and Minici, *Bottoni & Bottoni*, 18-23; Bergesio, “Scintillio metallico,” 136-43; Dora Liscia Bemporad, “Bottoni staccati,” in Liscia Bemporad and Chiarelli, eds., *Appesi a un filo*, 32-37; Isabella Bigazzi, “Il giardino dei bottoni,” in *ibid.*, 18-25.

sance Italy, had a strong decorative aspect, and also catered to the taste and purchasing power of an intermediate segment of consumers, as they were available in a wide range of colors and shapes. I have two main aims in reconstructing cases, which are mainly based in the urban context of a few towns in northern Italy. The first is to identify Italian manufacturers and production centers that were the protagonists in this middle stage in the spread of the use of buttons; I would like to ascertain what contribution (in terms of creativity and “imitative-innovative” skill) artisans made (many of them were skilled goldsmiths), and also to evaluate the range of measures local governments used in order to attract a skilled work force from abroad. How did they stimulate the introduction and diffusion of technical know-how through exemptions, incentives, and privileges? In my research, I evaluate the degree of permeability to innovation of the corporations involved; I am very interested in observing the way in which, in a few Italian towns where the goldsmiths’ art was deeply rooted and textile and vitreous paste manufacturing had a long tradition, the new modality of button manufacturing was received, contrasted, or re-interpreted. My second aim is to observe how fashion and innovation have intertwined, helping establish new products that were cheaper, but presented a strong decorative aspect, alongside the permanence of more expensive, precious, and luxury creations. This process was parallel and contemporary to the spread in Italy of the early production of *bijouterie*—that is, fake and plated jewels; the new decorated metal, vitreous paste, and enamel buttons were considered part of this production.

From the “Button as a Jewel” to the “Button as Fashionable Accessory”: Goldsmiths and Button-Makers in Early Modern Italy

During the early centuries of the early modern period, button manufacturing in Italy was mainly entrusted to the manual and creative skills of goldsmiths and jewelers. They had a monopoly on the production of small objects made of gold, silver, precious stones, and other metallic alloys.¹⁰ Researchers have rarely found the presence of guilds, corporations, or special branches of button-makers in the Italian context in the early modern period. Only later (around the eighteenth century) can we trace independent guilds of button-makers, which derived from the specialization and separation of a few craftspeople from larger professional groups working with noble metals, precious stones, and silk

¹⁰ See Levy Pisetzky, *Storia del costume in Italia*, 2: 136-39, who remarks that it was natural for buttons of fine noble metal to be made by goldsmiths, and how these objects, especially in the early phases of the introduction of buttons in fastening, were counted among goldsmiths’ products.

fabrics.¹¹ In the seventeenth and eighteenth century, we can identify some special branches of guilds that manufactured rosaries and were also interested in the production of bone or wooden discs for buttons. These semi-finished products were later given to tailors, goldsmiths, and brass workers, whose task was to complete the product, providing a fabric or metal cover.¹²

If sources explicitly suggest that during the early modern period the button-making artisan was often a goldsmith, in eighteenth-century documents we find the term “button-maker” more frequently. It is easier to find businesses, often privileged manufactories, whose purpose was the exclusive production of buttons using innovative methods and less precious materials. Sources related to the goldsmiths’ art very often show the path to follow if we want to identify “button-makers.” They worked with metals and were different from goldsmiths, who felt the danger of their market eroding. Having witnessed the success obtained by the colorful new-fangled creations, goldsmiths often pleaded with the authorities to defend their business positions and to denounce the introduction of innovations by other craftspeople that could damage the quality and image of their products.¹³

¹¹ “Noble metals” refers to those that are resistant to chemical reaction or corrosion; they generally include gold, silver, mercury, and the platinum group (including palladium, iridium, rhodium, ruthenium, and osmium).

¹² Archivio di Stato di Venezia, Savi alla Mercanzia, prima serie diversorum, b. 393, 1781 (statements by masters of button cores); and, in the same envelope, f. 222, 1780 (forbidden import of buttons, particularly of cores); Archivio di Stato di Torino, Materie economiche e di commercio, Professioni arti e manifatture, categoria IV, Dorerie, Università di fabbricatori de bottoni d’oro et argento, 1740. For a comparison, see data (referring to the Italian context) contained in Laviana Parziale, ed., *Istituzioni corporative, gruppi professionali e forme associative del lavoro nell’Italia moderna e contemporanea, archivio informatizzato-schede dati*, cd-rom attached to Alberto Guenzi, Paola Massa, and Alberto Moioli, *Corporazioni e gruppi professionali in Italia nel corso dell’età moderna* (Milan, 1999); and Paola Massa and Alberto Moioli, eds., *Dalla corporazione al mutuo soccorso organizzazione e tutela del lavoro tra XVI e XX secolo* (Milan, 2004). See also Doretta Davanzo Poli, *I mestieri della moda a Venezia nei secoli XIII-XVIII. Documenti: Parte II* (Mestre, 1986), 149; and Piero Pazzi, *Dizionario aureo: Dizionario biografico degli orefici, argentieri, gioiellieri, diamantai, peltrai, orologiai, tornitori d’avorio e scultori in nobili materiali . . .* (Treviso, 1998).

