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THE ROLE OF RAILWAY STATIONS IN THE FORMATION OF A NEW QUALITY OF INDOOR AND OUTDOOR PUBLIC SPACE IN THE DEFINED URBAN STRUCTURE OF DOWNTOWN MILAN

Abstract

This article is devoted to the process of transforming the train station areas in Milan. Stazione di Milano Centrale has been extended with new accompanying functions, which diametrically changed the proportions between the previously dominating railway function and the complementary service function. On the other hand, areas around Porta Garibaldi train station (which hasn't been developed for years and where spatial chaos continued) have been totally reconstructed, with changed functions and with a higher quality of public spaces. Central railway stations, which have been hybridized lately, cease to fulfill one specific function in the city and become multipurpose complexes. Observing this tendency, we have every reason to believe that railway and train station areas will play an increasingly important role in cities, turning into crucial elements of the central structure.

Keywords: railway station, city centre, hybrid, multimedia junction.

1. Introduction – exposing the problem

Regarding the issues of tradition and heritage in today's city image – from the perspective represented by the International Network for Traditional Buildings, Architecture, and Urbanism – it seems appropriate to analise the role of contemporary objects and systems, historically important for downtown structures, such as train stations.

Since their appearance in the structure of the city (from the start of the 19th century), railway stations have defined public spaces, which were bound together with them, and which naturally became typologically new showcases. They were, in fact, the first urban spaces of this type that travelers encountered.

Without losing its basic functional capacity, railway stations (with their traditional functional program) were often susceptible – as public spaces open 24 hours a day – to the destruction of its high quality cultural urban vitality. They attracted society's subculture – the homeless, social outcasts, etc. In response to the changing needs and requirements of its main feature (and modernized only in this direction), they were often degraded again. It seems that the contemporary leaning toward expressive hybridization is an opportunity for self-adaptation to the changing dynamics for both – functional efficiency and the indispensable quality of urban vitality.[1]

This applies both to the same building – specifically, indoor public space and, interacting with it in the urban context – the outdoor public space.

More and more frequently, railway stations are becoming multipurpose hybrid layouts. Their traditionally overriding railway function is now included in a set of other functions which – extending and differentiating – assume the proportions of overriding functions themselves. At the same time, the railway stations are usually associated with a transfer junction for various kinds of mass and individual city transport (which changes them into multimedia hubs.) The current transformations of railway stations, as well as the new layouts that come into existence in close relation to the existing train stations, are facing the ambitious task of satisfying users' expectations and needs in a complete and harmonious manner. These people, with their requirements, vary more and more.

This article concerns the comparison of two examples of the modernization, and resulting "hybridization", of the Stazione di Milano Centrale and the Porta Garibaldi train station areas. They are the part of the largest railway junction in Italy.[2]

Milan – description of the case

Researching European railway stations enables the isolation and examination of three types of roles in the city'sstructure, and the interactions of the railway stations within this structure:

1) The vertical relationship – the horizontal radiation;
2) The vertical relationship – the flow;
3) The vertical relationship.

Milan railway stations belong to the group of stations where interaction with the building's urban structure is based on the relationship of the horizontal radiation.

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[1] The author (commenced a doctoral degree at the Faculty of Architecture of the CUT; the dissertation is under the working title*: The Role of Railway Stations in the Structure of the Public Spaces of the Contemporary City*. Supervisor: Prof. D.Sc. Ph.D. Arch. Jacek Gyurkovich). He analyzes a whole series of examples of stations in European cities, which give rise to the acknowledgment of the presented problem.

[2] It is also one of the main manufacturing centres for rolling stock in Italy; Cf. *Nowa Encyklopedia*, PWN, Warszawa 1998.

The case of Milan and Stazione Centrale especially allows us also to follow how, over the centuries (1931–2014) railway station buildings (and their surroundings) responded to changing social needs; at the same time, they show which features of its solutions are essential for continuity and are treated as very important elements of the city's identity.

