



*The chimney of the pasta factory at present,
(by courtesy of Francesco Paolo Longobardi)*

The Alfonso Garofalo pasta factory in Gragnano, Naples, Italy: history, technologies and hypotheses of reuse

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ABSTRACT

About fifteen water mills settled in the Valley of the Mills of Gragnano. Thanks to new technologies, a few centuries later, fifty-seven new pasta factories were built on the Corso Sancio. The building typology was recurrent and constant. Each of them consisted of a ground floor, three floors in elevation and one or two underground levels that were in the rear close to the Vernotico stream. The complex retreated, for logistical and space reasons, from the road curtain, developing over an area of its own, with a large inner courtyard, a sort of real square, for the movement of horse-drawn carts, then trucks and therefore still several artifacts. For his time Alfonso Garofalo was one of the greatest Italian pasta manufacturers. After more than a hundred years the vertical production processes and the work done in many small building entities proved to be expensive with respect to industrial competitiveness. In other parts of Italy some pasta factories already appeared on a single level, with production in horizontal continuity and mechanized drying. In 1963 the historical Pastificio Alfonso Garofalo closed due to bankruptcy and the industrial activity was closed forever. The real problem that remains today is the reuse of these large abandoned container in the historic center. The building complex in the heart of the town, which is part of Industrial Archeology is now in serious disrepair and deserves to be restored and reused.

KEYWORDS

proto industry, reuse, pasta museum

1. THE ANTECEDENTS: THE VALLEY OF THE MILLS

The history that came before and to which we must necessarily relate began centuries before in Gragnano in the Valley of the Mills. From the 1400s and up to the end of the 1700s, there were about fifteen water mills in a sort of natural canyon, which belonged to noble and powerful families of Spanish origin, with only a few ruins of Ruskinian memory remaining.

"Urban planning expresses the way of being of an era" said Le Corbusier.

With the emergence of new technologies, a few centuries later, the production of pasta in Gragnano was organized in a new way, with factories distributed and set out along the main street of the city. They formed the road and the road formed them, in an inseparable relationship, between the new economy and the world of production and urban form. Along Corso Sancio, the main road that soon after the Unification of Italy (1861) changed its name to via

Roma there were about fifty-seven pasta factories (Fig.1, Fig.2).

The pasta was sold in the rooms on the ground floor facing the street. Whereas, in the rooms on the first floor facing the street, there were the offices. On all the others, on several levels - from the basement to the second floor - the pasta was made, according to a vertical processing approach. The house of the industrialist/owner, which was sometimes very elegant, could be found on the third floor. One of the most important characteristics of Corso Sancio was and is that of being a sort of street-square, with curvilinear widenings, a soft form that recalls an oesophagus, in which pasta was left to dry in the sun on canes. It was oriented along the East-West helio-thermal axis. (Liguori, 1863).

The White Art of making pasta was carried out by a series of "figures", who were always coordinated by a master of considerable experience and expertise, known as the "kneader", who presided over and coordinated all the various operations. He also



Figure 1.
*The process of natural
drying the pasta in Roma
street, former corso Sancio.*



Figure 2.
Fountain of Piazza Trivione.

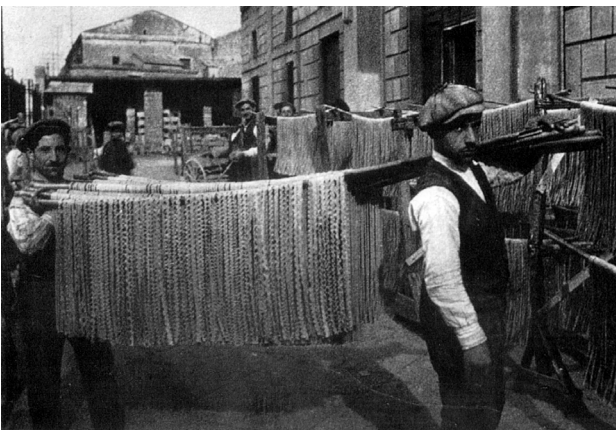


Figure 3.
Early years of the '900, the pasta carriers.

tested the quality of the semolina and, for example, controlled the degree of natural drying of the pasta, exposed to the sun on canes along the road.

After having determined, with his own hands, the degree of drying of the long pasta (spaghetti, vermicelli, ziti, candele, etc.), caressing it like the strings of a harp, he ordered the cane-carriers to carry it into the ventilated rooms so as to complete the drying process.

