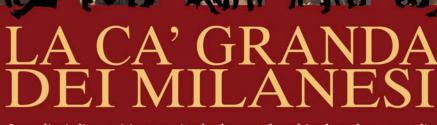
CAGRANDA_ENG:RESTAURI2 copia 2 24-10-2014 10:50 Pagina 1



Interdisciplinary itinerary in the heart of multicultural metropolis

edited by Francesca Vaglienti







FONDAZIONE IRCCS CA³ GRANDA Ospedale Maggiore Policlinico

10:50 Pagina 2



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On the need to promote the Ca' Granda heritage

Francesca Vaglienti

The project aimed at tracing a historical tour - guided and permanent - of the ancient Ospedale Maggiore arises from the will to make one of the landmark buildings of Renaissance Milan, alongside the Duomo and the Sforza Castle, accessible to the public at large. It arises from the awareness that Ca' Granda has represented for centuries, and continues to do so today, the centre of research, both scientific and humanistic, dedicated to alleviating suffering, to improving the quality of life, to fostering human dignity, to stimulating the professional and ethical growth a the community. The hands of countless many have contributed over the centuries to make bricks, carve columns, etch furniture, prepare medicines, while other assisted patients, cleaned their wounds, observed and studied their illnesses, ushered children into life, comforted the dying as life passed. Of these hands, of all these persons, of these "us", but a handful of names have made it into history's limelight, but many are the signs of their greatness as "ordinary" human beings. This guided tour is but the first step to ensure that the memory of these people are handed down to their natural heirs, the inhabitants of Milan and all those who are aware that in the solid roots of the past lie the indispensable resources of progressing into a future less uncertain than the present.

We would like to thank all those who have contributed to making this project come true, each with their abnegation and professional skill, first and foremost the authors of the texts contained in the guide: Fiorella Frisoni, Luca Condini, Roberto Mazzagatti, Daniele Pelosi, Paolo Galimberti and the LABANOF. Many thanks also to the following persons who would otherwise risk to unjustly go unmentioned. We are grateful to (rigorously in alphabetical order): Clara Antonucci, Luisa Betri, Elia Biganzoli, Anna Bocciarelli, Maria Pia Bortolotti, Alessandra Carta, Filomena Galotta, Paola Maestri, Chiara Melloni, Giuseppe Arconzo, Massimo Bianchi, Angelo Casertano, Massimo Colombo, Peppino D'Andrea, Marco Deriu, Luca Fois Dany Gardin, Achille Lanzarini, Giovanni Rivolta, Rosario Scandale. A special thanks to Rebecca Fant, Paola Navotti, Ornella Marcolongo and Rita Strafile, for having believed in the project.

During the first mandate of the administration I preside action was taken to give new impetus to the cultural heritage of the Foundation in view of the possible development of a museum aggregation focusing on Milan's healthcare history. To start with, the Foundation's name was changed, reverting back to the original "Ca' Granda" to underline the Ospedale Maggiore's commitment towards the sick and the poor. The Historical Archive was successively strengthened ensuring that it received donations that would allow it to implement a series of projects that have since been further developed. No doubt, the most interesting cultural and scientific initiative - a project involving the history and biomedical departments - has been the "rediscovery" of the Sepolcreto, the burial ground underneath the Santissima Annunciata. Indeed, it was a rediscovery not because our researches didn't know what was down there but because it allowed us to understand better what had always been before our eyes. A key contribution to this initiative came from Fondazione Cariplo and allowed us to restore the crypt where those who died in the hospital were buried from 1473 to 1698. Much later, those who fell during the Five Days of Milan uprising were also buried in this crypt, albeit temporarily.

Now the crypt is accessible and open for visits. Together with the University, we have established a historico-anthropological laboratory to conduct studies on the *Sepolcreto*. And this is just the beginning. Again in cooperation with the University we are working on an initial itinerary that would allow the public at large to visit the monumental complex of the Ca' Granda and thus admire a cultural heritage to be proud of that is largely unknown. We hope this initiative will attract the attention of public and private entities so that Ca' Granda – birthplace of and home to respectively the Ospedale Policlinico and the University – can once again become for Milan and its citizens a beacon of the city's civil life.

But much more needs to be done. The church and adjacent chapter halls, both the summer and winter ones, need to be restored. Plans have been defined to reestablish the library dedicated to medical history, whose huge collection has been dispersed in many venues and cannot be easily consulted. And we are looking, finally, to reopen to the public the *Crociera*, the original sick ward of the Ospedale Maggiore, a model for reformed hospitals during the European Renaissance.

Clearly, work is in progress and, I believe, must always continue and become permanent. History and tradition are not only a curiosity for the rich, but key drivers in developing the conscience of persons and nations. If we want to look ahead and grow, this cultural action must become a commitment and not just an option among many. When resources are scarce, historical awareness must be stimulated and turned into the driver for fresh action – for fresh, intelligent, action.

> Giancarlo Cesana Presidente Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico

Right from the outset of my mandate as Rector, in addition to strengthening research and teaching activities, I have also pursued the goal of unveiling to the citizens of Milan – of the Lombardy region as whole – the artistic and historical heritage of the ancient complex of Ospedale Maggiore, which has been home to the University of Milan since 1924.

On the occasion of the 90th anniversary of our university's foundation, this goal becomes even more significant. The collective consciousness is progressively becoming unaware of why the first ever state and non-religious university, namely the Faculty of Medicine, was inaugurated within the walls of one of the landmark renaissance buildings of Milan.

Teaching in our university – medical and successively humanistics – have been hosted here since 90 years , in this 14th-century building where the IRCCS Ca' Granda Ospedale Maggiore Policlinico Foundation is also based. This original cohabitation among two of the most prestigious scientific and cultural institutions of Milan is the tangible sign of both an age-old commitment to others and a continued dedication to developing and strengthening a science dedicated to alleviating human suffering.

If adequately highlighted in all its constituent elements – parts of which continue to be little known and explored – the monumental complex of Ospedale Maggiore could today inspire that sense of belonging and respect for culture and history that had in the past driven an afflicted but proud population to consider that hospital as its own, and to call it the "Ca' Granda dei Milanesi" – the big house of the Milanese.

The decision to make our historic sections always accessible and therefore strengthen their attraction is part of a wider project promoted and financed by the University of Milan and the IRCCS Ca' Granda Ospedale Maggiore Policlinico Foundation.

Through this project, the *Università degli Studi di Milano* – the "Statale," as it is affectionately called – aims not only to strengthen its role as a provider of a high-level education but also as the custodian of an outstanding cultural heritage.

In the 90th year of its establishment – an event for which a logo has been designed bearing the restyled image of the ancient hospital – our hope is that the *Statale* can once again be considered to be what it once was: a home for the Milanese.

Gianluca Vago Rector Università degli Studi di Milano CAGRANDA_ENG:RESTAURI2 copia 2

Pagina 4

10:50

The foundation

Luca Condini, Francesca Vaglienti

The vow by Francesco Sforza (1401 – 1466) in 1451 to the people of Milan to establish "a large and solemn hospital" was transformed in the decree proclaimed on 1st April 1456, six years after his triumphant entrance in the city – an event that marked the end of the ruling dynasty of the Viscontis demise and the demise of *Communitas ambrosiana* (1447-1450), which had reduced the city in misery. In subjecting themselves to the new lord, the people of Milan hoped to obtain peace, stability and prosperity. They called upon the Sforza not to focus exclusively on strengthening his political and military power , symbolically represented by the reconstruction of the devastated Visconti castle at Giovia Gate (currently Castello Sforzesco), but also on reinvigorating Milan's vocation in providing assistance to the needy as part of a tradition the city had developed over the centuries.

Shortly after the decree was issued, following the required official endorsement by pope Pius II (Enea Silvio Piccolomini, 1405 – 1464), the duke Francesco Sforza and Bianca Maria Visconti, his wife as well as staunch backer of the Sforza's policy in providing assistance, laid the foundation stone of the *hospitale grando*, the "big hospital,"

MILAN'S VOCATION IN **PROVIDING ASSISTANCE** TO THE NEEDY

that by incorporating the administration of sixteen hospitals operating at that time in the city earned the appellation of *maggiore*, or "major." Thanks not only to the quality of the services it provided to patients from all extractions and provenance, including non-residents and foreigners, but also to its ability to attract voluntary workers as well as donations from benefactors, the hospital was soon being acknowledged as the *Ca' Granda de' Milanesi*, the "Big House of the Milanese."