¹³ Interesting information about “button-makers” and types of buttons between the end of the eighteenth and the beginning of the nineteenth century can be found in Denis Diderot and Jean Baptiste D’Alembert, *Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers* (Livourne, 1770-1775), Tome second [B-cez], *ad vocem* “bouton,” according to which buttons could be

In the early modern period, particularly from the seventeenth century on and under French influence, there was a widespread diffusion of the fashion for buttons made of fabric, spun gold, silver, silk, and embroidered cloth.¹⁴ The artisan who worked on these products was an embroiderer or a tailor: silk, gold and silver thread, goat's hair, and embroidery were used for the more refined designs; mixed fabrics and silk waste were destined for poorer productions, which still had a strong chromatic and decorative effect. A rich series of buttons in colored vitreous paste was added to the new range of buttons in fabric and metallic alloy. Attempts to imitate crystal, using glass as a substitute material, date back to the end of the Middle Ages and the beginning of the early modern period.¹⁵ Between the seventeenth and eighteenth century, vitreous paste acquired more varied shades, which let craftspeople imitate gems and precious stones, giving place to new *bijouterie*-like productions (fake and plated jewels). Work on enamel and glass buttons was carried out inside the glassmakers' guilds, independently from, and in competition with, the production of goldsmiths and jewelers.¹⁶

Thus, the large increase in button shapes and the use of new materials and work procedures involved an ever-widening circle of artisans belonging to different guilds. The guild system usually established precise rules that authorized only selected categories of craftspeople to manipulate specific materials and instruments. The production of wood and metal or

subdivided into three main categories: stone, metal, and cloth; in Jacques Savary de Bruslons, *Dictionnaire universel de commerce* (Geneva, 1742), *ad vocem* "bouton" and "boutonnier," where the variety of buttons is confirmed (precious stones, cloth, woven gold and silver, silk, goat's hair), as well as the fact that button-makers belonged to the vaster category of "maitres ecc"; and, finally, in Francesco Grisellini, *Dizionario delle arti e de' mestieri* (Venice, 1768), tomo terzo, Bot-Cam, *ad vocem* "bottonaio," where reference is made to those who produced button cores, mainly in oak wood; to artisans who cast buttons using metals, which were more or less precious in different cases; and to those who created refined buttons using woven materials (goat's hair, gold and silver thread). We have noted the contrast between goldsmiths and other artisans who experimented with metal button production.

¹⁴ See Tarchi, "Fili e intrecci," 26-31; Bigazzi, "Il giardino dei bottoni," 18-25. See also Levi Pisetzký, *Storia del costume in Italia*, 4: 263, and "L'art du brodeur," and "Les plaisirs," in *L'homme paré*, 13 and 14-16.

¹⁵ Buttons could also be made of brass, copper, or glass: see Frugoni, *Il Medioevo sul naso*, 102-3. It is a curious observation that in Etienne Boileau's *Registri dei Mestieri*, button-making has, among various categories, that of goldsmiths who worked with precious metals and with glass; see De Buzzaccarini and Minici, *Bottoni & Bottoni*, 11; and Zanieri, "Splendide illusioni," 126.

¹⁶ On the variety of Venetian glass art productions, see Luigi Zecchin, *Vetro e vetrai di Murano*, 3 vols. (Venice, 1987-1990).

wood and fabric buttons had a “crossover” character. The button whose mold had been manufactured in wood by the button mold maker had to be finished, in various cases, by brass workers, embroiderers, tailors, or ribbon- and braid-makers.¹⁷

During the seventeenth and eighteenth centuries, Italian button production clearly became less concentrated in the hands of goldsmiths and jewelers. The refined production of jewel-buttons remained a high-quality manufacture destined for a restricted circle of consumers. It is mainly in the eighteenth century that we observe widespread attempts to imitate the refined original products in pleasant *bijouterie*-like objects directed toward a wider selection of consumers.

The first Italian creations of this new type were made within the context of the early modern period, when the button par excellence was still that produced with precious materials. In some cases, they were imported or reflected attempts to imitate work procedures found abroad. At first, these attempts involved craftspeople working with metals. In other cases, innovation seems to have taken place inside the guilds themselves, through the efforts of artisans who were trying to find new products better suited to the imperatives of fashion and current taste. This seems to be especially true for pearl and glass button manufacturers, whose production had rather ancient origins in Italy.¹⁸ The legal tools used by local government authorities to attract a skilled work force or to stimulate innovation mainly fall under the category of privilege: patents, tax exemptions, or concessions for privileged manufactures allowed innovation to penetrate the tightly ruled (at least formally) context of guild laws.¹⁹

¹⁷ Diderot and D’Alembert, *Encyclopédie, ad vocem* “bouton”; Grisellini, *Dizionario delle arti e de’ mestieri*, Bot-Cam, *ad vocem* “bottonaio”; Savary de Bruslons, *Dictionnaire universel de commerce, ad vocem* “bouton” and “boutonnier”; Poli, *I mestieri della moda a Venezia*, 149.

¹⁸ Archivio di Stato di Venezia, Arti, b. 437, Tariffario dell’arte dei perleri, 1800; Censori, b. 41, Capitolare del 1766 dell’arte dei perleri and b. 22, f. 27, Processo sulle differenze fra perleri-supialume, margariteri e verieri di Murano.

¹⁹ On the spread of innovation in the early modern period, see Carlo Marco Belfanti, “Between Mercantilism and Market: Privileges for Invention in Early Modern Europe,” *Journal of Institutional Economics* 2 (Dec. 2006): 319-38; Belfanti, “Guilds, Patents and the Circulation of Technical Knowledge: Northern Italy during the Early Modern Age,” *Technology and Culture* 45 (July 2004): 569-89. See also Massa and Moioli, eds., *Dalla corporazione al mutuo soccorso*, Parte II, 275-442. On the penetration of innovation in Venetian glass guilds, see Francesca Trivellato, *Fondamenta dei vetrai: Lavoro, tecnologia e mercato a Venezia tra Sei e Settecento* (Rome, 2000), 191-217.

