

Artificial Light in the Aristocratic Palaces in the Po Valley between the 17th and 18th Centuries

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Modesto Paroletti's remark about the *salone* in Stupinigi, "c'est une architecture qui se prête aux illusions de la nuit" (Paroletti 1817, 70), clears up an aspect that is often disregarded by literature: the important role and influence of lighting in the planning and in the living of the magnificent rooms in aristocratic palaces. It is a very large and complex topic, which regards the ways and "times" of living and, more generally, it is closely intertwined with social and ceremonial aspects of aristocracy: the possibility of lighting artificially – which means to extend the times of living until then marked by the sun light – is not within the reach of everybody and therefore it defines behaviour and habits of an elite.

This research is focused on the typical technical aspects of artificial lighting inside aristocratic palaces; besides the lighting devices – which had greatly increased and had continuously undergone significant modifications – and their disposition in important reception halls and rooms, the research proposes to define the results of a lighting project that was becoming closely integrated with the buildings, thus influencing their planning. The study is carried out with a careful analysis of some buildings that were significant in the Duchies of the Este and Farnese families, and extended to examples and experiences in other areas of northern Italy such as Turin, Genoa and Milan, proposing in the paper the more interesting case-studies. The period which is taken into account goes from the end of the 17th century and the first half of the 18th, which had evidenced a few changes and aroused questions of a certain interest. Due to the lack of fittings in buildings or their replacements

during the time, other sources – such as archival documents, iconography as well as chroniclers' and travellers' descriptions – are considered, and they are compared to the definition of inner spaces and the material traces of disappeared devices.

Starting our survey from some palaces in Emilia dated back to the half of the 17th century, first evidences come out from the reading of their inventories; we are aware of the limits inherent in these sources of information.¹ Documents describe buildings almost without permanent candle-holding fittings or other devices for artificial lighting, whereas there is an important presence of candlesticks. This is the case, e.g. of the residences of the Marquis Rangoni in Parma and Modena, of the counts Costa's city palace in Piacenza;² moreover, going up in the rank, of Este and Farnese's countryside buildings in Colorno and Sassuolo. On this topic, a very detailed inventory describes the Marquis Rangoni's residences in Parma and in Roccabianca, a feud of the family. In the *guardaroba* of the countryside one, there were 29 candlesticks, of different materials, sizes and manufacture. Among the materials, there were brass and painted wood; otherwise both silver and silvered-wood and silvered-stucco are only mentioned in the city residence. Besides, the specific use of candleholders is often recognized, such as the "candeglieri per tavola," for the kitchen, for the chapel, for playing the "truccho" and for decorating the "bucintoro." It suggests how the use of these objects could fully respond to the daily needs of artificial lighting of the residence. Candlesticks also seem to be fit representational needs. In the early decades of the 18th century, when the Marquis suddenly was informed that

the prince of Parma was planning to visit his residence in Spilamberto, he sent to the administrator a few objects in order to offer an adequate reception, among which were “some couples of candleholders.” The candlestick, each time of the more suitable type, is the most convenient, cheap and effective device, and also appropriate for receiving a prince, to illuminate a noble residence.

This hypothesis is coherent with the results of a recent research, which advanced some suggestions about lighting and uses of buildings in Emilia through the investigation of the decorations of rooms (Balboni and Corradini 2011). Starting from the 17th century, the illusionistic architectures painted on walls and ceilings by artists, such as Ferdinando Galli Bibiena or Agostino Mitelli, who used to work for theatre scenographies are more widespread in palaces. In particular, the study of light and shade effects simulated by painters in order to get three-dimensional illusions are evidence of the importance of natural light for their correct perception. Among the many remarkable examples still existing, we'll focus on the hall [16.20m.x9.50m.x10.30m. high] in the palazzo Costa in Piacenza, where Ferdinando Galli Bibiena [also the architect of the reform] proposed around 1690, on all the surfaces of the room, daring painted architectures, which enlarge the space in each direction (Matteucci 1979, 140). Such as in other aristocratic palaces where he worked, the of shade is obtained from the natural lighting coming either from the windows, or from the painted openings on walls and vault, as we can usually find in the great decorations of buildings in Emilia. So, it appears quite clear that the role played by natural light is fundamental to perceive these particular decorations and makes us think that these rooms were mainly used for a day-time life.