The project was initially entrusted to Filarete (Antonio Averlino, 1400 – 1469), who sought inspiration from the potent symbol of the cross. The layout involved two *crossbars*, one for men and the other for female patients, developing within a square, each defining four square-shaped inner courtyards. The two larger blocks were thus connected by a large rectangular courtyard at the centre of which stood a church. The project underwent significant changes as the original architectural solutions had to be adapted to the rigours of the local climate and also scaled down as a consequence of the chronic lack of funds that slowed down work to such an extent that construction was terminated but a few centuries later.

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as), Treatise on Architecture, 15th century. Florence, Biblioteca Nazionale Centrale

CAGRANDA_ENG:RESTAURI2 copia 2 24-10-2014 10:50 Pagina 6



Post-war reconstruction

Luca Condini, Francesca Vaglienti

THE RESTORATION WORK ALLOWED FOR **THE PRESERVATION OF FILARETE'S ORIGINAL CONSTRUCTION** PATTERNS

Not only factories, train stations, strategic military targets, the allied bombing of Milan in the period between October 1942 and August 1943 hit those sites that the population related to most, namely religious buildings, artistic and cultural monuments and even schools and hospitals, including, of course, Ospedale Maggiore. The bombs that rained down between 13 and 16 August 1943 brought down part of the façade along via Festa del Perdono, destroyed the Central Courtyard, including the portico, and heavily damaged the lateral cloisters.

The restoration of what could still be salvaged was due, above all, to the efforts of a great Milanese architect, Liliana Grassi (1923 - 1985), who not only recreated what had been irremeably lost but also relied on a variety of techniques depending on the nature of the reconstruction work that was required. The initial phase of the work focused on the rearrangement of the 19th-century wing – the teaching wing – where a more creative approach was possible because the artistic value there was less significant than in the rest of the monument. The reconstruction of the Central Courtyard proved to be far more challenging and was ultimately terminated in 1958 with the inauguration of the Università degli Studi. The most delicate part of the reconstruction started in the 1960 and centred around the 15th-century wing, with a special focus on the four cloisters. The restoration work in this part of the edifice, as well as the reconstruction ex novo of several sections, relied on a sound methodology based on the rigorous analysis of contemporary documentation and iconography that allowed for the preservation of Filarete's original construction patterns, which continue to provide the benchmark for any restoration work that is required. Architect Grassi's work officially terminated on 31 October 1984, with the handing of the Crossing to the university.

10**:**50 Pagina 8

A view of Ca' Granda

Fiorella Frisoni, Daniele Pelosi

Currently kept on the wall of the entrance hall of the Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, the large painting has been studied thoroughly and featured extensively in the literature focusing on the history of the hospital and its art collections.

While the work is traditionally known as the *Feast of Forgiveness in the Courtyard of Ospedale Maggiore*, recent studies have revealed that the famous feast, celebrated in the streets of Milan in front of the hospital, is not really the theme of the painting, which is actually an illustration providing an overview of the medical care activities carried out within the hospital.

The sprawling space of the Central Courtyard offers the painter an effective artistic expedient to represent, one alongside the other, the various episodes of hospital life: impecunious patients beg for alms along the small boulevard leading to the Santissima Annunciata church set against the backdrop of a funeral procession; state carriages carry wealthy folk into the hospital, while more modest ones transport goods and the sick. On the foreground, on the left, opulently dressed gentlemen – possibly the hospital deputies – discuss, while an obsequious functionary is handed a reel; behind them is a rather curious character: elegantly attired, equipped with walking stick and hat, he appear to be a proportional dwarf, moving around in the crowd begging. On the right of the painting a group of wet nurses lull and breastfeed babies, while alongside them a man hand over a foundling to an old man with crutches carrying two large keys from his belt, probably the hospital caretaker. Several ecclesiastics, regular and laymen, make their appearance in the painting's various scenes, which together count over 200 figures.

From a strictly artistic point of view, the painting presents numerous inconsistencies in terms of quality. For example, strongly realistic figures – the hospital deputies could be, in all effects, real portraits – come alongside wellmade ones, like the wet nurses on the right, and evidently more modest ones. The uncertain perspective of the architecture, in addition, naively distorts the columns on the left-hand side of the portico.

Made probably between the 17th- and 18th-centuries, the painting was made after the *cour d'honneur*, designed by Francesco Maria Richini (1584-1658), had been completed. It is particularly interesting from an historical point of view because it provides an unusual documentation of what the hospital looked like soon after the restructuring carried out by Richini. (The small balustrade crowning the Annunciata chapel, for example, no longer exists). It also signifi-

CAGRANDA_ENG:RESTAURI2 copia 2 24-10-2044 10:50 Pagina 9



Lombardy painter, *Feast in the Ospedale Maggiore courtyard*, end 17^{th-} beginning 18th-centuries. Milan, Ospedale Maggiore Archive

cantly provides a record of the local colour and costumes in the period marking the passage between the Spanish and the Austrian domination. It was to this painting that Francesco Gonin (1808-1889) sought inspiration from when he designed the clothes for the characters of *The Betrothed*, the literary masterpiece he illustrated, anachronistically incurring into error considering that the novel by Alessandro Manzoni was set in the years between 1628 and 1630. The painting, in addition, belongs to a flourishing Milanese popular tradition that in the course of the 17th-century produced a flurry of works depicting city life, as clearly shown in the many paintings of the Borromeo collection.

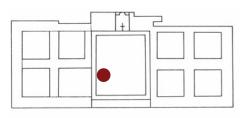
As for the date of the painting, a singular coincidence has been brought to light. Under the portico on the second floor is a young man affected by dwarfism but nevertheless perfectly proportioned. The remains of a person with such characteristics were found in the ricetto most likely going back to a period between the end of the 16th-century and the early decades of the 18th. Unfortunately no records exist in the archives testifying to when the painting came into the hospital's possession or from where it came. The painting has been attributed in the past to Sebastiano Giuliense, better known as Sebastianone, a genre painter who lived and worked in Milan from at least 1673, and who, judging by art collection inventories of the time, appears to have enjoyed a degree of success during the 18th-century. Nevertheless the studies carried out so far have only partially shed light on the personality of this artist. The few works that have been definitely ascribed to him, in addition to the descriptions of his works available in collection inventories, show him as a portraitist and author of scenes involving beggars - following the example of Pietro Bellotti - and not as a painter belonging to the Bambocciati with a penchant for depicting peasant rogues.

10 - 201

THE CARCANO LEGACY THE CENTRAL COURTYARD

Luca Condini

The number of bequeathals for Ospedale Maggiore increased significantly starting from the second-half of the 15th-century. Donations came not only from wealthy citizens but also from the poorer segments of the populations. The poor, while able to give precious little, showed compassion and the strong will to contribute to the running and development of the Ca' Granda, which had emerged, along with the Duomo, as the symbol of 'Milaneseness.' Designed in a layout consisting of three main bodies, the Ca' Granda was left unfinished for a long period of time, until, that is, a very conspicuous bequeathal gave to the construction its long-awaited turnaround. In 1621 Giovanni Pietro Carcano wrote a will, which became executive in 1624, the year of his death. The legacy he left was staggering in its consistency. Carcano, who had become immensely rich from the wool trade and the banking business he had set up, left to his underage son all his possessions, establishing, in addition, that half of the income generated by the estate - worth an astounding 1,622,000 liras - be devolved to the Ca' Granda until his son came of age, after 16 years. Thanks to Carcano, who is remembered as the Ospedale Maggiore's "second founder", the monumental complex was redeveloped and expanded through work that lasted until 1649, culminating in the construction of the magnificent Central Courtyard, or the Cour d'Honneur, also named after Francesco Maria Richini, one of the architects involved in the redevelopment effort. The 17th century project had to take into account what had already been con-



structed over the previous centuries, namely the quadrilateral built at the time of the Sforzas (the wing on the right) and the portico that connected it to the central courtyard Giovanni Antonio Amadeo (1447-1522) had almost finished by 1497. The 17th century work, which relied on the guidelines set out in the Filarete model for all four sides, completed the central courtyard starting from the entrance side. Work then proceeded along the front where the construction of the Annunciata church started in 1635 - which was therefore built not at the centre of the courtyard as Filarete had originally intended but absorbed in the southern side - and, finally, on the righthand side, where the portico was renovated, maintaining, however, the pre-existing decorative patterns. As established by the hospital administrators, the courtyard was built with the same materials that had been utilised in the 15th-century: columns in *miarolo*, or Baveno pink granite; the bases and capitals in 'bastard' or micaceous marble, otherwise known as Viggiù stone, while all the decorative parts in Angera stone. The tondos with busts most likely from the late 15th-century depict biblical figures, apostles, sybils, saints and evangelists. The two reliefs with St. Ambrose and St. Joseph have been attributed to Giovanni Antonio Amadeo, the master of the workshop that made all the other tondos. Following the bombardments of August 1943, which also hit the Central Courtyard, the four sides were reconstructed utilising, for the most part, the original pieces.