Leaving it out in the sun for longer would have created micro-cracks on the surface of the pasta, thus compromising the quality of the product (Fig. 3) (AA. VV., Gragnano dei "Maccaroni", Quaderni Culturali della Biblioteca Comunale di Gragnano).

There is an unwritten story which tells that in 1832, a sudden, bold and overbearing elevation on the south side of the main road began and it was discovered that the new cone-shaped shadow, created on the opposite side, prevented the traditional, natural and correct drying of the pasta, with consequent serious economic damage for the pasta factories. Legal action was taken before the Bourbon Court of Naples which appointed an expert who, together with the report, produced a volumetric plan and several cross sections of the road, to study the various cone-shaped shadows projected by the new building in the different hours of day and different days of the



Figure 4.
Typical coat of arms with ears of corn.

Figure 5.
Advertising labels.



year. The most equitable and Solomonic solution was that the cone-shaped shadow should not exceed, in the most disadvantageous condition, the centre of the road. These buildings were no longer belonged to the noble and aristocratic families of the past but rather to the bourgeoisie, the new entrepreneurial and commercial class, the "Third State", the one that came out and was consecrated by the French Revolution, which aspired, as a "status symbol", to its own architectural dignity. Thus, the keystones of the refined piperno stone portals of the entrances to the new pasta factories, no longer featured noble coats of arms but the ears of durum wheat, the origin of the semolina, the raw material for the processing and production of pasta, the new symbol of work, capital and wealth (Fig. 4)

Advertising also played an important role in this whole process. Labels with a refined graphic design advertised the goodness of the product and accompanied the sales campaigns in Italy and abroad, especially in the United States, with stores in New York and Chicago (Fig. 5).

However, with the Alfonso Garofalo pasta factory an urban mutation took place: the new industrial complex was very large and divided into several parts, a sign of continuous additions and extensions. It was the first real large multi-floor factory with a load-bearing structure of grey tuff masonry and vertical structures made up of cast-iron balusters and very bright floors. It broke away from the traditional typology of bourgeois buildings along the Corso and stood out like a modern castle with its outbuildings and two very tall chimneys of which only one remains today. For logistical reasons, space and the town, the complex was detached from the street curtain, developing over an area of its own, between via Roma (formerly Corso Sancio) and Piazza Trivione (Piazza Giacomo Matteotti), with a large inner courtyard, a square, which was ideal for maneuvers, first of dozens of horse-drawn wagons and then of lorries. There were various buildings for the storing of materials, stables, warehouses, and a sawmill for the preparation of wooden boxes for the packaging of the pasta (Fig. 6)

Some industrialists were also patrons and this fervent process also benefitted the town in general, with the



Figure 6.
*Aerial photo of the pasta
factory.*

supply of significant elements of street furniture, such as refined piperno stone fountains, some historic floral-style bars, meeting places for industrialists, representatives and other economic investors.

In that rare trinity that saw indissolubly linked families-city-factories, Garofalo stayed in Gragnano like the Agnelli family in Turin, Olivetti in Ivrea, Borsalino in Alessandria, and Ferrero in Alba, etc. The life and evolution of the factory has often affected and affects the building and urban development, connoting it, modifying it and identifying it. For his time, Alfonso Garofalo was one of the greatest Italian pasta producers. He led the company to produce, with the means and the possibilities of the time, about 400 quintals of pasta a day (a rare record), employing 300 workers in addition to a huge infrastructure consisting of the mill, the sawmill for the pasta boxes, the stables for dozens and dozens of workhorses, mules later used for the lorries, trailers, mechanical workshops for the bronze dies managed by the historic Liguori family of precision mechanics, but commonly known

as the "trafilari" etc., etc.

The Garofalo property occupied an entire neighbourhood, known as Trivione, one of the largest in the town.

From the point of view of corporate strength and economic reliability, the Pastificio Garofalo was the first in Italy to become a SpA (Società per Azioni). Strict and rigid with his employees, Alfonso Garofalo was however an entrepreneur who was mentally open to new technologies, at the forefront, interested and attentive to finance. When he decided to expand the pasta factory at the end of the 18th century, made by his grandfather Michele in local grey tuff, he directly purchased the Neapolitan yellow tuff from the quarries of the area of upper Naples, Chiaiano.