Therefore, the challenge of the architects and scene designers was how to illuminate these great halls and rooms, for instance when festivities, balls and dinners were organized. In the hall in Piacenza, the investigation in situ allowed the discovery on the vault of three holes in a line for three chandeliers. Probably three wooden painted chandeliers – described in a document dated back to 1736 – were hung. Their position contributes to illuminating properly the whole rectangular hall; besides, although artificial light doesn't seem really suitable

to perceive this kind of scenographic painted wall, the effects offered by the diffused lighting of chandeliers – which Bibiena defined as “mezzano” (Bibiena 1711, 113), which means neither too far nor too close to surfaces – doesn't conflict too much with the credible illusions so well created by Bibiena through the expert use of perspective and the play of shades. On the walls it hasn't been possible to identify with certainty tracks of lighting devices. Probably appliqués were used in 1737, as an inventory suggests, but we do not have any documentary evidence to link these items with Bibiena's work. In fact, their light skimming over the surfaces isn't fit for the painted architectures lying behind. Besides, they are incongruous with Bibiena's careful remarks on the use and effects of artificial lighting in theatre scenes, which are present in his treatise: he suggests not to place the scenes too close, in order to get enough space and insert the artificial light far from behind the scene. Only in this way it is possible to light its whole decorated surface in a good way.

Archival documents describe with more details the situation in the palazzo Farnese Rangoni in Parma. Some authors attribute the design of the main façade, and also the stucco decorations of the great staircase and entrance hall, to Ferdinando Galli Bibiena in the 1690s to celebrate the great festivities of the wedding between Odoardo Farnese and Dorotea Sofia of Neuburg (Barocelli 2007). We may suppose that also lighting fittings described in the inventory of 1696 are linked to this event. Again, the several candlesticks in the “guardaroba” (49) make their main role evident. The number of rooms lit with permanent devices is limited, and it is interesting to observe their disposition, which follows the order of the Baroque ceremonial described in Anna Maria Matteucci's studies, and correspond with Bibiena's reformed areas: crossing the main door a lanternone lit the entrance hall; from here you can reach the great staircase which is also lit with a *lanternone*; then you arrive at the *piano nobile*, where the lighting devices are arranged in relation to the importance and use of the rooms. Only two rooms placed near the hall, probably with reception uses, were lit by chandeliers with six or 12 candles “with some branches in silvered metal which support the candles, and embellished with several cristal drops.” In the hall

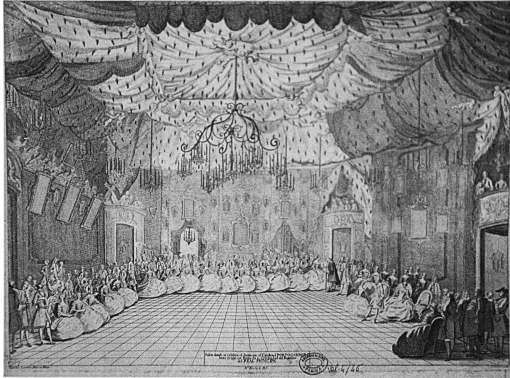


Fig. 1: J.B. Boudard. Festivities organized in 1752 by the cardinal Porto Carrero for the Prince's baptism in the hall in Palazzo Farnese; in the middle, the big chandelier described in a late-17th century inventory (Barocelli 2007, 15).

we can find the more remarkable system of lighting. The painted architectures on the walls were lit with a huge chandelier with 216 candles hanging in the middle of the room: a big iron stick with 24 branches supported “72 chandeliers and each of them bears three candles” (Fig. 1). Four wooden torches painted with different colours, 3.5 braccio high (three m.) were placed on the corners to illuminate the darker parts of the rectangular room.

In general, during the festivities, the widespread use of chandeliers inside the buildings is quite common. A rich iconography regards the palazzo Fibbia in Bologna, where the family organized in 1712 [?] the celebrations in Benedetto Erba Odescalchi's honour – the Archbishop of Milan (Camerini 1982, 26-27). Several chandeliers, generally a bigger one in the middle and smaller ones around, are represented inside the halls in the miniatures that celebrate the noble family. However, with the palaces that it has been possible to study, it is to be noted that the source of lighting is totally ascribed to candle-holding fittings, with almost no mirrors or other devices. As well as for Bibiena is scenographies in theatres (Povoledo 1970, 7), the main topic seems to be the placing of candles in proper positions and amounts in order to get proper effects, with a few influences on the architectural arrangement of the palaces.