Luca Condini

10:50 Pagina 11

FROM THE AGE OF ENLIGHTENMENT TO THE BARRICADES THE WET NURSE COURTYARD

At the end of the 17th century work started on the construction of the new left-hand side Crossing terminated between the 18thand 19th-century, thanks to Carcano's bequeathal, a conspicuous donation, amounting to 2,265,000 lire, signed out by the notary public Giuseppe Macchi in 1797. Three out of the new four courtyards were made in a style different to that defined in Filarete's original layout. The only exception being the one reserved to the Ca' Granda rector and his family, which was architecturally similar to the 15th-century courtyards and known as the Quarto delle balie, the 'wet-nurse quarter' because it was located in a separate and protected part of the complex, thus becoming the designated area for wet-nurses where they could breast feed infants in full privacy.

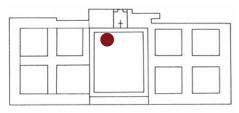
Following its significant enlargement, the hospital could now, in fact, take abandoned and undesired infants under its wing, weaning them and successively rearing them so they could be adopted. During the Age of Enlightenment, numerous specialisation schools were founded in the Ospedale Maggiore, among which the pioneering school for surgery and anatomy and the school for obstetricians. The latter, founded in 1767 by Bernardino Moscati, was not only reserved for surgeons but also innovatively opened to "co-mothers" and "wet-nurses" (i.e. godmothers and midwifes) who were at least 18years-old and "learned in reading and writing." The illuminated reformism of the Austrians in a Milan that was ever more receptive to science and technique soon turned the Ca' Granda into a "teaching and specialisation hospital" under Maria Theresa, and into a "medical specialisation school" under her son Joseph II.

The links between the hospital and Milanese society were further strengthened during the Risorgimento, especially during the uprising known as the Five Days of Milan (18-22 March 1848) when hospital doctors, healthcare staff , both men and women, took part in the events either aiding the wounded from both sides or taking up arms, combating on the barricades for the independence of Lombardy from Austrian rule, a struggle in which many sacrificed their lives.

10:50 Pagina 12

THE BURIAL GROUND

Francesca Vaglienti



The mortuary service at Ospedale Maggiore had been authorised right from the outset with the 1456 foundational papal bull issued by pope Pius II (1456) and provided within the hospital premises soon after the hospital began operations (1473). The area reserved as a burial ground, the *Sepolcreto*, expanded rapidly not only because those who died in hospitals were generally not allowed to be buried in the city's parish cemeteries but also because those who were buried in the hospital grounds were granted indulgence.

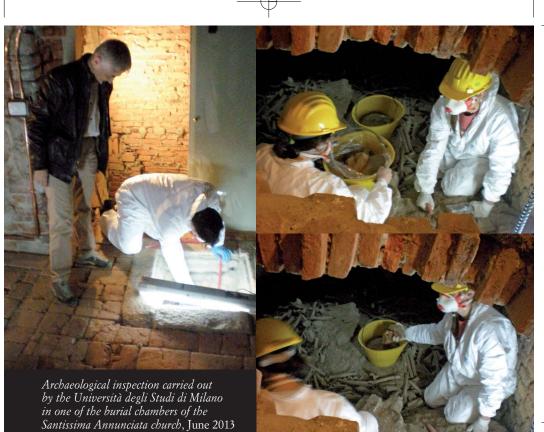
On 7 May 1473, the Ca' Granda Chapter decided to build a small wall, by the Annunciata chapel originally located in the northwestern side of the present-day Central Courtyard, serving to delimit a space for the burial of the poor who died in hospital. The bones were successively laid in the original burial ground, probably underneath the chapel itself.

From the middle ages through the 18th century, the dead were buried naked or wrapped in sack-shaped shrouds in mass graves, half-a-metre deep, containing up to a dozen bodies. After about two or three years, the remains were dug up and placed in the charnel houses of cemeteries. When a particularly serious epidemic broke out, the burial period had to be reduced drastically due to lack of space and the number of bodies buried in a single mass grave spiralled out of measure thereby interrupting the natural process of decomposition.

During the 16th century, as the number of patients, and therefore of deaths, grew, the lawn in the unbuilt part of the hospital grounds was turned into a paupers' grave, the *foppone* or "pit" in the Milanese dialect, were the bodies were buried. The *foppone* was periodically emptied and the bones placed in the hospital's burial grounds, which were known as the *brugna*, the Milanese for churchyard.

When the Carcano complex was constructed (1624-1649), a new burial ground was created under the crypt of the Annunciata church. Known successively as the 'Old *Brugna*,' it remained active until mid-17th century. Other sepulchres – known as the New *Brugna* – were constructed along the Naviglio side (now via Francesco Sforza) and remained in use until 1697 or even later. In fact recent C14 testing on several surface samples show that these burial grounds were in use up to the 18th century.

The rising number of corpses and their slow decomposition discharged so much gas as to make the stay at the hospital absolutely impossible. As temporary documentation show, hospital staff and local residents filed angry protest to the Health Tribunal. It was only starting from the last decade of the 17th-century that the decision was taken to build a new cemetery outside the city walls. Known as *Nuovi sepolcri* ("New Sepul-



CAGRANDA_ENG:RESTAURI2 copia 2 24-10-2014 10:51 Pagina 13

chres"), and now as *Rotonda della Besana*, the burial ground was established in July 1697.

The burial grounds within the hospital premises, however, were never totally emptied out. In 1692, 65 out of the 66 pits were opened, but the exhumation of the remains was interrupted following a controversy between two funeral homes. But the bones that had been recovered were buried in pits dug in the parvis before the hospital chapel. During the siege laid by the Austrians to Milan's city centre, which had been taken over by the rebels during the insurrection of 1848, the Milanese who were killed in the clashes – the patriot and philosopher Carlo Cattaneo counted some 300 dead and wounded – were temporarily buried in the principal burial ground after the area under the central pits had been emptied and the subsisting remains scattered in the lateral ones. The bodies of the 150 who fell – maybe even more – were then exhumed in 1895 and reburied in the bone house under the monument made by Giuseppe Grandi at Porta Vittoria dedicated to the *Cinque Giornate* ("The Five Days") as the insurrection came to be known.

A possible case of dwarfism

10:51

Pagina 14

LABANOF Laboratorio di Antropologia e Odontologia Forense

THE DISCOVERY HAS BEEN **PARTICULARLY IMPORTANT** IN THE FIELD OF ANTHROPOLOGICAL STUDIES

Researchers found in one of the burial chambers of the Ospedale Maggiore crypt a cranium, a scapula, a radius and another unspecified left side bone belonging to one or more individuals, but possibly to a single individual. A feature of the specimens is their reduced size compared to individuals of the same sex and age. The bones may have in fact belonged to one or more small-sized individuals of a height that, judging by the maximum length of the radius, ranged between 135 and 143 cm, probably affected by a growth deficiency leading to the consequent proportional decrease of the size of all bodily districts indicating a possible case of dwarfism.

While the low height may have been caused by a number of diseases, it doesn't necessarily come with significant impairments in terms of biological or mental functions. The little data that is available suggest that the subject (or subjects) did not present appreciable physical or mental shortcomings although the extremely small size may have possibly created a disadvantage in terms of working and social life.