Stazione di Milano Centrale's story is related to the development of Milan's railway system. The Milan-Monza line, realized in 1848, was the country's second steam engine railway line[3] (designed by Giulio Sarti, Milan.) In 1898, the insufficient amount of railway objects in Milan, especially in the case of Central Station, was obviously still unadjusted to the rising number of travelers. After the formation of the State Railways (1905), Director General Riccardo Bianchi submitted a proposal for the reform of the entire railway junction. In 1906, the first architectural competition for Stazione di Milano Centrale (including a hotel) was announced. However, it was not settled for administrative reasons. In 1912, a new competition was announced. It was based upon a new functional scheme, inspired by the stations in Leipzig and Stuttgart,[4] which extended the functional programme from the previous competition with a covered gallery accessible to vehicles – the so-called "Galleria delle Carrozze."[5, 6] The winner of the competition was the architect, Ulisse Stacchini, from Rome. Initial work was soon interrupted by the outbreak of the First World War[7] and the resulting unstable economic situation. Ulisse Stacchini designed a terminal called "The Cathedral of Movement". His very first sketches made it clear that the idea of this object was to create a space for all, not just for travelers – a comfortable and beautiful space introducing the atmosphere of rest and relaxation. Stacchini's eclectic Art Deco-style monumentality had the strongest impact upon the character of the object, which was gradually (1912–31) adjusted to the city's changing requirements, as well as its inhabitants' rising needs and aspirations. Stazione di Milano Centrale was expected to appear as an important spot within domestic and international railway traffic. This contemporary building was expected to raise Milan's prestige and become its icon. At the beginning of the 20th century, it turned into the European centre of economic and industrial development on a historical scale. In the prime of the "belle époque",[8] the construction of Stazione Centrale became a vital event in the city.

Many times, Stacchini was engaged in the 1912 design's work, which gradually grew impressive and sublime until its final version in 1925.[9] The originally designed roof of the main platform hall was replaced with steel bearing arches (span: 72 metres[10]) – Italy's largest ever.[11] The Minister of Transportation, Constanzo Ciano, formally opened the railway station on July 1, 1931.[12] It was the opening of the last grand railway terminal in Europe, and the completion of a junction's transformation with an arterial station (the first Stazione Centrale) into a hub with a terminal.

This station does not have a defined architectural style. It is a mixture of various styles, in particular Art Nouveau and Art Deco, combined with the aloofness of fascist architecture. The extensive public spaces of the railway station (the main tunnel, the central ticket offices, and "Galleria delle Carrozze") refer to Roman architecture but – against all appearances – they were realized with frugal means: the walls in the upper part are made of a decorative imitation marble cement which covers the lower parts. The splendid structural ceilings do not act as constructional elements (they are hung), whereas the decorative elements are made of plaster (friezes in the ticket office hall, panels with zodiac signs) or of cement (statues, lion heads, etc.).

Even though Stazione di Milano Centrale was completed several years before the Second World War, its maladjustment to the users' changing needs was plain to see at the end of the global conflict. Apart from the aesthetic aspect, which did not correspond with postwar tastes at all, criticism was leveled against the platforms' hampered access, which was caused by differences in the levels between them and the streets. In 1953, the State Railways announced an architectural competition for the building's radical modernization. The winners were the architects Minoletti and Gentili Tedeschi, who designed a voluminous object adjoining the front façade of Milano Centrale.[13] Their work, however, was not realized. One of the reasons was that the operation of Stazione di Milano Centrale was supported by the newly constructed Porta Garibaldi in the 1960s.

In August 2005, the comprehensive renovation and redevelopment of Stazione di Milano Centrale was commenced by Grandi Stazioni, a company acting within the State Railways.

The restyling of the station, originally designed by Marco Tamino – the author of the renovation of Roma Termini (then removed from management), included forming a pedestrian zone at "Galleria delle Carrozze", opening new functional spaces inside the station, and changing the distribution of some of the previous functions. The new

[3] The first line (Naples-Portici) was realized in 1831.

[4] C. Columba, *Il cinquantenario del fabbricato viaggiatori della Stazione Centrale di Milano*, [in:] *Ingegneria Ferroviaria*, May 1982, p. 315.

[5] C. Columba, *op. cit*., p. 314.