Moving to 18th century palaces, the research pointed out some differences which raised a few

questions of a certain interest. Carrying out the survey from a quantitative point of view, emerges quite clear evidence: whenever inventories of different periods of aristocratic buildings have been analyzed, it has been possible to record an increase in the number and variety of lighting devices [e.g. for the ducal palace in Sassuolo, for the reggia in Colorno, for the Trettenero palace in Piacenza]. Chandeliers and appliqués are a more and more common element in representative rooms in noble residences (Fig. 2). These changes should be linked to the changes of the rager context, which this paper can only mention: e.g., the possible differences in ways of living in the residences by the noble élites. On this subject, it is appropriate to remember what De Brosse said on visiting the court of Modena in 1740. He relates his talks with the marquis Rangoni, who bitterly complains about the confusion created by the French Duchess of Modena, Carlotta Aglae d'Orleans, imposing “the amusing habit of playing biribisso all night long, having supper at six in the morning and going to bed at eight” (De Brosse 1739, 300). This curious anecdote about the lively duchess at



Fig. 2: The print points out the complexity and the interconnection between several movable lighting devices. “Le Jeu n'en vaut pas la chandelle” (D'Allemagne 1891, 297).

the severe and stern court of Modena highlights an interesting aspect: the introduction of a new style of life tending towards living at night and coming from France, upset and influenced the cultural habits of the quiet and peaceful centre of Modena. Coming back to the main matter of the paper, a part from the amount, what's more interesting is the increasing complexity of the lighting projects. The issues connected with the artificial illumination are not only limited to the implementation of the illuminant devices or to their adaptation to the existing spaces. They are in fact developed in the planning phase of complex lighting systems, where lighting devices are integrated, also in an aesthetic manner, with the architectonic and figurative elements in the wide halls and galleries.

In the Ducal palace in Modena (Biondi 1987) an inventory of 1771 reports the great attention for lighting aspects (Valenti and Curti 1986). In the ducal family apartments it's possible to observe a great number of mirrors; permanent lighting devices – such as chandeliers with six or eight flames, often considered small, or cornucopiae with two flames – are in the reception rooms. We can observe a greater effort in lighting the “grande nobile appartamento”: in every room there were one or more richly decorated chandeliers, with 16 or 32 flames; in addition, we can find cornucopiae with four or six flames and “luxurious appliquéés.” Chandeliers and appliquéés, metal-made, can be either silvered or gilded, with roses and drops made of rock crystal, and “padelline” of Venetian crystal. Further decorative elements can be either brass or tin made. Also the furniture took part in lighting effects, such as for the gilded panels with rococo decorations in the salottino d'oro, which was commissioned in 1751 by Francesco III d'Este. But what is more surprising is the Gran Sala. Since the end of the 17th century, travellers have been admiring it during festivities and dinners, describing a room which was illuminated and arranged on the occasion of events, according to the results to be obtained. The inventory of 1771 shows a different conception. The Sala was lit by steady lighting devices bearing 927 flames. Thirteen Venetian crystal chandeliers were hanging from the vault, and they were different in form and dimensions [one is defined “stragrande” and it had 72 can-

dles]. In the intrados of the vault, it's still possible to see the signs of chandeliers: partly influenced by the vault decoration of Marcantonio Franceschini, they were placed in order to get a uniform lighting of the whole room. The walls are lit on the ground floor by 13 appliquéés with five arms. The balcony, realized by Francesco III to place the orchestra, contributes to the lighting project most: above 35 cornucopiae, each one with 18 flames, were borne; below eight chandeliers in Bohemia crystal with eight candles were hung. So, apart from the high number of fittings, the document makes us aware of the great complexity of a project, which involve also the architectural elements, and which tries to solve the problem of lighting in the wide 17th hall. If the furniture and tapestry are not described in the inventory, probably because they were changed and placed according to different events, the presence of lighting devices underlines that they almost grew into an integral part of architecture in an attempt to fit the 17th century *salone* to new requirements.