Gold and Silver Buttons in French and English Style

Italian attempts to import new work procedures are especially evident in the production of metallic alloy buttons. Gilded and plated buttons successfully imitated gold and silver buttons, as well as the decorative motifs of the refined and ancient Huguenot production in intertwined thread.²⁰ These very bright products were obtained through the use of gilding techniques in bronze or brass, first experimented with in France. The English entrepreneur Matthew Boulton, who is well-known as James Watt's partner in the production of steam engines, started his career as a fine craftsman of buttons, buckles, watch chains, and metal furnishings. He understood the potential of French gilding techniques, and he successfully employed huge sums of money and a number of men to steal the secrets of those procedures, through which bright, fake, extremely profitable objects could be produced.²¹

The later improvement of these techniques determined the success of English productions. Birmingham became an internationally famous center of button manufacturers. In England, improvements in plating techniques and metalwork led to the creation of a vast range of buttons of varied quality. For example, Boulton perfected a method for the production of quality buttons using enamel. Among these new creations, those in polished flat steel held a place of renown; after skilled work, they could be used to support refined *bijouterie*. The watchmaker Christopher Pinchebeck experimented with a copper, brass, and zinc alloy that could be used, with good results, in the manufacture of covers and rounded surfaces. Known as pinchbeck, these surfaces could later be engraved with emblems, monograms, or military arms.²²

Italian governments, including those in a few urban centers in northern Italy (Turin, Milan, and Bergamo), also understood the potential of the new manufactures, and they tried to stimulate both the import of new gilding and plating techniques and the introduction of improvements whose objective was the production of metal ware and furnishings directed at a wider market. In each case, the importation of the new techniques, through the instrument of privilege, had somewhat different results, depending on the balance shifts generated by the introduction of the techniques into the various guilds, as well as on the presence of further incentives granted by the authorities to cultivate, imitate, support, and spread the new techniques once they had been introduced.

²⁰ See Liscia Bemporad and Chiarelli, eds., *Appesi a un filo*.

²¹ Landes, *La ricchezza e la povertà delle nazioni*, 294-95; and Albert Edward Musson and Eric Robinson, *Science and Technology in the Industrial Revolution* (Manchester, England, 1969), 218-21.

²² De Buzzaccarini and Minici, *Bottoni & Bottoni*, 23.

“Gilding Factories” and the Universities for Makers of Gold, Silver, and Spun Material Buttons in Turin

Our first case concerns the metal button manufacturers established in Turin in the mid-eighteenth century. Our documents, mainly from that period, allowed us to identify a rarity inside the Turin guild system—the presence of a “university” of button-makers, autonomous and independent from other guilds, who worked with gold and silver threads. This Turin guild mainly employed women and produced scarves, fringes, fabric decorations, and other small pieces. Our sources explain that work of this kind was more suitable for women, because it involved the use of a needle and long periods sitting in front of a desk.²³

This category of button-makers was granted autonomy in a rather delicate moment, which marked a transition to this kind of “corrupt” production. Plated metal buttons, produced in huge quantities in France or England, were invading the Italian markets in the middle decades of the eighteenth century, with great success. The button-makers’ university found itself in the middle of a situation in which local government used customs policies to protect traditional button production (jewel-buttons and buttons spun of precious material), but also tried to stimulate the manufacture of plated buttons in the French and English style within the Turin region.²⁴ We have diverse documentation illustrating the complex situation that led Turin button-makers, on the one hand, to continue outdated forms of production in an attempt to defend the privileges they had recently obtained with the establishment of the new guild. On the other hand, enterprising people also took the chance of generating huge profits from the installation of the promising new manufactures. Finally, goldsmiths and Mint authorities controlled the variety and regularity of the objects created by the importation of the new work procedures.

Pleas presented to authorities and the replies given by magistrates dealing with economic and commercial matters often illuminate the presence of differences between national products and new creations. Traditional manufactures were distinguished by the kind of material they used (noble metal with a particular carat weight, precious threads) and by following the “state of art”; new productions were characterized primarily by their apparent similarity to gold buttons. This reference to gold was enough to fully satisfy most consumers.²⁵

²³ Archivio di Stato di Torino, Materie economiche, Commercio, categoria IV, m. 5, orefici; categoria IV, m. 5, ottonai; categoria IV, m. 6, porcellane e maioliche; categoria IV, unità 2, bottonai; categoria IV, m. 19, donne bottonaie; categoria IV, m. 19, orefici statuti e cataloghi; categoria IV, m. 19, Stefano Pacalet.

²⁴ *Ibid.*

²⁵ “Il pubblico il più delle volte è tratto a fornirsene non peraltro che per l'apparente somiglianza che hanno de' bottoni d'oro, della quale idea appagan-

From a few sources we intuit that workers inside a few traditional local manufactures had tried, although rather timidly, to elaborate a catalogue of buttons of various qualities to fulfill the tastes and needs of consumers of different social classes. This idea came from the university of goldsmiths, jewelers, and silversmiths.²⁶ In 1745, they presented a plea to authorities to approval new rules for the guild. The relevant material, in the paragraph about the characteristics of gold works, dealt with two categories of products: the first included luxury products where a superior carat was employed (26 and 6/8); the second included a series of small objects (crosses, rings, snuffboxes, buttons, earrings) with a lower number of carats (20) destined for “peasants and poor people.” For the latter products, goldsmiths proposed to use carats not lower than 20; going any lower would have damaged the high quality standards expected of goldsmiths. There does not seem to have been any follow-up concerning rules for these products; perhaps these were only proposals for temporary regulation. The official art regulations by the early nineteenth century do not allow goldsmiths to use fewer carats than those specified for luxury creations (21 6/8).²⁷ This was probably a result of the great success of plated button manufacturers, which made gold and silver production with a low number of carats following traditional work methods expensive and, in the final analysis, superfluous.

Did button-makers working with gold and silver thread try, perhaps with more freedom than goldsmiths, to create button catalogues in gold and silver thread of varying qualities? The documents we analyzed reveal that producers were hampered by very high quality methods that were outdated.²⁸ Guild rules imposed the exclusive use of gold and silver thread in definite proportions; “lower quality” products with gold and silver thread mixed with other fibers were forbidden and consequently seen as “unauthorized” and “faulty.” Turin button-makers felt threatened, not only by competition from products in which gold and silver thread was mixed with other fibers, but also from more recent buttons called “*quivre/cuivre*

dosi, ne avviene che i bottonai hanno tanto di meno avventori per le loro opere” [Most of the time, the public is induced to acquire these goods only for the apparent likeness they have with gold buttons, and it is satisfied with this idea; but so it happens that button-makers lose customers for their merchandise]: see Archivio di Stato di Torino, Materie economiche, Commercio, categoria IV, unità 2, bottonai, 1753, 15 febbraio.