[6] Today the Galeria delle Carrozze is a pedestrian walkway – a buffer between the square in front of the station and platform hall, and a huge part of the retail area, which is a vertical underground link between the railway station and the subway station. The monumental nature of the Galeria delle Carrozze recalls how important building a railway station was for the city in the past.

[7] C. Columba, *op. cit*., p. 314.

[8] The period from the end of the French-Prussian War in 1871 until the outbreak of the First World War.

[9] C. Columba, *op. cit*., p. 314.

[10] To this day, an original roof construction of the platform hall, which currently covers not only the platforms, but also a multifunctional space designed for travelers. Thanks to the introduction of different functions (restaurants, shops) into the platform's hall space – this area has gained a completely different quality, becoming multifunctional and thus more attractive to contemporary users.

[11] C. Columba, *op. cit*., p. 317.

[12] *Ibidem*, p. 310.

[13] *Ibidem*, p. 317.

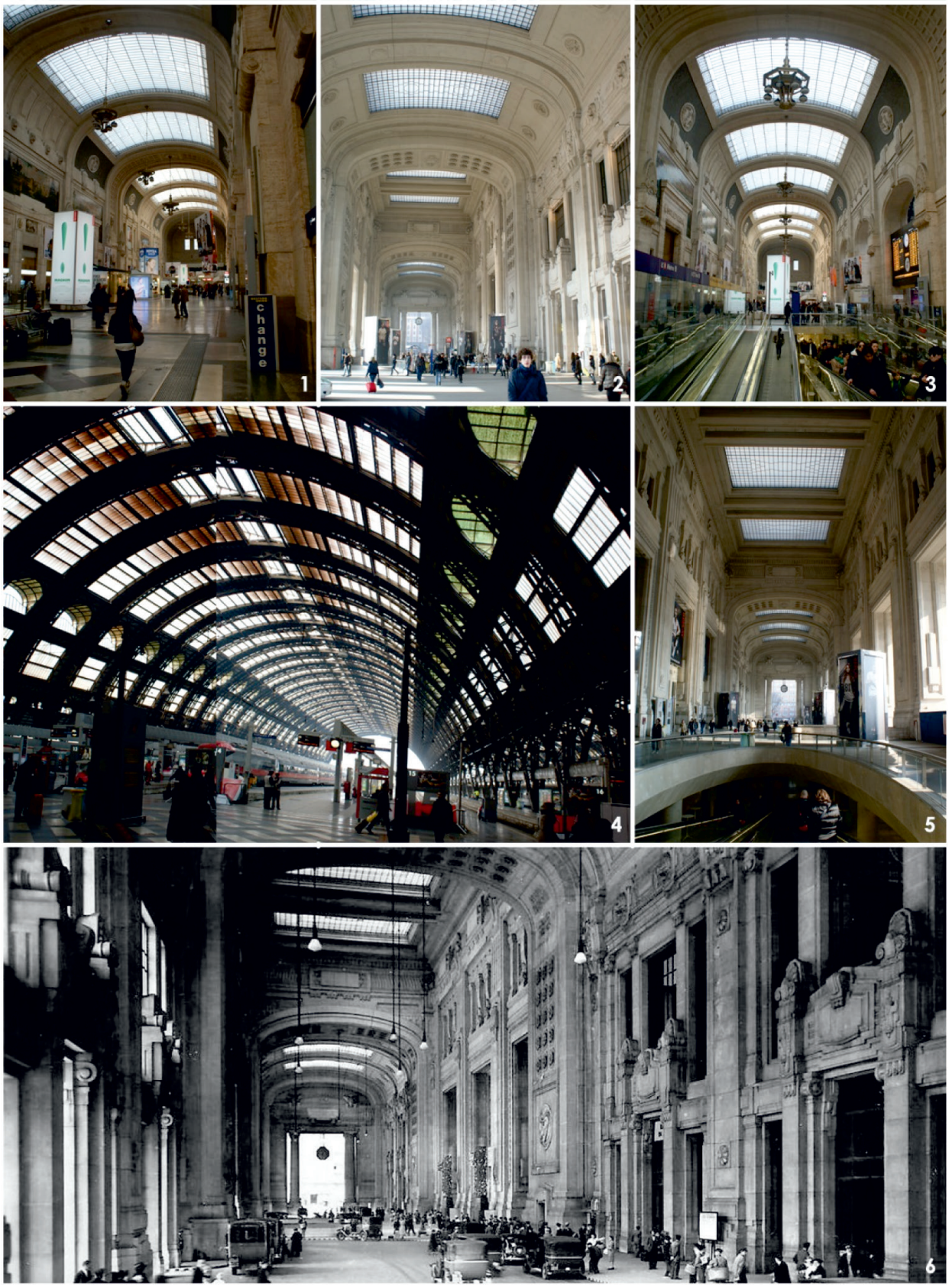

Fig. 1, 2, 3, 5. Interiors of the "Gallerie Delle Carozze" – main entrance to the station; Photos by the author
Fig. 4. Station main hall with platforms. Photo by the author
Fig. 6. Original look of the "Galerie Delle Carozze" – a roofed driveway for bringing travelers to the station. Source: (online): www.wikimedia.org (date of access: 2014-01-05)

Fig. 1, 7. Bosco Verticale Residential Buildings designed by Stefano Boeri Architetti – two high-rise buildings that are the part of the new skyline of the Porta Nuova District in Milan. Photos by the author
Fig. 2. Unicredit Tower designed by Pelli Clarke Pelli Architects – seen from the Corso Como side. Photo by the author
Fig. 3. Unicredit Tower designed by Pelli Clarke Pelli Architects – seen from the Porta Garibaldi train station. Photo by the author
Fig. 4, 5, 6. Central square defined by the conch-like towers plans, designed by Pelli, Clarke, Pelli Architects. Photo by the author
Fig. 8. Aerial view (rendering) of whole area of the Porta Nuova District and the Porta Garibaldi train station. Photo, (online): www.residenzeportanuova.com (date of access: 2015-01-05)