In different geographic and social contexts the graduated process for the intensification of brightness inside aristocratic residences assumes analogous valences. The Salone in the Palazzina di Caccia at Stupinigi – Turin – started being built in 1729 and was planned by Filippo Juvarra, who projected the architectonic system as well as many decorative details. He also planned the design of the lighting devices in the hall, which consist of 36 appliquéés placed on the 24 pilasters and on the central four pillars. However the 36 appliquéés made of wood commissioned to the sculptor Giuseppe Morocco in 1733, were gilded by Giovanni Carlo Monicelli: he sculpted the head of the deer in copper and silver and he painted 35 appliquéés “with the Pearl grey colour and the Prussian blue,” then he gilded one appliquéé as a trial (Gritella 1987). Later on, we do not know why, the gilded appliquéé was re-painted as the other 35. In 1773, on the occasion of the wedding of Carlo Filippo d'Artois and Maria Teresa di Savoia, the architects who had to plan the lighting system in the interior were really worried about the necessity to make some holes in the vault of the Hall, hanging some chandeliers. They were afraid to overburden the vault so one single chandelier was fixed to the vault, while several lighting

fittings were anchored to the balustrade.³ Several years later Modesto Vittore Paroletti, a member of the Academy of Sciences in Turin, recognized in the Salone a new architectural model, planned and constructed for nocturnal entertainment too (Fig. 3).

The Galleria degli Specchi in the palazzo Balbi-Durazzo in Genoa was accomplished in a completely different environment:⁴ the mirrors, skillfully placed, stress the rhythm of the room [pilasters] and at the same time they seem to endlessly amplify the perception of depth along the shorter sides. All this is enhanced by the presence of statues on pedestals, gilded stuccos, chairs covered with precious fabrics and a vault painted in fresco. The hall is lighted with three huge iron gilt chandeliers bearing 24 candles and hanging from a vaulted roof. Twenty six appliqués with five lights are fixed to the mirrors of the pilasters which, besides rectifying the luminosity of the room, multiply the quantity of light that is reflected in the mirrors (Di Biase 1993, 158).



Fig. 3: The Salone in the Palazzina di Caccia at Stupinigi (Turin). The crystal chandelier, the appliqués and the statues with torches on the balcony were added between the end of the 18th and the 19th century.

In Milan we can observe some early examples showing a perfect integration of the lighting apparatus into the architectural and decorative forms. By the middle of the 18th century, the Governor Gian Luca Pallavicini decided to renew the large gallery called Salone dei Festini, inside the Regio Palazzo Ducale in Milan, incorporating also the contiguous Salone degli Imperatori. The Governor was born in Genoa and he had retained a clear memory of the halls accomplished in the aristocratic palaces of this town. The architect Francesco Croce attends to the planning of the Sala da Ballo and he also designs the fittings “paying a particular attention to the quality of materials used for surfaces, fittings and interior finishings, considering them as a part of the whole project.” The restoration of the Hall [46×10.30m.] was finished in 1751 when it was lighted with “172 brackets bearing 3 candles and 70 brackets each bearing 4 candles” (Forni 1997) (Fig. 4). During the general rehearsal for the first ball, the lighting apparatus consisted only of appliqués bearing 796 candles and it was intensified with mirrors and silver curtains, but the results were not satisfactory. So Croce decided to add other “26 iron appliqués bearing 4 candles in the shape of chandeliers” to be hung below the balcony. Besides, the “light yellow colour of the walls” completely disappeared in comparison with the stuccos and the gilded frames of the mirrors; so Croce decided to avail himself of a false gilding less bright than the colour used for the gilding of the stuccos, thus meeting with some difficulties in keeping to the lighting technique parameters. On the contrary, the Governor was well aware of the importance of textiles on the final result of candle lighting: when his wife Anna, still residing in Genoa, sent him some typical Genoese velvets to tapestry a few rooms of the Palazzo Regio, the Governor criticized the bad hue of colours shown by the candle light. His wife just answered she had bought the velvet textiles by the light of candles and when the windows had been closed. These remarks are very useful to understand how much attention was given to choose the materials for decorations in relation to candle lighting. Pallavicini also bought many chandeliers to decorate the Palazzo Regio and in 1753 he sold his 89 chandeliers to the Empress Maria Teresa for 80,000 fiorini: 46 chandeliers were made in