For months and months, he organized caravans of "carts" that, from Gragnano to Naples, took the pasta to the port and, so as to not return empty, brought the tuff stones for the extension... a memorable anticipation of the optimization of costs and time as well as a concrete example of a "circular economy"

(Fig.7). He was a provincial councillor and assessor as well as mayor several times, a position from which he had to resign due to conflicts of interest. It was discovered that he did not pay the town council congruently for the water that he consumed in very large quantities for the production of the pasta as well as for washing the grains and the sawmill. Among his many children, the activity was continued by his sons Mario (in the Trivione- via Roma complex) and Lucio and by their nephew Luigi, son of Giovanni (in the complex of Piazza San Leone, founded in 1935). (De Gianni, 1990).

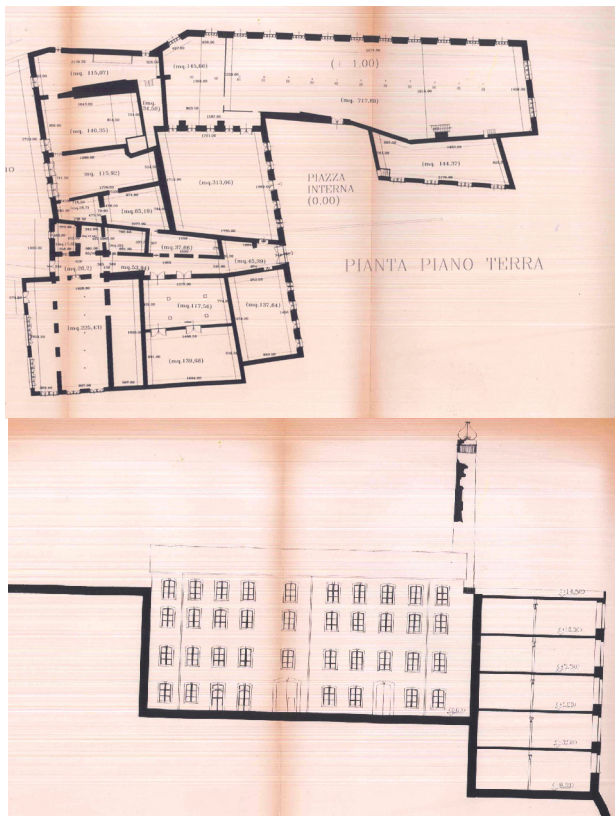


Figure 7.
Ground floor plan and elevation/section.

2. ORESTE LIZZADRI (THE PASTA MAKER'S HELPER, THE TRADE UNIONIST, THE GREAT POLITICIAN)

The Alfonso Garofalo pasta factory also saw a young worker, who was then a trade unionist, grow up within its factory.

Oreste Lizzadri, who over the years had become a protagonist of Italian trade union and political life at the highest levels. Then he became the third General Secretary of the CGIL.

He was a member of the Italian Parliament in 1948, 1953 and 1958, always bringing the soul, strength and combativeness of the worker of the Pastificio Garofalo in Gragnano, a very hard youth experience that had marked him and determined his life choices.

From the pasta factory, he had started a life and career so fraught with difficulty, yet adventurous, committed and brilliant.

He died in Rome in 1976. (Webster, 1974).

3. THE START OF THE PASTA FACTORY CRISIS

Between the two world wars, the Fascist autarchy policy led to a lack of the conspicuous supplies of American and Canadian hard wheat, with the conspicuous pasta exports that in the past had always been consistent and highly demanded by the Italian and not only US communities being drastically reduced.

The 1950-60s also meant dealing with new technologies. The continuous presses had replaced the long and tiring hours of work kneading in the pantries, of the homogenization with the kneading machine and the grains and the weeks necessary for natural drying. After more than one hundred years, the vertical production processes and in many small buildings, often not compact with functions distant from each other, the lack of space for logistics, warehouses, lorries with trailers that replaced the "carts" pulled by mules and horses but needed



Figure 8.
View from the main street through the urban empty spaces caused by the earthquake of November 23, 1980.

space for parking and maneuvering, workshops, the unloading of semolina, the loading of pasta cartons, the important role in terms of time and therefore economics that occupied the workforce, all of which turned out to be important factors in the large-scale industrial competitiveness: in other parts of Italy, the first pasta factories were already on a single level, with production in horizontal continuity, with mechanized drying. In addition, the bank rates reached 20%. In the 1960s - 70s. it was finally clear to everyone that the circulation, movement of vehicles for the pasta factories was incompatible with the traditional road network of the historic centre.