functional layout was criticized, not only for the lack of certain functional elements, but also for the organization of pedestrian movement. The garret of the Eurostar Club, which now holds the Feltrinelli bookshop, was maintained at the original height so as not to block the view of the maps of Italian cities that Marcello Nizzoli had painted on the walls. The garret of "Galleria delle Carrozze" and the ticket office atrium were lowered just like the gallery's glazed closures on both sides of the station. Nonetheless, the extension of the corridors leading to the platforms, as well as the question of adjusting the commercial spaces the passengers have to cross before they get to the platforms, remain problematic for the project.

Milano Centrale is Italy's second largest and busiest railway station. This object, with its impressive and majestic architecture, is still one of central Milan's icons, remaining in accordance with the premises of the competition that was organized in the early 20th century. Today's Stazione Centrale is the key junction for urban services and trade in the city's centre, and the main hub for the railway, the high-speed railway, and the underground (as well as the main railway connection from Milan and the rest of Europe.) The modernized Stazione di Milano Centrale was designed as a service centre for travelers, but foremost for the inhabitants of Milan. It serves 320,000 users a day, or approximately 120,000,000 people a year. Service and trade, cultural, and catering functions make this place attractive to everyone.

Its "grand revival" in the contemporary central structure began with the renovation process in 2005 – the development and functional modernization, as well as the restoration of the formal glare of the station's spaces. The object was adjusted to the requirements of the contemporary agglomeration, as well as the agglomeration of the future. Stazione di Milano Centrale's renovation is one of the most important architectural projects within the protection and modernization of Italy's public objects; it is of paramount importance in the context of the approaching EXPO 2015. Stazione di Milano Centrale is becoming the most characteristic showcase in contemporary Milan, the spot where visitors from the whole world are welcomed. The site is an important and "favoured" meeting place frequented by users and inhabitants from the centre and throughout Milan. The modernization process, both within the functional and spatial scope (including measures taken to recreate the grandness of the structural ceilings and decorated walls), restored the original splendour of Stazione di Milano Centrale in the context of the city centre's contemporary image. By introducing new usable spaces inside the station, and changing the location of some of the existing functional elements, the restructuring determined its hybridization.