Considering the rarity of osteological remains involving subjects affected by this anomaly, the discovery of these bones has been particularly important in the field of anthropological studies. CAGRANDA_ENG:RESTAURI2 copia 2 24-10-2014 10:51 Pagina 15

Nutritional pathologies in late medieval cities

Roberto Mazzagatti

Data concerning pathological conditions relating to dietary regimes bring to light the delicate relationship between primary needs and historical, economic and cultural factors that affected the availability of nutrients and oriented food consumption. In the late medieval period, while malnutrition and others syndromes arising from a shortage of food caused numerous victims especially among the poorer sections of the population due principally to a diet that was monotonous and insufficient for their needs, frauds in the area of hygiene compliance put the entire population at risk, exposing citizens to a series of diseases such as intoxications, cholera, salmonellosis, hepatitis, etc., which caused significant loss of life.

Historical sources in reporting an abundance and large variety of food, describe a system of supplies that each day replenished markets, shops and

trading quarters with all kinds of food, all subjected to very strict food stock regulations. Historical records also speak of chaotic marketplaces involving an undisciplined army of street hawkers, carts, stalls, spreading foul smells everywhere and dumping waste on the streets and canals and undermining the entire community's health.

FRAUDS IN THE AREA OF HYGIENE COMPLIANCE PUT THE ENTIRE POPULATION AT RISK, EXPOSING CITIZENS TO A SERIES OF DISEASES

As for nutritional pathologies, those arising from undernourishment were the most common; martial anaemia, caused by a chronic deficiency of iron from meats, eggs and fish was very frequent. Between the 17th- and 18th-centuries, the most common undernourishment-related illness was pellagra, which reached epidemic levels among the poor for whom polenta or cornmeal mush was the staple diet with no other intake of additional nutrients. While maize allowed people to overcome dreadful penury both in cities and the countryside – the American cereal grew well and abundantly and was affordable – the lack of niacin (vitamin B3 or vitamin PP) associated to low tryptophan contents caused the symptomatology known for its four "Ds": dermatitis, dementia, diarrhoea and death.

On the other hand, a historically well-known hypovitaminosis, scurvy, was unknown in cities where the large consumption of vegetables and fruits

CHAOTIC MARKETPLACES INVOLVING AN UNDISCIPLINED ARMY OF STREET HAWKERS, CARTS, STALLS, **SPREADING FOUL SMELLS EVERYWHERE** AND DUMPING WASTE ON THE STREETS AND CANALS

ensured a sufficient intake of vitamin C, which prevented the development of the disease. However, poor working conditions, which often forced labourers in dark, sunless, environments, often led children and adult to develop respectively rickets and osteomalacia. Besides the insufficient exposure to sunlight that prevents cholecalciferol (vitamin D) synthesis at cutaneous level, these diseases developed more frequently with low vitamin D food intake. On the other side of the spectrum there developed pathologies caused by excess of animal proteins, which was a feature of rich people's meals. The wealthy were very often the victims of painful an repeated bouts of gout. Dental problems too were very frequent due to dietary regimes based exclusively on maize and to the lack of oral hygiene.

Towards the end of the 13th-century, wine production in the area of Milan – going by what Bonvesin de la Riva reports in *Le meraviglie di Milano (De magnalibus Mediolani)* – amounted, in terms of per capita consumption, to twice of what is produced today. By the 15th-century alcoholism had, in fact, developed into a major social scourge, becoming a fully recognised addictive pathology by the 17th-century. Additional proof of the drinking excesses and of the high demand for wine are provided by the rules preventing alcohol abuse that were affixed in taverns and inns and by the vitality of vine cultivation even within the city.

CAGRANDA_ENG:RESTAURI2 copia 2 24-10-2014 10:51 Pagina 17

Physicians and surgeons in the Milan of Leonardo

Francesca Vaglienti

In the late medieval period the Lombardy region hosted, besides Pavia, other study centres specialising in medical knowledge chief among which, as Stefania Salvi points out, involved "the powerful corporation of collegiate physicians," whose members were, for the most part, patricians, laureates in the Liberal Arts and Medicine from the Ticino university. Exercising alongside them were a crowd of physicians hailing from a more modest social background who besides theoretical learning could also rely on skills acquired on the field and from direct observations, accompanying older professionals – doctors and surgeons – often relatives, who guided them through their apprenticeship in patients' homes or in hospital wards. Right from the outset, Ospedale Maggiore emerged as a key pre-university med-

ical teaching centre above all in the areas of obstetrics, surgery and anatomy. After all the mission Ca' Granda had set itself was not to provide assistance to long-term patients but to cure pathologies "which are quickly done with, leading to health or death," as the hospital's rector Gian Giacomo Gilini testified in 1508. The rector in fact contemplated two possibilities for patients "either they die or,

IN MILAN **THE DISTINCTION BETWEEN THE SURGEON AND THE CERUSICO**, THE BARBER-SURGEON OR THE COMMON MEDICAL PRACTITIONER, CONTINUED TO BE CLEAR-CUT

restored back to health, they return to their business with all our blessings." In the 15th century the nobility of the theoretical knowledge of collegiate physicians had not yet come into contrast as it would in the following centuries with the perceived vileness of the surgical practice. In Milan the distinction between the surgeon and the *cerusico*, the barber-surgeon or the common medical practitioner, continued to be clear-cut. The field of action of the *cerusico*, or the barbiere as the Milanese called him, was limited to conducting minor surgeries, namely blood-letting, application of suction caps, incision of cysts and abscesses, dental extractions, etc. Quite numerous, on the other hand, were the collegiate medical surgeons. As a matter of fact, one of them, master Francesco de Medici of Saregno, heir to a dynasty of physi-

cians going back to the mid-1300s, showing sharp business sense, opened "al segno della campana," a pharmacy whose ensign bore the figure of a bell. And, of course, there were physicians belonging to other religions, such as master Salomone, a Jewish physician, who had been granted the authorisation to feely practice the medical profession curing even Christian patients, among whom, sources say, there was one Andrea da Novate.

Some physicians specialised in carrying out autopsies like Giacomo della Notomia who was entrusted in 1483 with the task of examining the body of the 20-year-old Filippo da Vercelli who had died as a consequence of the injuries sustained after falling from a horse. It should be recalled that 'notomia' was the term that in the middle ages designated autopsy.

As amply documented, medico-scientific experimentation was strongly backed by the Sforza ruling dynasty. In 1458, duke Francesco pushed back the death sentence of a woman accused of witchcraft from one Saturday to the following one changing also the execution venue from Milan to Pavia so as to allow the college of physicians "to do a notomy" on the corpse. Under duke Galeazzo Maria, Milan beat other Italian and European cities to the publication of Avicenna's Canon Medicinae (1473) and Mesue's Opera Medicinalia, soon after Gian Matteo Ferrari da Grado had published and dedicated to the young duke his Opera medica sive Practica cum textu noni ad Almansorem (1472). In Bernardino Corio's Storia di Milano it is told that Galeazzo Maria, "within the sepulchres delighted himself in watching the cadavers of many." While the passage has been used as a further proof of the ruler's deprivation and even necrophilia, the careful phrasing of the text actually suggests that within the burial grounds there were mortuaries and autopsy rooms and that the young lord often went there to "observe." But it also describes the dukes' personal and direct interest for experimentation in the anatomical field that the Ca' Granda Chapter of Deputies had by 1491 made into a regular practice, albeit upon the discretion of the hospital physicians - postmortem experimentation carried out on pauper patients that Leonardo would later record in drawings that would become immortal.

OSPEDALE MAGGIORE EMERGED AS A **KEY PRE-UNIVERSITY MEDICAL TEACHING CENTRE** ABOVE ALL IN THE AREAS OF OBSTETRICS, SURGERY AND ANATOMY

The Catelano and the plague

Francesca Vaglienti

Starting from 1361 through 1657, Lombardy was the epicentre of an almost uninterrupted series of plague outbreaks, some of which took the characteristics of fully-fledge pandemics (1485, 1576, 1630). After an initial violent brush with the virus, a number of Italian cities, namely Venice, Florence and Milan, created institutions and implemented health structures that within a century-and-a-half would be adopted in the rest of the peninsula and in Europe as well.

