

Turin's underground: historical aspects of the planning and the realization in the picture of the history of infrastructures European basements

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The subject of mobility and transportation, that have represented the main factors defining the modelling of most of the cities and territory, during the XX century, must be traced back to the beginning of the industrial revolution. The changes, both on physical and social-economic levels, have made it necessary to reorganize and update the transportation infrastructures as well.

In the context of this thesis we have taken into consideration one of the innovative answers to the phenomenon of congestion and the ever-growing need to move, the so-called underground: the mean of transportation that more than any other one, was able to revolutionize the look and the structure of cities. To get a better idea of the reason that lead, only in more recent times, to the decision to adopt this mean of transportation in the city of Turin, we will analyze the main phases of the building of the subway in a European setting identifying the principal cycles of realization and their tight links to urban and territorial planning.

The analysis starts in London, the first to be affected by the processes of industrialization and equipped with a subway, to be then concerning the main European capitals which, during the first cycle of construction of this mean, represent the experimental lab, both for the concentration of national capitals and the necessity of such mean of transportation. After London, follow Vienna, Paris and Berlin, which, following the steps of the Britannic capital and for obvious need of prestige, rush to update their knowledge on the utilization of this new technology. Then it is Spain's turn who, in the early after-war, although still behind with respect to industrialization, has the need to introduce this mean of transportation since both its political capital, Madrid, and its economical one, Barcelona, are suddenly experiencing heavy urbanization.

Moscow, in this digression, maintains a central and relevant position in the 30s due to the architecture of its subway, strongly influenced by the diversity of town's economical and social structure.



For the coexistence of engineering, architecture and art, we have reviewed the extreme case of Stockholm and the less famous one of Lisbon, where there was an anticipation of a tendency, which only in the last few decades of our century, is becoming more and more popular in Europe, where the presence of such infrastructure is alimeted by the ever growing interest in architecture.



Canary Wharf

It was only at the revealing of a new technological impulse and the moving of interests for planning, even allowed on a regional level, that it was possible to turn our eyes toward minor cities, facing cases like those of Lion, Lille and Bilbao, respectively for the innovative automated systems, for the strategic positioning and for their architectural value.

With respect to Italy, the movement will start much later, due to the sporadic interventions and the subsidizing of the transportation issue in the planning process, timidly showing up on the European scene only in the second after-war. If we exclude the first case of the subway in Rome, built during the fascism in occasion of the Expo42, with characteristics closer to a railroad, the moment of great enthusiasm arrives with the "linea 1" of Milan inaugurated in 1964: it looked like the terminology related to the subject of the subway had found its way into Italian technics. There were already talks about Turin, Genoa, Naples and Rome but partly due to elevated costs, partly to the slowness and the difficulty of the decision-making process froze the enthusiasm and leads some cities to giving up the project or to incline toward a pre-subway system.

So, while Milan continued more or less slowly the extension of its subway network, Naples started the construction of its own, given the sudden increase of the population throughout the 70s and the heavy urbanization determining a rapid and disorderly growth of the city. Using the multi-annual financial aids offered by the Law n. 1042/69 (state contributions for the realization of the subway transportation systems) in favor of the cities and their highly congested hinterlands, the cities moved to realize a subway network at the same time with hypothesis of reorganization of public and private ground transportation.

In the last two decades, which marks the introduction of many Italian cities in this competitive climate of renovation of the European city, Genoa's subway joins the group in 1992. Genoa has actually been recognized the accomplishment of being one of the few cities on our continent, with a population count below one million, that can count on an efficient mean of transportation, whose particularity lies in the reuse of already existing structures and adapting them to the new mean of transportation.

Starting from this wide introduction careful consideration will be given to the troublesome events of Turin as far as the subway is concerned, analyzing the project different phases through a more accurate historical and descriptive documentation.

In our city, the modern line of underground transportation, traces its beginning back to the 30s with the first hypothesis of an underground tramline linked to the reconstruction of Via Roma during the fascism years. However, the decisional process linked to the fate of such infrastructure really begins toward the end of the 50s, given the demographic growth rate and the rapid expansion of the city itself, with the proposal by the ATM (the Metropolitan Transport Company) of an advanced tramway restructuring and contemplating an ensemble of subways near the center of the city. Such proposal, as well as Italy's celebration in 1961 with the monorail "Alweg", contributed to the putting the subway problem on the table, to the point where in 1961 a first project elaborated by the ATM and made up of three variables linked by the prospected solution of it being totally underground. From this point on the priority is for the "linea 1" (on the N-S axis) the project for which is sent to the Ministry in order to be approved for the funds established by law 1042/69 mentioned earlier. The administrative procedure and the projecting proceed with the birth of the Società Metropolitana Torinese S.p.a. with the goal to execute the project. However, once delivered this document it did not meet the expected consensus, starting a climate of controversy on the subject.

So the local authorities proposed the pre-metro (the underground tramline) more economic and more flexible, however still on paper. This marked the first step toward the second phase for the cycle of studies on the subway of Turin, known by everyone as "metropolitana leggera" (light subway) on the E-W axis which starting at the second half of the 70s, has undergone uncountable

studies, plans and a network system of comparable potential (progetto rete '82- network project '82). Such studies, however, failed in the following few years. The opportunity came with the 1990 Soccer World Cup whose government funding could have been used for the longed for realization of this mean of transportation but in reality vanished when "linea 3" and the under passage of Piazza della Repubblica failed.

Only in the last decade of the XX century Turin has seen the accomplishments wanted by its inhabitants, initiating the works that will allow the realization, by the year 2006, of this transportation system that will utilize the modern VAL technology.



Turin 2001. Val transportation system exposed at "Piazza Carlo Felice"

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