The railway station is a living, contemporary, multipurpose structure which includes historical matter, as well as the memory of events related to the place. One of the examples is the Shoah Memorial located close to Track No. 21 in the platform hall.[14]

Stazione di Milano Centrale is a symbol of the process of modernizing the entire city, the new "Milan Revival". Not just symbolically, its renovation represents the healing of the city. It is an important element of the new image of this significant part of Milan, where the old, historical urban tissue joins and intermingles with the present day in a harmonious manner, creating a structure suitable for the city of the future. The station's renovation perpetuates the heritage in the city's image.

Porta Garibaldi Station in Milan, designed by architects Eugenio Gentili Tedeschi, Giulio Minoletti, Mario Tevarotto, Bonamico Sergio Franco, Guido Gigli, and Dante Jannicelli, was built in 1963 at the site of the Porta Nuova train station (also known under the name, "Varesine", and was the terminus of lines to Gallarate, Varese, and Novara. It destroyed during World War II.) Porta Garibaldi Station was part of the unfinished plan for a huge business center in Milan. In 1966, Porta Garibaldi connected the Garibaldi tunnel to the Mirabello junction and the Monza railway, thereby linking all the regional lines.

Porta Garibaldi Station was modernized in 2006 and now has all the amenities of a large station, such as shops, restaurants, and business space. It did not change its spatial structure significantly (internal and external).

Currently, the Porta Garibaldi railway station is one of the most important train stations in Milan, generating traffic of 25,000,000 users per year, just after Stazione di Milano Centrale. Porta Garibaldi is now the second largest interchange in Milan, combining public transport (buses, trams, and metro) with the suburban railway; connecting the city with the Malpensa airport; connecting to other major Italian cities (Turin, Florence, Naples, and Rome) as well as other European cities (Paris). In the case of Porta Garibaldi, what determines its new role in the city is its changing urban context (according to the guidelines of the Porta Nuova project.)

The Unicredit Tower office building is part of a larger residential and office complex in this part of Milan that is called the Porta Nuova District. Its a de facto complex of three towers of 31, 22, and 11 storeys, with the highest dominant, asymmetrical, sculptural spiral form. Conch-like tower plans define a square, a new public space that links this complex with the surroundings. On one side, the square is horizontally closed in by the Porta Garibaldi. The second side is closed – a new residential complex and Corso Como – by a very elegant pedestrian street, closed off by a historical gateway to the city – the Porta Garibaldi. The Porta Garibaldi Arc crops a high-rise building which is a vertical dominant of the Porta Garibaldi train station. Representing 1960s modernism, Porta Garibaldi's building is thus still an important compositional element of the whole new Porta Nuova District complex; this area consists of even more vertical elements, such as the Torre

[14] During the Second World War, trains deporting Italian Jews to concentration and annihilation camps left from Platform 21. Overcrowded carriages would go to Auschwitz and other places until May 1944. On January 27, 2013, after the modernization, which took place from 2009, the Shoah Memorial was opened. It is related to the Shoah Foundation (Fondazione Memoriale Della Shoah) run by Ferrucio De Bortoli.

Diamante office building, Bosco Verticale, Aria, Solea, the Solaria residential towers, and a contemporary park. The Porta Garibaldi Station is a new example of the heritage of 60s modernism in the image of modern Milan. In contrast, Stazione di Milano Centrale is an example of the ongoing tradition of the monument in the city's structure and image.

3. Conclusion

The main railway stations, not only in Milan, are undergoing a process of hybridization. They don't have just one specified role in the city but are becoming an increasingly multi-functional unit. The article examines Milan as an example, but the author observed this trend in other European cities, too, such as Dresden, Rome, Turin, and Budapest; and domestically (in Poland), such as Katowice, Wrocław, and Kraków.

As a result of hybridization, railway stations bring new vitality – attractiveness, safety, and the neutralization of urban barriers, which are the rail areas – into well-developed downtown areas. This tendency suggests that the railway stations and areas around them will play an increasingly important role in modern cities becoming an even more significant element in the downtown area.

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