On the one hand, therefore, the awareness that the optimal production was in horizontal, in simple one level buildings, without intermediate pillars, and where, along the production lines, on one side the



Figure 9.
The Garofalo pasta factory at present with the interior floors collapsed, by courtesy of Francesco Paolo Longobardi.

semolina would enter, supplied by large external silos, at the head, and on the other hand, after a few hours, packs of pasta in packaging and pallets would be released, ready to be loaded. The process was and is increasingly highly technological, rational, hygienically controlled, automated, without wasting time and human resources and therefore profitable and commercially competitive. The White Art, the knowledge of doing, orally handed down from father to son for centuries, had become science and technology, according to the logics and patterns of modern industrial society, but abstract and indifferent with respect to human resources and the nature of the place.

Thus, began a period of struggle and drastic selection for survival. Many pasta factories were forced to close. In 1963, the historic Pastificio Alfonso Garofalo closed due to bankruptcy and was taken over by the Aprea Family from Formia, which also failed a little later. The business was closed forever. The Lucio Garofalo pasta factory survived in Piazza San Leone managed by Luigi. The violent earthquake of 11/23/1980 severely damaged the buildings, caused many collapses and made the entire complex unusable.

After the 1980 earthquake, the Lucio Garofalo pasta factory settled in the new and very modern complex of Via dei Pastai in the industrial area of the town, but the company was sold by the Garofalo family to the Menna family from Salerno, who shortly afterwards sold a part of it to a Spanish company, who became the majority shareholder (Fig.8, Fig.9).

4. HYPOTHESIS OF REUSE

Today the new and large pasta factories are located in the industrial area, a former agricultural area on the outskirts of the city, far from its centre, with which it no longer has any connection or relationship whatsoever. The real problem that remains is the reuse of these large abandoned containers in the historic centre, built in a particularly thriving moment of the economy, structuring the nineteenth-century urban

form. At present, there is no master plan for which an appropriate and compatible reuse is considered. Some localized interventions have seen nefarious choices, including some, immediately after the 1980 earthquake, for the demolition of these factories and the reconstruction - on an equal volume - of the same into dense and crowded residential condominiums. Highly speculative operations that offend historical memory do not solve the problem and only increase the urban load (burden) of the town. Today the

Figure 10.
Internal with cast iron columns
(by courtesy of Francesco Paolo Longobardi).





Figure 11.
Detail of the cast iron capital
(by courtesy of Francesco Paolo Longobardi).

situation has come to a standstill, waiting for interventions that restore dignity to the places, that fulfil the expectations of the local population, while also including equipment and services in already existing containers (just like many other qualified Italian and foreign experiences testify to us on the Industrial Archaeology) and establish an intelligent and dynamic relationship with our “recent past”. (Rubino,1978).

The former Pastificio Garofalo building complex, which is now in serious disrepair and decay, is composed of:

- a building block with a mixed construction system of five levels. The external perimeter load-bearing masonry is made of grey tuff stone and the wide spans of the floors in iron beams and grey tuff vaults are supported by cast iron pillars of rare elegance and beauty;
- a covered multi-plane building with a chimney, warehouses, etc...

In effect, this large building complex in the heart of the town is part of the Industrial Archaeology category. Some years ago, a reuse was attempted proposing to use it as a higher education institution, initially starting from a structural consolidation and seismic adjustment (Fig.10, Fig.11).

There are now multiple proposals. The most accredited is that it can be the home of the Pasta Museum as is its natural right. The similar Italian, Spanish, French and English experiences show a path already outlined with the certainty and awareness that it is feasible and successful.

5. CONCLUSIONS

To intervene on the pre-existence, even the recent and relatively modern one, is our precise task and duty. There are multiple factors at stake (political, social, economic, technical, regulatory, cultural, business, management, etc.) and today more than ever, more than a few years ago, it is necessary to answer multiple questions and involve multiple disciplines. (Beccatini, 2000).

Firstly the project and the subsequent construction have now assumed highly complex characteristics that need to be dealt with using the appropriate and varied skills, the related responsibilities without ever forgetting the quality of the architecture and the spaces designed also in terms of efficiency, liveability, comfort and safety, aesthetic quality, all categories that fall within and contribute to the sustainability of the interventions.

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