Besides putting in place a widespread system of intelligence gathering to report the emergence of any new plague focus and thus quickly cordon off the area to prevent the exchange of goods from potentially infected areas, Milan had soon equipped itself with a health department, which before long developed into a Tribunal. The ducal authorities institutionalised the office

of the *physicus epidemiae*, a government physician (often a surgeon) entrusted with the task of promptly identifying and reporting suspect deaths – deaths, that is, caused by highly infectious diseases, not only by the plague but also by typhoid fevers, small pox, pneumonia, etc. It became compulsory, under Francesco Sforza, to report all cases occurring in the city of deaths or pathologies

IN THE MID-15th CENTURY **THE ACCURATE EXAMINATION OF THE BODY** CONDUCTED TO THE CATELANO WAS AN UNPRECEDENTED PROCEDURE IN EUROPE

that were potentially contagious so as to allow the physician of the Office, "commonly known as the Catelano," to assess the nature of the death or disease.

The decision produced two effects. First of all, it led to the establishment of an accurate death registration system that minimised the risk of omissions. To this end duke Francesco relied on the influential role of parish Elders and tied the issuing of the burial certificate (*sepeliatur*) to the previous release of a death certificate by the College-registered physician or by the Catelano's office itself. Secondly, following an initial phase were death reports consisted in indicating just the absence of suspect symptoms – in the 15th century the adopted formula was simply *sine suspicione* becoming "s.p.s." (*sine pestis sus-*

CATELANO, NICKNAME DERIVED FROM **THE LONG ROBE** THAT WAS WORN TO AVOID CONTAGION

picione) in the 16th century - before long descriptions became more detailed and included the symptoms the dead person had manifested in his life and especially during his last days. This information was gained not only from the testimony of relatives, friends and acquaintances but also from an accurate examination of the body, which was conducted to this end to the Catelano. In the mid-15th century this was an unprecedented procedure in Europe where post-mortem investigation was carried out for forensic purposes to ascertain if a crime had been committed. This was the first instance of a systematic registration of deaths - collected in Mortuorum Libri - by a non-religious institution, a practice established principally for health reasons and with the aim of identifying the emergence of epidemics focus and thus minimise the risk of contagion. Thanks to the brilliant intuition of duke Francesco and of his successor Galeazzo Maria, this system became an early clinical statistics tool that effectively aided medical practice and provided the city of Milan with an accurate population census (residents, domiciled, foreigners or transiting), thereby allowing the Sforzas to define measures aimed at implementing targeted professional, seasonal or permanent immigration flows to strengthen those productive sectors that were most likely to be most affected by recurrent epidemics.

On the other hand, the figure of the Catelano progressively took up a specific connotation by virtue of the professional and personal skills of the first known among these health officers, maestro Giovanni. As for the nickname "Catelano," it most likely derived from the long robe that was worn (the "catelana") to avoid contagion, an attire that soon became a sort of *professio in signis* (uniform) that strongly impressed the collective imagination.

Co-opted in the Milan College of County Physicians on 19 April 1450, master Giovanni, although appointed physician of Ospedale Maggiore in 1458, was in charge of curing patients in the hospitals that were merged into the Ca' Granda, which started operations only in 1473. These were some of the tasks that were entrusted to him: to visit the sick whenever it was required even more than once a day; to visit the poor not admitted in the hospital whenever ordered to do so by the hospital deputies; to not accept moneys from patients; and to not sell to external pharmacists medicines made in the Ospedale Maggiore pharmacy.

The patients suspected of having the plague were not admitted in the Ospedale Maggiore, at least not consciously, but were attended to by medics and paramedics in their homes, which were placed under quarantine ("serrate"), or otherwise led to the San Gregorio hospital. The tasks carried out at the same time by master Giovanni – who for two decades starting from July 1468 became the government's plague physician – created, nevertheless, a unique situation, as unique as the amount of detailed information that was contained in the death certificates of this period.

And it was a job that came with great risk. Just how much was at stake for the Catelano and his staff clearly emerges in a letter written to the Health Office where the Duke is informed that "the female assistant of magistro Giohanne Catalano has herself fallen sick with that disease [plague]. We believe that disclosure of this news would lead [...] to fear and concern among the people." The decision was thus taken to keep the information "secret and concealed and that [Giovanni] continue attending and curing the sick as before, starting early in the morning and continuing until late in

the evening. And that he, after changing his robe [*the catelana*], be careful to not touch or come too close to anyone and use all the care that is required in dire cases such as these."

The Catelano showed an even more heroic commitment in the great plague of 1485 when, alongside another physician surgeon, master Dionigi of Nuremberg, they visited, during the autumn months, as many as 60 patients a day. On one occasion the Catelano visited as many as AS AMPLY DOCUMENTED, **MEDICO-SCIENTIFIC EXPERIMENTATION** WAS STRONGLY BACKED BY THE SFORZA RULING DYNASTY

40 patients on his own. For the abnegation shown during this terrible plague, master Dionigi was given, in the *Mortuorum Libri*, an extemporaneous epitaph that in all likelihood was written by his colleague the Catelano himself: *laboriosus et praticus vir magister de Norembergo qui pro civiate perutilis hinc retro fuit* ("Master of Nuremberg, an untiring and practical man, who to the very last gave his all to the community.")

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Paolo Antonio de' Maestri (aka Il Volpino), *Skeleton*, end 16th- beginning 17th-centuries. Milan, Ospedale Maggiore Archive

10:51 Pagina 23

Echoes of pictorial decorations

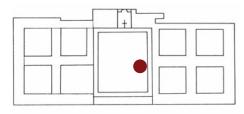
Fiorella Frisoni, Daniele Pelosi

As testified in documents conserved in the historical archive of Ospedale Maggiore, Paolo Antonio de' Maestri terminated a cycle of paintings in the crypt of the Annunciata church in the spring of 1638. Known in other sources also as Paolo Antonio Volpino, the painter was a member of a family of artists having the same name which was active in Lombardy between the 16th- and 17th-centuries. The same artist received a few months later a commission to fresco the Summer Chapter with decorations inspired by Marian allegories drawn from the Ancient Testament which are still visible today, albeit partly damaged. On the other hand, the frescoes in the crypt - barring a fragment - are no longer extant. But we have a description of it by engineer Crivelli, who was at that time in charge of the building site: "around the pillars are the figures of the dead in various forms and in natural size 40 in number with various boards and written bands, and trophies of bones and heads of likewise dead people 20 in number, and large boards in the front side of the entrance of the said scurolo 3 in number among which one bearing little puttos [...], an altarpiece ending on the altar with its steps [...] and in the vault above said altar the figure of the Holy Ghost surrounded by clouds". The indications provided by the engineer clearly show that Volpino had relied, in the area around the altar, on a more traditional iconography - the representation of the Holy Ghost in the glory of heaven painting, along the perimeter of the crypt, a cycle of "bone trophies", inspired by macabre themes that, developing in the low middle ages, would blossom during the Counter Reformation and the 17th century. The depiction of bones and skeletons starting from the end of the 16th-century emerged as the chief iconographic devise to express the malaise and fears of a civilisation - affected by never ending conflict (the bloody Thirty Years War above all else) and recurring outbreak of pest - that indulged with morbid insistence on the depiction of human frailty and the fleetingness of existence, as best expressed in the iconographic subjects of the memento mori and the vanitas. These concepts appeared to have been functional in the decoration of the crypt, which was located in an area, above the burial chambers, designated for the celebration of funeral rites of patients. It is possible to identify in the surviving fragment of the decorations a skeleton in an anatomic position, most likely represented holding a reel in its hand bearing a warning that recalled the age-old tradition of both the hospital's surgical school and autopsy practice, the latter regularly conducted in the hospital starting from the final decades of the 1500s and, from the mid-1600s, in rooms adjacent to the crypt itself.

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THE CROSSING

Francesca Vaglienti



Filarete's project for the Ospedale Maggiore was based on the Crociera, or Crossing, two long arms that intersected with each other at a right angle. While ensuring a large capacity in terms of patients, this module also allowed for the placing, at the centre, of an altar for the celebration of religious offices. The foundations, as well as the columns, were in sarizzo granite, and hosted building facilities, namely cellars, storerooms and workshops, which were therefore strictly separated from the infirmary section by a bar in Angera stone. Work, first started on the right-hand side Crociera in 1459, was terminated in 1465 under the supervision of Filarete himself. The required bricks and other terracotta building materials were produced on site thanks to the construction of three furnaces (1460-1464) located between the central courtyard and the Naviglio. Additional furnaces were also available outside Milan. By 1461 the structure appears to have been already fully endowed with a timber roof truss for whose entablature the hospital deputies sacrificed the entire Trivulzio Wood. Patients began to be admitted at least by 1474 when records show that 14 had died in the hospital in that year. The dead were all male, ranging from 16 to 80 years of age, and mostly came from Milan and surrounds, although some were probably foreigners judging by their surnames. The following year, the death toll rose to 18 and included two women, one 58 and the other 26.