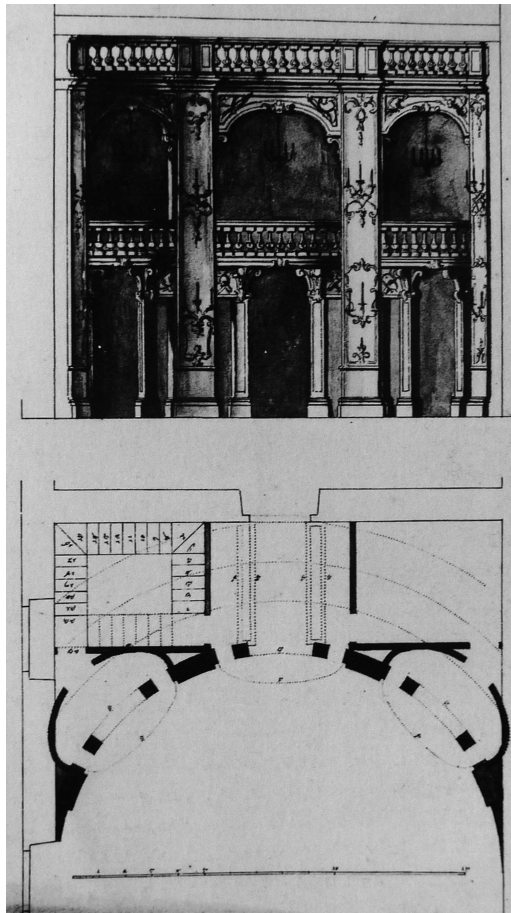


Fig. 4: F. Croce (?). Drawing of the platform for the orchestra in the Salone da Ballo in the Palazzo Regio Ducale in Milan, 1751 (Forni 1997).

Venice while other 43 were imported from Vienna (Table 1).

An inventory dated 1761 describes a further development in the lighting technique used in the large Salone da Ballo and this is more detailed than the previous one: “24 brackets in false gilded iron bearing three candles hanging from the walls above the balcony; another 22 brackets with five candles hanging as above; 28 chandelier supports including their reinforcements were situated on the vaulted roof of the Hall; 28 crystal chandeliers from Vienna, that is 4 bearing 9 candles, 14 bearing 12 candles and 10 chandeliers bearing 18

candles; 28 crystal appliqués, that is 20 bearing 4 candles and 8 Viennese appliqués bearing 3 candles, 10 trumeaux containing 2 candles each: large mirrors of the same size with a gilded stem each containing Viennese lights.” The artificial light apparatus was very complex and created a lot of problems. In 1765 the Governor Ferdinando Asburgo-Este realized that during the parties the hall was too dark and so he ordered “to take away the family portraits and to put mirrors on the empty spaces.” He also added three more chandeliers, each bearing 24 candles. However the great number of candles gave off a lot of smoke, therefore some openings were made in the vaulting roof so as to let the smoke out of the hall. A year later the Archduke Ferdinando began restoring the Gran Sala del Ballo, in order to clean the vault: the stuccoes, the frescoes and the gilded surfaces, which were blackened by smoke again.⁵

The Palazzo Clerici in Milan is described by an inventory of the furniture, tapestry and silverware written down in 1770 which allows us to know the order of hierarchy within the families in relation to the use of the rooms. Lighting is only present in public spaces, in the apartments, in the galleries, in the chapel, but it is not found in the rooms of the servants and in the rooms used for the distribution. However it is interesting to compare the lighting of the two most important rooms in the palace, the Salone da Ballo [15×12m.] and the Galleria Grande [22×5m.] not only for the very rich interior decorations, but also for the different use of the rooms.⁶ The former is often used for parties, it is a wide room after the Italian style [double levels with balcony], its shape is quadrangular and was lighted with “24 iron gilt appliqués with 3 candles, 12 iron gilt appliqués with 2 candles, a Venetian chandelier with 40 lights (and its cover), 6 other Venetian chandeliers with 24 candles (and their covers).” The use of chandeliers was necessary to illuminate also the central areas of the room which cannot be reached by the light of the appliqués. On the contrary, the Gallery, which is an oblong room linking together the three apartments on the first floor, was lit with “48 gilded appliqués each bearing three lights,⁷ 16 gilded bronze appliqués, 32 iron gilt appliqués, 2 crystal appliqués for each small table” (AA.VV. 2005). The inventory allows also to quantify the value of the lighting devices placed inside the palace: the great Venetian chande-