²⁶ Archivio di Stato di Torino, Materie economiche, Commercio, categoria IV, m. 5, Università degli orefici e dei gioiellieri, suppliche e statuti dell’Arte, 1708.

²⁷ Ibid., and Archivio di Stato di Torino, Materie economiche, categoria IV, m. 19, orefici statuto e cataloghi, 1815.

²⁸ Archivio di Stato di Torino, Materie economiche, Commercio, categoria IV, unità 2, bottonai, 1740, 1753, 1766.

doré” (that is, gilt bronze), and from copper buttons or buttons in other metallic alloys that looked, even in their design, very similar to those done with gold embroidery. Smooth or simply ribbed buttons made with these more recent alloys were not considered as threatening, because they lacked the decorations that could deceive customers. Button-makers considered as “faulty goods” all creations that were not made according to the “rules of art,” including the production of “colored” and “painted” buttons. The result of the imitation process, which was the fruit of careful study and the design of casts, machines, and materials, induced button-makers to ask customs officials to stamp a mark on foreign buttons that would make it possible “at all times to distinguish them from those manufactured” using more traditional methods in the city of Turin.²⁹

Local authorities understood the success of French and English buttons and the potential of the new work techniques, and they soon started to offer prizes and grant privileges to enterprising people who hoped to make profits by founding innovative factories for the production of buttons (for both civilian and military use) and similar small objects in the Turin territory.

Around the mid-1750s, several manufactories were active in the kingdom; they produced a vast range of pinchbeck buttons, buckles, boxes, and various other tombac products.³⁰ The introduction of these techniques was contemporary with the new methods of “painting” and “coloring” china, majolica, and enamel works. All kind of objects were produced: pinchbeck buttons with a wooden core, painted and dyed buttons, silver buttons, silvery metal buttons (all called white and yellow tombac buttons), flat and round buttons for liveries and “ordinary people”; every sort of buckle for shoes, trousers, and the neckline made of pinchbeck; white and yellow metal buckles of the “fine” and “common” kind; silver and plated metal buckles. Tombac and brass, once gilded or painted, were also used for decorating cabinets, chests of drawers, desks, doors, windows, locks, chandeliers, and Catherine wheels (pinwheels).

However, the newly invented buttons called “plated,” with a massive silver sheet soldered on copper, were not very common. Artisans were certain they could skillfully practice this kind of soldering, but the prices imposed by cast engravers were too high to allow much production. There was a strong demand for pinchbeck shirt buttons; for shoe and trouser buckles with steel borders and damascening; for pinchbeck and “fine” and “common” metal thimbles; for pinchbeck and common metal watch keys; and finally, for every kind of pinchbeck snuffbox, made of enamel

²⁹ Ibid.

³⁰ Archivio di Stato di Torino, Materie economiche, Commercio, categoria IV, m. 6, porcellane, maioliche, pichbeck, 1755-65. “Tombac” is an alloy of copper and zinc, used in gilding and to simulate gold.

decorated with animal figures, or of fine and common quality tombac; for pinchbeck, silver, and steel watch chains for men and women; and for enamel dials for clocks and watches.³¹

Work on the new types of buttons was usually associated with traditional production as well as with the manufacture of fancy goods, furnishings, fireplace tools, portable heating sources, gaskets, handles, and door and window parts. These were typically low-priced accessories that could give house interiors a more refined look, with decorations in the fashion that had widely spread, even among the middle classes.³² Experimentation and production of tools and machines could also be associated with the production of buttons and the fusion of thin metal sheets.³³

Foreign production of both buttons and other fancy goods was very competitive. In Turin at the end of the eighteenth century, machine-based button and fancy goods production was still rather limited and could not fulfill local demand for this new type of small objects. Most workers only occasionally experimented with the new techniques. The use of machines offered greater precision and was less tiring, but button crafters, afraid of the new techniques and with limited funds, were reluctant to begin enterprises that required courage and a spirit of adventure. They consequently underestimated the potential offered by the new techniques (speed, simplicity, precision, chromatic shades with strong effects, market opportunities) and kept doing their expensive carving work, which could not compete with foreign products or even with local output from the privileged manufactories.³⁴

Privileged Manufacturers for the Production of Metallic Alloy Buttons on the Venetian Mainland: Gold and Silver Pinchbeck Works in Bergamo

The second case deals with the privileged manufacture of button production on the Venetian mainland. We have documents dating back to the 1770s dealing with the opening of a privileged manufactory for the production of pinchbeck and gilt and silver metal buttons in the territory

³¹ Ibid.

³² See the cases analyzed in the third chapter of Barbara Bettoni, *I beni dell'agiatezz: Stili di vita nelle famiglie bresciane dell'età moderna* (Milan, 2005), 125-291.

³³ Archivio di Stato di Torino, Materie economiche, categoria IV, m. 19, Stefano Pacalet (1780-1797).

³⁴ Ibid.

of Bergamo, the first attempt to introduce this kind of manufacture in the Serenissima.³⁵

The privilege—the foundation of the manufactory and tax exemption—was granted to Giovanni Valania in 1771, for a period of ten years. The plant had been established inside the lodgings of the Vaerini brothers in Bergamo. The renovation of the building and the purchase of sophisticated machinery required the investment of a huge amount of capital. More money had been invested in the creation of canals whose water would be used as a source of energy for the machines. The privilege had been granted with the purpose of starting a business in gold and silver pinchbeck buttons in the French style. The factory employed about thirty workers; foreign supervisors helped them learn to use the machines and taught the new work methods. In particular, we know of the presence of a skilled French master from Lyon.