The arms of the Crociera had acquaioli (stone

washbasins having metal basins and buckets) constructed by Filarete in 1464, and by Guglielmo del Conte in 1486. Endowed, right from the outset, with a sewerage system, the hospital also had toilets, called necessaria ("necessaries") or destri ("nimble"). Among the priorities duke Francesco Sforza had set out and recommended to Filarete was, in fact, the construction of an adequate number of toilets one for every two beds - served vertically and horizontally by both running- and rainwater to ensure maximum and constant hygiene. Heating was provided by two huge chimneys, constructed by Andrea Castiglioni in 1465, to which an additional one was commissioned in 1477 by Boniforte Solari. Alongside each bed was a small wall opening that acted as a cabinet and as a small table, thanks to a wooden folding easel, that allowed patients to eat seated.

In 1472, duke Galeazzo Maria Sforza ordered feather mattresses – a real luxury at that time – to be placed on the beds. Feather bedding would ultimately be replaced by woollen bedding only in 1802. The blankets were in leather and the sick, one for each bed, were given vests made of Vigevano drape, a mixed wool fabric widely used at that time, shoes (1477) and white caps (1486). At admission, the sick were undressed, washed and combed with a fine brush to remove lice from hair and beards. The beds, warmed in winter, were made twice a day (mornings and afternoons), and twice a day the floors cleaned and the rooms aired. In warmer summers, halfway up the ceiling, wet sheets were hung.

Each arm had a name. The southern one - perpendicular to the Naviglio - and the first to be built, was dedicated to Bianca Maria Visconti and reserved to female patients. The entrance portal was decorated by a stone lunette depicting the Annunciation (1463-1465) by Cristoforo Luoni, a mediocre artist who was also the author of the funeral monument to Andrea Birago at the San Marco church. Atop the entrance from the west, leading to the crossbar known as Sala Madonna, and the opposite entrance from the Courtyard, leading to the Crociera arm known as Sala Pio II, there stood the lunettes made by Martino Benzoni, the first also dedicated to the Annunciation and the other depicting God the Father with Seraphs. Benzoni reproduced this same lunette on the entrance from the Portico of the Infirmary leading to the hall known as Sala Francesco Sforza. The western wings of the Crociera were mostly reserved to female patients and nurses, with the exception of the nuns who stayed above the Pharmacy Courtyard. Priests lodged, instead, in the quarters located above the Ice-House Courtyard.

In the 1490s, Ospedale Maggiore hosted 1,600 persons including patients and healthcare staff (physicians, surgeons and pharmacists); administrative personnel (accountants and scribes), and nursing personnel (barbers, wet nurses, obstetricians, nurses); and service personnel (servants, stretcher-bearers, barber-surgeons, bakers, tailors, cobblers, etc.).

In a bid to optimise space, new halls were created by adding mezzanines in the arms of the Crociera, which remained in use until the 19th century. In 1773, the hospital had 21 wards ("sale" i.e. plural of "sala") with a total capacity of 1,022 patients, 67% of whom were admitted with unspecified febrile symptoms. Some patients had scabies, consumption or scurvy, while others bore wounds or lesions.



CAGRANDA_ENG:RESTAURI2 copia 2 24-10-2014 10:51 Pagina 26

Eating practices in late medieval Milan

Francesca Vaglienti, Roberto Mazzagatti

MEDICAL STAFF AT THE OSPEDALE MAGGIORE MADE ATTEMPT TO IMPROVE EATING HABITS BY IMPOSING ON PATIENTS **A DIETARY REGIME** WHICH REFLECTED THEIR PERSONAL NEEDS

In his *Le meraviglie di Milano (De magnalibus Mediolani*, 1288), Bonvesin de la Riva reports that in the city the population drank the potable water that generously flowed in wells and public fountains. The water, he says, was limpid clear, enriched by the minerals it found as it flowed under the Padana plains, pleasant to the taste and uncontaminated, thanks to an efficient sew-erage system that was in place.

The principal sources of food for the population of Milan were the vegetable gardens, orchards and farms outside the city. In the 15th-century, extensive areas within the city walls were designated to the cultivation of a wide variety of fruits: not only apples, pears, cherries, sour black cherries, peaches, plums, medlar, apricots, grapes, nuts, hazel but also melons, figs and pomegranates (the latter were considered fever reducers).

In the fields, alongside wheat, rye, barley, oat, buckwheat, were also cultivated the grains that were typical of the Lombardy eating tradition: grain sorghum, millet and hog millet. A staple food for the poorer segments of the population, the less refined cereals were boiled over slow fire in a cauldron until they produced a coarse polenta, ash-coloured if buck wheat was used, or kneaded to make flat breads. Hog millet, for example, served to make the *paniceum*, an unleavened pancake that was a feature of the poor man's cuisine prior to the advent of maize. Grain wheat, mixed with other cereals, was processed by the *pristinai*, who sold bread to those who, not possessing a domestic oven or unable to access a community or parish one, were force to buy it.

Although rice had been introduced in Lombardy by duke Filippo Maria Visconti and regularly cultivated in the Sforza era, it was at that time still a luxury product, appearing in the common man's table only during the Renaissance. Sacks of rice were considered a princely gift and sent by the dukes of Milan to neighbouring courts in Padania with armed escorts.

The poor man's soup alternated legumes with vegetables (beets, turnips, chards, spinach, pumpkin, leeks, onions, garlic), dairy products (goat and cow's milk cheeses, *giuncata*, or cheese made in reeds, and ricotta) eggs, salted pork meat and snails. Bread was often replaced by boiled chestnuts, which were, in fact, known as "tree bread." Chestnuts when roasted were a favourite, alongside hazels, dogwood, jujubes, almonds and nuts, end-of-meal treat. It was also the basic ingredient of a soup that was served to the sick as a cure against infections and anaemia. Shellfish and freshwater fish, the eel above all, but also sardines and anchovies (dried, smoked or salted) and the salted codfish, or baccalà, were consumed abundantly during Lent.

The cuisine of the upper and wealthier classes, while sharing most of the basic ingredients of the lower and poorer segments of the population, differed in the way they were prepared, relying heavily on the use of costly spices to mark status and rank. In the rich man's table, meat was a constant feature, replaced by fish in the many lean days that marked the religious calendar. However, the rich and powerful, who loved venison and were quite reluctant to make sacrifices, often succeeded in obtaining a papal dispensation, putting forward specious excuses just to satisfy their craving for meat. And that too despite the doctors' recommendations to reduce meat intake significantly as it was the main cause of gout among the wealthier classes.

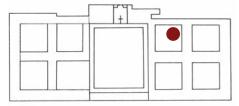
As for cooking fats, butter and lard were mostly used. Olives were not available in large quantities and oil was made from nuts. While the basic sweetener was honey, cane sugar soon began to appear on the dining tables of the rich – of the very rich: it was in fact so expensive that Ludovico il Moro, known for his miserliness, drastically reduced its consumption to his niece Isabella of Aragona, who loved crunchy nougat.

A significant protein intake came from the consumption of frog legs, prepared as choice tidbits in town taverns, famous above all for their wines, especially the whites and the nouveaux, which were what the Milanese preferred in those days. Alcoholism caused by cheap and low-quality wine was widespread although physicians at that time were quite unable to diagnose it with precision.