Table 1. List of chandeliers sold by the Governor G. Pallavicini to the Empress Maria Teresa in 1753

CRYSTAL CHANDELIERS n° 89 placed inside the Ducale Palazzo di Corte, Milan			
Produced in Venice	With vases and coloured flowers:	n° 2 with 12 candles	
		n° 2 with 12 candles	
	Others with coloured flowers:	n° 4 with 8 candles	
		n° 4 with 12 candles	
		n° 4 with 12 à due piani	
	Others with white leaves:	n° 8 with 8 candles	
		n° 13 with 12 candles	
		n° 1 with 18 candles	
	Produced in Wien	Others in English style [two floors]:	n° 6 with i 18 candles
			n° 2 with 24 candles
		n° 8 with 8 candles	
		n° 4 with 9 candles	
		n° 14 with 12 candles	
		n° 10 with 18 candles	
		n° 6 with 24 candles	
	n° 1 with 6 candles [with armor]		

lier with 40 candles, placed in the Salone da Ballo was estimated £1.250, the six chandeliers with 24 candles each were valued £2800 and the 48 appliques in the gallery £450. Their values are comparable to the most luxurious furnishings of the palace like velvets, trumeaux, tapestries and canapé: therefore it is clearly the representative role of the lighting fixtures.

The lack of literature on this topic to compare the study and the breadth of the subject suggest a certain caution in conclusions. Anyhow, some stimuli emerge about the role of the artificial lighting in the 17th and 18th centuries and its rela-

tion with the aristocratic residences. In this paper, considering the evolution in the perception and use of artificial lighting and its devices through a brief analysis of the more interesting case-studies, it emerges how the use and diffusion of fixed lighting plants in the aristocratic buildings led to adopt new building and figurative solutions which were strictly connected with the architectural structures, the arrangements and planning of halls and the decorations. Besides, the suggestions from this point of view underline some aspects generally disregarded, which could be useful in the wider study of the great halls in baroque palaces.

NOTES

1. For instance, when lighting devices are missing in inventories, it's not easy/possible to know if they were not used, if they were in other buildings [lighting fittings could be moved from a residence to other ones] or if they haven't been registered. Besides, the traditional aesthetic or artistic interpretation of the lighting apparatus and the inventory of the single items found in the furniture catalogues could simplify a very complex reality; in particular, in the Ancien Régime society, where the artificial illumination concurred in expressing an ancient language that we no longer understand nowadays.
2. In 1686, in the whole palace, there were "6 brass candlesticks, 4 spanish-style candlesticks, 2 french-style candlesticks, 6 decorated candlesticks and 3 mochette."
3. At this time the chandelier was probably placed in the Hall.
4. The Galerie des Glaces in Versailles [1679-1686], the galleries in the Roman palaces and some Italian Capitals

[Turin, Genoa, Milan] are probably the models of this architectonic conception. The smaller dimensions of the gallery, in comparison with the French and Roman models, have conditioned the planning of the hall.

5. "E primieramente siccome le dorature i stucchi e Pitture esistenti nella Gran Sala del Ballo erano o guasti o interamente affumicate, queste si sono del tutto ripulite come avervi levate alle Pitture il nero del fumo così con Panni si sono ripulite tutte le dorature tanto in giro ai muri, che al volto, Anfiteatri, Cornici". Between 1944 and 1945, the palace had been largely damaged by bombs, and today the 18th century structures are no longer visible.
6. Nowadays, the Salone is lighted by contemporary appliqués while three old chandeliers have been added to the appliqués in the Gallery.
7. The appliqués that Clerici commissioned to the famous Milanese cabinet-maker Giuseppe Cavana can illuminate the entire surface of the room.

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