After the first year, a commission composed of six expert Venetian fancy goods sellers examined the output of the new manufactory. Their report was quite negative: button quality was very low; the gilding had a tendency to tarnish, and had low resistance to wear and tear. According to the commission members, Giovanni Valania's buttons would lose their gilding in just a week. These products could not compete with English, or even French or Milanese goods, which were not as excellent as those from England. The commission also noticed that the producers had not observed the strict rules for marking (a lion of Saint Mark on the rear of the button) and package stamping.

Giovanni Valania and the Vaerini brothers, however, were able to defend themselves, claiming that the commission was biased; there was a strong suspicion that the Venetians had already signed very advantageous supply contracts with some English producers. Foreign buttons were probably sold in Venetian markets with a large mark-up, giving the sellers huge profits. The Venetian fancy-goods sellers were accused of trying to hinder the course of the new manufactures by discrediting the new products to further their own interests.

Giovanni Valania was happy with the first products: some Neapolitan buyers appreciated the quality of gilding and the good price and had ordered shipments of various goods. However, the entrepreneur conceded that his products were not comparable to those of the English, who benefited from more than two centuries of experience in the field. His aim in requesting the privilege had not been to imitate English production; thus he considered the accusations to be unfair. His main objective was to get as close as possible to the quality of French products, which were notoriously inferior to the English. In any case, Valania believed it was only a matter of time before even local products would equal the English

³⁵ Archivio di Stato di Venezia, V Savi, b. 378, 22 dicembre 1772.

quality.³⁶ It was not really fair to revoke the privilege he had been granted for a manufacture, which could also prove useful for other metal objects for domestic use and fancy goods.

Some early nineteenth-century sources describe the new type of button production (for military use) as well-established in other areas under Venetian power. In a flourishing factory in Lumezzane, in the Brescia territory, military button production was accompanied by the production of cutlery, chandeliers, parts for swords and rifles, buckles, and other such small objects.³⁷

French Taste and Design and English Production Methods in Metal Button Production in Milan

The articles of association of both fancy goods and rosary makers refer to the vast range of buckles and buttons sold on the Milan market in the mid-eighteenth century.³⁸ They were used for shoes and shirts and were made of tin, brass, steel, or gilded or silver-plated iron; other versions, whose decorative and chromatic effect was stronger, were completely manufactured in glass or metal, with the addition of stones and mother-of-pearl. These products were in strong demand in the local markets and came mainly from abroad, especially from France and Flanders, and from Genoa and Venice harbors.

The sources for the Milan case show how, in the second half of the eighteenth century, various Milanese artisans attempted to imitate button and fancy goods products from France and England. The enterprising spirit of some Mint engravers began a long, continuous process leading in the early nineteenth century to the success and fame of Milanese buttons as very high quality goods, a reputation that spread to foreign countries. Local authorities consistently supported these enterprises, understanding the potential of new metalwork techniques in the French and English style. They funded the opening of new businesses and supported courses for the creation of a highly qualified work force.³⁹

³⁶ Ibid. Valania's only task was the production of buttons in the French style, or the style of other countries; his company never tried to imitate English buttons, as it was impossible for a new factory, in a period of one, two, or even four years, to reach the level of English factories, which had so long practiced their art and attained such a high level of perfection that they held first place in this kind of manufacture; see Savary de Bruslons, *Dictionnaire universel de commerce, ad vocem* "bouton" and "boutonnier."

³⁷ Archivio di Stato di Novara, Archivio Torielli di Vergano, b. 173-m.

³⁸ Archivio di Stato di Milano, Atti di governo, Commercio, p.a., b. 263, chincaglieri, coronari università, 1741.

³⁹ Archivio di Stato di Milano, Atti di governo, Commercio, p.a., b. 222, 1781-1791.

However, the first attempts at introducing the new manufactures caused a series of disputes inside the guild system. The privilege was granted to two skilled Mint engravers, Antonio Guillemard and Cristoforo Worcher, who, after preparing melting casts and various button-producing instruments, succeeded in creating a range of accessories whose production had been reserved for goldsmiths and silversmiths. Previously, local production of buckles and buttons could not compete with analogous French creations, which excelled for “*miglior travaglio*” (better workmanship), acceptable prices, and, above all, “good taste.”

Guillemard and Worcher tried to exploit their own engraving skills. They prepared designs and invented models, which they would later entrust to selected members of the goldsmiths’ guild; their enterprising spirit, however, hurt the interests of other goldsmiths. The Mint engravers’ interest in buckle and button production was considered scandalous, because their only task should have been coin minting. They obtained a privilege precisely because they were more skillful in the design of models and decorative motifs, and in the engraving of casts, which were indispensable for serial production of these accessories. Milanese goldsmiths and silversmiths would soon follow their example.⁴⁰

In our sources, we often find reference to the themes of drawing skill and of education in good taste. A proposal was made at the beginning of the 1780s that goldsmiths and silversmiths attend drawing courses: the “mediocrity of most goldsmiths was due to their poor drawing skills,” though it was to them that the production of gold, silver, and mixed objects had always been entrusted in Milan. Course attendance and a certificate from the local fine arts academy were considered basic ingredients for “elegant, good taste manufactures.” A stronger familiarity with drawing techniques would also be useful in learning enamel work and the production of *bijouterie*, which was so fashionable. The suggestion was made to set aside part of the tax revenues paid by goldsmiths and fancy goods makers to build machines for the production of gold and silver manufactures—watchcases, cases, boxes, and other fancy goods whose production was often associated with buttons—that had not yet begun in Milan. Another proposal was to select the best artists among goldsmiths and send them to Paris to work there to improve their taste.⁴¹

The new work techniques provided interesting profit perspectives, as they allowed the differentiation of production into a vast range of products in high demand in local markets: the production of handles, curtain knobs, and a variety of furnishings for domestic use could accompany button-making. Support was directed especially toward stimulating the activities

⁴⁰ Ibid.