While chronic hunger in the 15th century was essentially uncommon, it inevitably became more frequent during periods of conflict, becoming even more recurrent in the successive centuries when rapacious and remote foreign governments showed little interest for the Milanese. Malnutrition, on the other hand, was more commonplace, caused not only by the inability of many to purchase food having a more varied nutritional properties but also from poor eating habits. Medical staff at the Ospedale Maggiore made attempt to improve eating habits by imposing on patients a dietary regime which reflected their personal needs and which they could replicate when they returned home at least with regard to the more affordable ingredients. -10-2014

THE ICE-HOUSE COURTYARD

Francesca Vaglienti



The work of Lombardy craftsmen, the Cortile della ghiacciaia (the Ice-House Courtyard) was a development of the project Filarete had started in 1486 when the hospital Chapter ordered the purchase of stones and other materials for the construction of the adjacent courtyard, successively known as the Cortile della legnaia (the Woodshed Courtyard). Originally, at the centre of the courtyard was a cemetery built in 1473 by the master mason Ambrogio da Rosate at the back of the first chapel. The altar was initially placed where the crossbars met so that it could be viewed by all patients, so that they could assist the liturgical functions as was in the tradition of the ancient hospitals of the knights hospitaller of Jerusalem (present day Order of Malta). Successively, the chapel and burial yard were shifted, replaced by the apothecary's workshop that was, in turn, transformed into the dispensary.



The ice-house, located in the central part of the courtyard, is mentioned for the first time in November 1638 as the cella *nivaria*, the "snow cell." The reservoir was filled in the winter months with snow, which, appropriately pressed and wetted, was allowed to freeze and used to preserve perishable food and, possibly, also for therapeutic purposes (to cure traumas, fevers, etc.). The exterior of the reservoir was surrounded by a semi-circular corridor that acted as a dispensary as well as a brick casing. The ice-house was managed an operator who was on the hospital payroll.

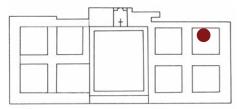
A surface well, originally serving the apothecary's workshop and built by Boniforte Solari (1429 ca. – 1481 ca.), was located in the southwestern corner (1472). Overlooking the courtyard was possibly the old wash-house (1499), which could rely on an independent water conduit and on a mill, constructed between 1519 and 1523, whose milling stones were found during the challenging post-war restoration campaign. The Ice-House Courtyard was, in fact, the part of the complex that was most damaged during the 1943 bombings, and was fully restored in 1962.

View of the Ice-House Courtyard, 1881, photograph by Icilio Calzolari. Milan, Archivio Ospedale Maggiore

-10-2014

THE WOODSHED COURTYARD

Francesca Vaglienti



Not unlike its twin - aka the 'ice-house' the Woodshed Courtyard was the work of Lombardy craftsmen who sought inspiration from Filarete's project and worked on it staring from 1486. While it was originally known as the "women's courtyard" because it was reserved to female patients, by the 18th century it had come to be known as the "nizuola courtyard" probably because of the presence of a hazel tree, nisciœula being the Milanese word for "nut." Successively until recent times it was renamed after the kitchens located along the eastern side. It was only starting from the second-half or the 18th-century that we find reference to a "woodshed," located within the perimeter of the courtyard and surviving until 1943. Prior to the restructuring financed by the Carcano bequeathal, wood was previously stored in the main courtyard behind the tiny church and attached burial ground.

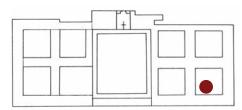
Archaeological digs carried out by the Università degli Studi in 1995 brought to light a large quantity of bones and animal horns, most likely the waste from the hospital's slaughterhouse (built in 1494) or, more likely, from the kitchens or attached dispensary,

which for a period were located in the cloister. The practice of slaughtering animals within the hospital probably started in the early part of the 16th century. It is likely this part of the edifice also hosted a panateram pristini, or bakery (built in 1478), a chicken coop and a pigsty (first mentioned in 1499) as well as a livestock shed (existing since 1500). Within the central octagonal structure there once was a well having a diameter of 2 metres. It is not sure whether it was a surface well, from which water was drawn, or an underground sewerage well. A surface well for kitchen use, on the other hand, already existed in the north-western corner, made by Guglielmo del Conte in 1482.

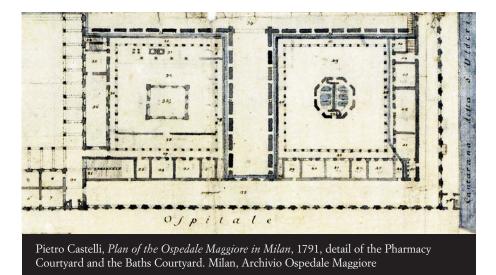
Surviving in the underground chambers on the side of the Naviglio – now via Francesco Sforza – are significant traces of the old stone washhouses, which are expected to be surveyed and restored by the University of Milan shortly. After washing, hospital bed sheeting and patients' clothing were dried along the ditch or, if it rained, in the courtyard lodge on the first floor where they were warmed by the large chimneys of the kitchens below. 24-10-2014

THE BATHS COURTYARD

Francesca Vaglienti



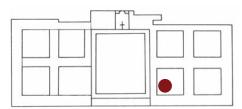
Designed by Filarete, who personally supervised the works from 1460 to 1465, the *Cortile dei bagni* (the Baths Courtyard) was completed by Boniforte Solari. Initially, the courtyard was reserved for the recovery of the aristocrats, who paid for their stay at the hospital, and was called the "gentlemen's courtyard." While successively renamed the "women's separate courtyard," as it was principally reserved to labouring women (the area around the San Nazaro church), it was also designated to the "scabbed" and the "delirious" of both sexes (the area by the portico), for it afforded a degree of isolation compared to the overcrowded wards of the *Crociera*. At the beginning of the 17th century, the area was turned into the "servants' courtyard," reserved to nursing staff and attendants. The courtyard had a coatroom (by the portico) and a wash-house (by the San Nazaro church). A surface well was located in the north-eastern corner, while a system of baths was constructed at the centre of the courtyard starting from the 18th century. The bathing complex had separate pools for men and women and, starting from 1802, also half-baths that allowed partial immersions. These served for hydrotherapy and were located in the infirmaries.



10-2014

THE PHARMACY COURTYARD

Francesca Vaglienti



Designed by Filarete, the Cortile della farmacia (the Pharmacy Courtyard) - the first to have been constructed under his direct supervision between 1463 and 1467 - was ultimately terminated by Francesco Solari (1420 ca. - 1469 ca.), brother of Boniforte, with the help of the sculptors Guglielmo del Conte and Pietro Ambrogio de Munti, who made the columns and the capitals. Initially, the courtyard was designated to host the hospital's administrative offices, among which the Chapter of the Deputies whose task was to handle the hospital's administration and day-to-day affairs. It is likely, considering the prestige of the office, the venue was most likely elegantly decorated, as can still be observed by the traces of surviving framed graffiti depicting vases endowed with curves in the shape of snakes on whose rim birds are perched.

Work on the administrative area, which included the offices of the notary public and accountants besides the archives, was terminated with the construction of a hall, with fireplace (1468), that probably served as the capitulary. This was followed by the construction in 1502 of a refectory that was successively decorated by a mediocre reproduction of Leonardo's *Last Supper*. It is likely the bread store was just next door. There also was, in the south-western corner, a well whose curb was probably made by the sculptor Giorgio Gariboldi (1464). In the secondhalf of the 17th century administration was moved elsewhere and the premises vacated were for the most part used by the pharmacy (laboratories, storerooms and dispensaries), including the small green space at the centre, which was transformed into a small botanical garden.

The earliest mention of medicinal activities being carried out at the Ospedale Maggiore goes back to 1458 when Giovanni Vailati was appointed *magister aromatarius*. But it was only in 1470 that a formal agreement was signed authorising the opening of two chemist's shops specialising in the administration and preparations of medicines exclusively for hospital patients.

Therefore, the figure of the hospital apothecary had been formalised by the end of the 15th century as can be observed also from his distinctive garb. Apothecary staff, in fact, wore a black vest, which successively became grey or white, with the master apothecary wearing a more elaborate attire. The latter, in addition, had to live with his family in the apartments attached to the pharmacy as well as to ensure that the storeroom, dispensaries and laboratories were at all times replenished, to register all pharmaceutical therapies and to make sure that patients were given the



prescribed medicines. The validity of the pharmaceutical recipes also had to be assessed and approved by two collegiate physicians. The apothecary had to enter in specific volumes the prescriptions given by each physician and assess its efficacy and economic viability: In fact, "the Duke's medicaments," as the medicines produced at Ca' Granda came to be known, not only had to be effective in curative terms but also convenient economically.