⁴¹ Ibid.

of entrepreneurs who could learn the secrets of plated-metal work procedures from Birmingham factories.

It was in Birmingham that artisans had recently experimented with new techniques that made it possible to gild brass surfaces and burnish copper ones.⁴² Marsilio Landriani, during one of his trips to the Birmingham factories, had managed to discover the secrets of Boulton's formula, which was behind the so-called Birmingham platen. He wanted to share these secrets for brass gilding and copper burnishing with a few Milanese crafters on the condition that those artisans would replace their old tools (round burin and hammer), which required "slow, hard work," with "a certain number of casts to imprint brass sheets with."

Landriani also tried to learn the secrets of the English gilding that the French called "*d'or mat*" (ormolu), and of creating the various shades of common gilding. These procedures were already partially known to the Milanese work force, but the products they made had been, in Landriani's opinion, "very imperfect" and could surely be improved on. He suggested that local authorities try to attract a specialized work force from Paris, where this kind of manufacture was in demand, and where a number of craftspeople specializing in metal gilding techniques lived. He thought they were likely to agree to move to Milan, bringing their knowledge, in exchange for travel expenses and free lodging.⁴³

The support of local authorities, the courses in the Milanese fine arts academy, the skill of artisans, and the cooperation of the work force (including some foreigners) expert in metallurgic techniques all contributed to the successful conclusion of the process the Mint engravers had started in the 1780s. In the meantime, Milanese button-makers had widened their range of products. Silver buckles and buttons in the French style, which had become outmoded in the 1780s, were accompanied, and then replaced, by metal-plated button and fancy goods production in the English style.

In the late decades of the eighteenth century, fashion had demanded innovative metal manufactures. At the beginning of the nineteenth century, one Mr. Atanasio, "professor of bijouterie and composer in gold and other metals in the English style," made a plea for building a *bijouterie* factory in Milan. He attached various documents and a steel button of "new fine invention." At the same time a Mr. Carnevali, also engaged in steel buckle and button production, was dispatched from

⁴² Marsilio Landriani, *Relazioni di Marsilio Landriani sui progressi delle manifatture in Europa alla fine del Settecento*, ed. Mario Pessina (Milan, 1981), 235-40.

⁴³ *Ibid.*

Venice to Turin with the aim of learning “diamond faceting and how to work with steel and other metals.”⁴⁴

City guides and almanacs from the early decades of the nineteenth century bear witness to how well established steel and metal button production in the English style had become in Milan. This kind of manufacture was often associated with the production of brass knobs, metal curtain rails, candelabra, and other fancy goods for domestic use, and, in fewer cases, with ribbon and braid production.⁴⁵

Glass Buttons in Venice

Venetian glass button and fake lamp-melted pearl manufacture was a very old technique whose roots date back to the centuries when buttons started to spread in European clothes fastening. There were a few cases, between the Middle Ages and the early modern period, in which glass was used to replace crystal in sophisticated button and small jewelry objects.⁴⁶

Until the eighteenth century, vitreous paste was melted in a color range that was rather limited compared with the color scales that would become available in the following centuries: light, transparent semi-finished products could be used to imitate crystal, but not many other precious materials. Artisans experimenting with enamel lumps and innovative vitreous paste in the Murano furnaces finally made an incredible variety of chromatic shades available. Glass could be used in the creation of refined *bijouterie* products, prepared with the same care normally devoted to jewels.⁴⁷ Different kinds of vitreous paste could be

⁴⁴ Archivio di Stato di Milano, Atti di governo, Commercio, p. m., b. 97, 1802-1822.

⁴⁵ See *Utile giornale ossia guida di Milano*, fascicolo (dic. 1840), 358; fascicolo (1841), 361; fascicolo (1845), 408; Giovanni Frattini, *Storia e statistica della industria manifatturiera in Lombardia* (Milan, 1856), 138-39.

⁴⁶ On the use of glass and enamel in button-making see Zanieri, “Splendide illusioni,” 126, and Donata Grassoni, “Gemme e vetro per i bottoni,” in Liscia Bemporad and Chiarelli, eds., *Appesi a un filo*, 114-17. The latter says (p. 115): “it is interesting to notice that for both Lescomb and Hughes, the expressions Jewel buttons and Jeweled buttons refer both to buttons with precious and semiprecious stones and to vitreous paste stones.” Grassoni’s reference is to Elizabeth Hughes and Marion Lester, *The Big Book of Buttons* (1981; Sedgwick, 1991). See also Levi Pisetzky, *Il costume e la moda*, 171, who talks about the use of fake stones instead of real ones in fourteenth-century works by “paternostreri.” She also mentions the use of enamel and glass decorations in the fourteenth century (see p. 33).

⁴⁷ A very interesting study on Venetian glass colors can be found in Carlo Neumann Rizzi, *Memoria storica, tecnica, scientifica dell’Arte del vetro* (Venice,

distinguished from each other using the name of the precious stones and minerals they imitated. The glass mixtures produced were almost indistinguishable from the originals they imitated (cornelian, agate, lapis lazuli, ruby, mother-of-pearl, amber, and grenade), thanks to their texture, reflexes, crevices, and veins.⁴⁸

All-glass button production was typical of Venetian manufacture. In his dictionary of arts and trades, Grisellini divided “bottonai” into two categories: those who made the buttons and those who sold them. Among the former were various workers: button-core makers, metal button-makers, artisans making buttons from stones, the refined button-makers who used precious spun materials (goat hair, angora, silk, gold, silver thread), and, finally, those who made buttons by melting enamel and glass with the heat of a lamp.⁴⁹

During the seventeenth and eighteenth centuries, glass button work was mainly entrusted to “*perleri*” (makers of fake pearls using lamps), who represented one of the branches of the Venetian glass guild. Their vast range of accessories (fake pearls, grains, hair and shawl needles, brooches) was made using the heat of a lamp to melt colored glass canes and lumps of vitreous paste.⁵⁰ A special class of glassmakers, called “*smalteri*” (enamel makers), produced these semi-finished products in Murano furnaces. Through the use of a vast range of vitreous pastes, the *perleri* were able to obtain a variety of strongly innovative products to meet the taste and the buying power of an increasing segment of consumers. Other sources tell us that in the second half of the eighteenth century a range of similar products (“button ware,” large beads, “paternosters”) had been created, probably by the *smalteri*, who worked on semi-finished products. The initiative of these Murano glassmakers had caused one of the many internal conflicts in the guild: it was increasingly difficult to adapt legislation to every new discovery, to identify exclusive productions,

1811), 49-68; see also Luigi Zecchin, *Il ricettario Darduin: un codice vetrario* (Venezia, 1986).

⁴⁸ Archivio di Stato di Venezia, Arti, b. 437, Tariffario dell’Arte dei perleri, 1800.

⁴⁹ Grisellini refers to workers using a lamp to heat glass as “*margaritaj*”; see Grisellini, *Dizionario delle arti e de’ mestieri*, 17. As documents concerning Venetian glass guilds show, those who used lamps in this kind of work were more properly called *perleri*; see Archivio di Stato di Venezia, Censori, b. 22, f. 27, Processo sulle differenze fra perleri-suppialume, margariteri e verieri di Murano.

⁵⁰ See Archivio di Stato di Venezia, Censori, b. 41, Capitolare del 1766, and b. 22, f. 27, Processo sulle differenze fra perleri-suppialume, margariteri e verieri di Murano, where the distinction between “mother” and “daughter” arts in Venetian glass guilds is referred to and explained.

especially when craftspeople from different areas were able to create such similar products.⁵¹

Beginning in the seventeenth century, Bohemian glass factories began to compete with Venetian products in foreign markets.⁵² With fake pearls, as with all-glass buttons, Bohemian artisans were not able to steal all the fabrication secrets from the Venetians, but they used more advanced technical procedures. The machinery they used to polish beads, in particular, was up-to-date. Their procedures allowed the production of vast quantities of beads in less time and at lower cost. Pearls in the Venetian style were also made in France and probably in England and Spain, too. Other centers were active in Italy and in the southern regions of Germany. In these cases, businesses were often managed by Venetian glass-makers who had left the Dominante looking for fortune.⁵³

Venice's reaction to competition from other centers was both external and internal. Externally, Venetian authorities intensified their "hunt" for counterfeits and against the smuggling of vitreous paste semi-finished products used by *perleri*. They had the cooperation of their hired killers, but they also adopted a system that rewarded returning fugitives. This was how Venice tried to prevent the best artisans from leaving, or to bring them back if they did. Internally, Venetian authorities had forbidden the import of products, declared as "prohibited," which had been made abroad and were offered at a low price that enticed Venetian customers.

Foreign sovereigns, on the other hand, tried to steal the secrets of Venetian production, sending their workers to the city to learn. Sometimes these workers, having become particularly skillful in the trade, were able to become guild members through the concession of a privilege. In some cases these "acquired" craftspeople remained faithful to Venice, but in others they took advantage of their position inside the guild to better discover trade secrets and thus to take part in the illicit system of expatriations. The Dominante never refused to accept new artisans, if they

⁵¹ Archivio di Stato di Venezia, Arti, Tariffario dell'Arte dei perleri, 1800, and Censori, b. 22, f. 27, Processo sulle differenze fra perleri-suppiialume, margariteri e verieri di Murano.

⁵² For further information on Bohemian competition in the eighteenth century, see Bruno Caizzi, *Industria e commercio nella Repubblica veneta nel XVII secolo* (Milan, 1965).

⁵³ The expatriation of Venetian glass guild workers was particularly problematic during the second half of the eighteenth century, but its origins date back to the previous century; see Sebastiano Molin, *Sull'arte vetraria* (Venice, 1843), 26; Zecchin, *Vetro e vetrai di Murano*, 1: 91; Giuseppe Morazzoni, *Le conterie veneziane dal XIII al XIX secolo* (Venice, 1953), 44; and Antonio Neri, *L'Arte vetraria distinta in libri sette* (Florence, 1612). On immigration stories, see Trivellato, *Fondamenta dei vetrai*, 247-63.

were particularly skillful, even though it always harbored suspicions of foreigners. It seems clear that the authorities in various countries tried to have the best craftspeople; they hunted master workers, who were the only ones who knew the trade secrets. The effects of foreign competition were especially felt in the late decades of the eighteenth century. After the fall of the Republic, many artisans moved to France.⁵⁴

Analysis of long-term export data reveals that the Venetian production of fake pearls and glass beads was never equaled, especially in quality.⁵⁵ In foreign countries, bead production problems were connected not only with the appropriation of the most sophisticated blowing, casting, and decoration techniques, but also with the modalities of the supplies of semi-finished material. The expansion of Venetian trade and its recovery after 1830, following the downturn of the last twenty years of the eighteenth century, were perhaps possible as a result of the “submerged” activities that favored the spread, continuation, and evolution of these jobs.⁵⁶ Illicit traffic had favored the expatriation of the glass-making trade. From a long-term perspective, in the following century Venice had the chance to recover through the union of original skills with new knowledge likely learned during the dialogue with foreign competition.

Conclusions

In the last two centuries of the early modern period, button production in Italy was decreasingly concentrated in the hands of goldsmiths and jewelers. The production of luxury creations destined for a limited segment of consumers continued, but beginning in the second half of the eighteenth century, work procedures favored the production of buttons with strong decorative and chromatic effects made with materials less valuable than gold, silver, and precious stones. We see the spread of new

⁵⁴ These observations are based on the study of documents from Archivio di Stato di Venezia, Inquisitorato alle Arti, b. 822 (examinations and other information from criminal trials); also see Archivio di Stato di Venezia, Savi alla mercanzia, diversorum, serie seconda, b. 385, n. 58.