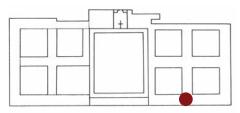
Among the innovations introduced at the Ca' Granda, one of the most significant certainly concerned the involvement of women in the professional care of the sick and that, too, in areas that went beyond mere nursing and patient assistance. This trust in the professional skills of women explains, for example, the decision, on the part of the hospital chapter deputies, to appoint, at the death of the master apothecary Ardigò Cobeloni in December 1487, his widow Modesta to continue his work for three months – the time required to find a legally suitable replacement. The hospital chapter, in fact, promptly appointed Modesta's second husband, Luchino del Bene, as the hospital's new master apothecary, a man thus to be considered more as reliable business partner than an eager lover, impatient to tie the wedding knot.

Another hospital pharmacy, with decorations by Stefano Cittadini, was opened in 1497.

THE PORTICO OF THE INFIRMARY

24-10-2014

Francesca Vaglienti



Designed starting 1456 by Filarete, who conceived a series of sculptures in marble, stone and terracotta, the portico has conserved the original chromatic tones notwithstanding the fact that it underwent numerous changes even during the construction phase. The lower part of the façade up to the stringcourse storey demarcation can be attributed to the Tuscan architect. The basement hosted shops, stores and *caneve* or cellars. Along the portico were wooden lodges where surgeons and barbers operated and medicated the sick afflicted by ailments that did not solicit hospitalisation (wounds, sores, burns, abscesses, sprains, etc.).

Featuring 29 rounded-arches that joined the *Crociera*, the portico was constructed between 1458 and 1462 by Lombardy craftsmen. In the arches' intradoses, fragments of frescoed decorations – rhombuses and *tondos* – were brought to light. The terracotta arches were provided by Filarete himself who also made the decorativearch-shaped bands and the large and small *tondos* (1461). An arcade, not



Andrea Biffi (draughtsman), Federico Agnelli (engraver), *Ospedale Maggiore*, 1674. Milan, Civica Raccolta delle Stampe Achille Bertarelli, Castello Sforzesco

the central one, was designated as a vestibule of the *mastra*, or principal, gate and of the infirmary. To access it, a wide staircase was built, albeit with little practical sense.

According to Filarete – who was probably the author of the haut relief *tondo* depicting Francesco Sforza – it was Vincenzo Foppa who made the fresco on the portico with the scene depicting the laying of the cornerstone, while the Humanist Francesco Filelfo and the courtesan Tommaso da Rieti were the author of the epigrams still visible at the entrances of the *Crociera*.

The duke's engineer Bartolomeo Gadio rearranged the rainwater ridging that had been originally designed in the walling with a view to keep the environment cool and have a supply of water available for the cleaning of the "destri," or toilets. But it was solution that could have ended up devastating the entire building (1473).

The upper floor was the work of the Lombard Boniforte Solari, while his brother Francesco

designed the 18 finely decorated balconies (1467). By the central arcades (the 13th, 14th and 15th), the façade recedes all the way to the master wall to create a sort of open terrace. At the back there is a gable, atop of which there once was a small belfry in terracotta made by Giovanni Maria Busca, rising from which a docked pinnacle held a weathercock, decorated by Giovanni d'Alzate (1482). Most likely, the gable at one time hosted a clock, made towards the end of the 15th-century by a Swiss-German clockmaker, one Giacomo teutonico. Along the external perimeter, in the direction of San Nazaro, there was a horse stable (1490).

In 1597, the entire portico façade was shut with metal gratings, which gave to the corridor the name of *Portico delle inferriate* (the Gratings Portico). In 1648, the central staircase was replaced by side ramps, which were entirely dismantled at the end of the century when access to the infirmary was ensured by an entrance from the Central Courtyard (1686).

The Historical Archives

Paolo M. Galimberti

THE PAPERS CONSERVE **THE MEMORY OF THE OSPEDALE MAGGIORE** AND OF THE INSTITUTIONS THAT WAS ABSORBED BY IT

At the back of the Central Courtyard, a vast atrium precedes a solemn portal. The sculptures that decorate it evoke the Virgin Annunciate, to whom the hospital is dedicated: an angel, a woman's face and the dove of the Holy Ghost – the constituent elements of the hospital's emblem. This sumptuous decorative apparatus is justified by the importance of what comes next: the two chapter rooms (summer and winter) where the Board of Directors met. This part of the complex was designed by Francesco Maria Richini to host representative functions as clearly shown also by the paintings on the ceiling made by Paolo Antonio de' Maestri, aka il Volpino (1638).

The shelving running along the walls of the two rooms – put in place between 1767 and 1808 – hold a significant part of the hospital's huge archives, whose documents stretch out to some 3,000 linear metres. The papers conserve the memory of the Ospedale Maggiore and of the institutions that was absorbed by it, covering a period from the 11th- to the 21st-century. Besides being a key historical source of the region as a whole, it continues to be a functional tool for the hospital's present-day management. Following the establishment of the hospital and the surrender, in 1935, of the Sforza section in nearly all its entirety, the wing stretching between the hospital parish church and via Laghetto has hosted the administrative offices of the Polyclinic.

Besides the Archives, this section is home, thanks to a web of close interconnections, to the hospitals outstanding art, scientific and photographic collections, which together, alongside the medical library, the anatomical museum and the architectural complex of the church, the crypt and the chapter halls, form an extensive cultural heritage. The hospital Foundation is the only one in Lombardy to have set up a specific art and monuments unit for the management of its invaluable heritage.

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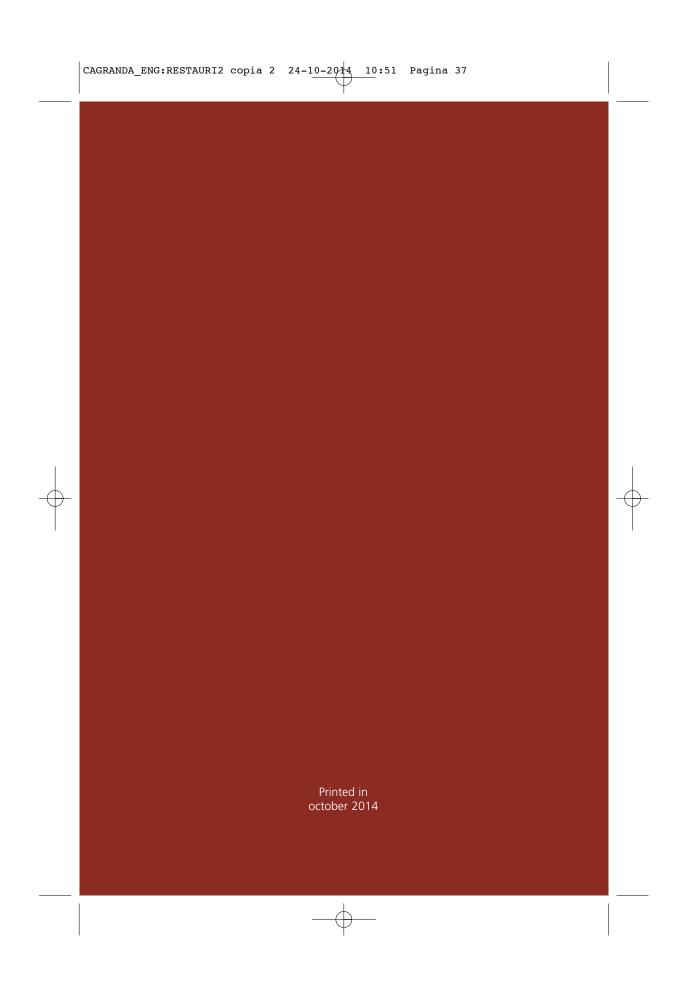
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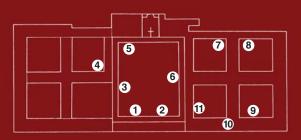
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The itinerary at the Ca' Granda takes place within the University of Milan and is defined by information panels, in Italian and English, describing the salient spots of the ancient monumental complex.



1. The foundation 2. Post-war reconstruction 3. The Central Courtyard 4. The Wet Nurse Courtyard 5. The Burial Ground 6. The Crossing 7. The Ice-House Courtyard 8. The Woodshed Courtyard 9. The Baths Courtyard 10. The Portico of the Infirmary 11. The Pharmacy Courtyard

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