⁵⁵ The data we compared come from Francesca Trivellato, “Echi della periferia: Note sulla circolazione e la produzione delle perle di vetro veneziane nei secoli XVII-XVIII,” in *La ricerca folklorica: contributi allo studio della cultura delle classi popolari* 34 (April 1996): 25-34; Giovanni Campos, “Il commercio esterno veneziano della seconda metà del settecento secondo le statistiche ufficiali,” in *Archivio veneto* 19 (1936): 145-83; Dominique Bussolin, *Les célèbres verreries de Venise et de Murano, description historique, technologique, et statistique de cette industrie divisée dans ses diverses branches avec des notices sur le commerce en général des émaux et des conteries*, (Venice, 1847).

⁵⁶ See Pauline B. Marascutto and Mario Stainer, *Perle veneziane* (Verona, 1991), 66.

technical knowledge, which led to the creation of “the button as new product.” In the cases we have analyzed, we also see an institutional organization in which the guilds and the system of granting privileges, patents, and licenses tended to counterbalance each other.⁵⁷

Tradition and innovation tend to cohabit, especially in the first phase of the introduction of new work procedures. Internal guild conflicts can delay, or even deter, the rooting of new types of work. In some cases, however, along with foreign competition, they stimulate an original re-interpretation of the imported techniques. Guild systems were sufficiently permeable to innovation; new techniques were learned with different timing and always through the mediation of a skilled work force in the field. Sometimes the stimulus for innovation to meet changing demands influenced by new fashions and tastes came from the guild system itself.

In the case of Venetian *perleri* and *smalteri*, the idea for the creation of an updated range of accessories was born inside the Venetian glass guild, stimulated by strong competition from Bohemia. The use of glass to replace crystal had already been experimented with in earlier forms of button production. The variety of vitreous pastes and enamel shades and colors created in the eighteenth century encouraged the imitation of precious mineral and stone buttons, thus giving place to *bijouterie*-like products, so much desired and appreciated by consumers of the age. As noted, Venetian fake pearl, “button ware,” and glass bead products were never equaled in quality by foreign manufactures, not even during periods of decadence. Venetian production quality was strongly connected with the characteristics of semi-finished materials, which came from mixtures and formulas that had been closely guarded for centuries; it was impossible to reproduce them abroad except through the expatriation of a skilled Venetian work force and their tools.

In the case of metal works, the beginning of the new production type was made possible in Italy mainly through the importation or the attempts at imitation of work procedures invented abroad. The cases we analyzed tell us how the early spread of these productions in the urban centers of northern Italy were encouraged and supported by local governments wanting to introduce products already largely available on English and French markets into Italy, where these creations were in strong demand. Italian territories’ imports of foreign buttons were constantly rising, as a vast consumer segment found metal buttons in the English and French style a valid alternative to precious buttons. The new accessories could be used both in the civilian and military world, decorating clothes, liveries, and uniforms.

⁵⁷ See Belfanti, “Guilds, Patents and the Circulation of Technical Knowledge,” 569-89.

Local governments generally encouraged and supported the introduction of promising new work procedures in button manufacture. Now that many people used buttons, their production could be associated with the production of fancy goods and objects and of utensils for domestic use. Portable heating sources (small stoves, hand and foot warmers), tongs, andirons and other fireplace tools, small containers and precision instruments (cases, snuffboxes, watchcases, ink pots, thimbles and sewing kits), curtain knobs and sticks, handles and other door and window accessories all were part of that category of mobile “comfort” goods that the fashion for small spaces and small pleasures promoted in the eighteenth century.

In the European context, where English button and fancy goods manufactures were unparalleled in work perfection and metal quality, the case histories we have analyzed have in common the artisans’ objective, in their early experimentation with new techniques, of creating products similar to the French imitation of English products. Only later did they attempt to imitate the English products directly. Buttons imported from France, which were often imitations of English products, were in great demand in Italian markets. For the new button entrepreneurs, therefore, the first objective was to attain the level of design and quality of French imitations of English buttons.

Italian governments, which were ready to grant concessions and privilege, attracted French technicians and masters. Their cooperation was a basic component in the establishment of new work procedures in northern Italy. In Turin, the encounter between French artisans and local brass and “*dorerie*” (gilding factories) manufacturers resulted in high-quality products, which were nevertheless unable to compete with those of the French because of higher production costs. Sophisticated machinery for working, melting, and cleaning metals had been introduced; but the work force who had to operate the machines increased production costs. There was no infrastructure near the early factories for the channeling of hydraulic energy. In the Bergamo case, the first pinchbeck button manufactures were accompanied by large investments in building canals for exploiting hydraulic energy, the purchase of machinery, and attracting a specialized work force from abroad. Product quality was perhaps equal to French production, but certainly not in the early phase of introducing new work procedures.

In the Milan case, Mint engravers were able to start a long, continuous process in the eighteenth century of good imitation of French products. Later they added fancy goods and steel button, burnished copper, and gilt brass production typical of English manufactures. Engravers, who were more expert in metal melting and cast preparation, produced objects that were typically made by jewelers and goldsmiths, stimulating their businesses. Goldsmiths were urged to attend drawing courses at the local fine arts academy, to go to France to learn the trade, and to receive lessons in good taste, design, and elegance in the workshops of Parisian artisans.

Milanese fancy goods, buckle, and button producers could also take advantage of the mediation of experts who learned the secrets of English metallic mixtures during their visits to the main Birmingham factories. They contributed to the local spread of the new techniques of false gilding of brass and copper-burnishing. In the second half of the eighteenth century and the early years of the nineteenth century, goldsmiths and engravers in the Milan area were protagonists of great progress; here we discover and understand the deep roots of the primacy obtained by Milanese entrepreneurs in metal button production in the first half of the nineteenth century.