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Infrastructure for mobility and landscape construction: an unresolved issue

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Abstract
Among the factors that were most decisive in the transformation of the Italian landscape over the course of the twentieth century, we can certainly include the intense construction of infrastructure for urban and territorial mobility. This occurred in a climate of significant indifference to the context, unsettling both the delicate territorial equilibrium and the communal methods that had for years governed the transformation of urban and rural landscapes. Starting with reflections on the main phases of this process, the paper will investigate the reasons for the division between planning culture and the construction of landscapes of recognisable quality, from a historical perspective. This in the conviction that the desire for 'landscape' and for 'beauty' are alive and well, even in contemporary society and that it is necessary to implement planning practices that on the one hand avoid the destruction of our inherited past, and on the other permit, through infrastructure for urban and territorial mobility as well, the construction of contexts that communities can recognise themselves in.

For centuries in Europe transformations of the territory have been "seizures, puppet inventions and modifications of nature in order to transform it into a recognisable landscape" (Gregotti, 2011, p. 136). On the old continent urban and rural landscapes – of an exceptional quality that we still recognise today – were constructed on the basis of the changeable but shared ideas of beauty that nourished painting, literature and poetry simultaneously for hundreds of years (see, for instance: Agostini, 2009; Benevolo, 2011; de Seta, 1996; Meneghetti, 2000; Romano, 2005, 2010). However, from the nineteenth century onwards, but especially during the late twentieth century, this slow and unanimous action based on public sentiment began to deteriorate and "that extraordinary culture of the territory that had made the Italy of the past so beautiful and unique, seemed to dissolve with the arrival of modernity" (Turri, 1994, p. 24). In fact, albeit with varying intensity and speed, new forms, unusual materials and never before seen technologies began to create realities that were extraneous to their contexts, the social culture and local materials, making ever clearer that detachment between anthropic activity and territory that has characterised the contemporary age of our country.
Numerous factors contributed to this situation. Among these a primary role was played by the infrastructure for local and territorial mobility. The building of roads, railways, canals, ports and airports, as well as all the complementary works required for them to function, had and still have today both a direct and indirect impact on the landscape. Direct in the sense that these are interventions that mark the image of the contexts due to their size and form. Indirect as they result in diverse uses for the territory; rather than altering its perception, they promote its transformation.

1. When infrastructure is integrated with the landscape

From 1839 – when the railway section between Naples and Portici was opened – Italy underwent decades of railway construction: this happened in limited quantities in the pre-unification period (in 1861 just under 2200 km of railway were in use), and then in much larger but still overall contained quantities until the end of the

century (in 1900 there were almost 16,000 km of track, predominantly branching out over northern Italy). Although at the time of unification Italy was "one of the European nations with most cities" (Maniglio Calcagno, 1983, p. 247), during those years the Italian landscape was mostly agricultural, by which I mean "that form that man, over the course of and at the end of his productive agricultural activity, consciously and systematically imprints onto the natural landscape" (Sereni, 1961, p. 366) The direct impact of the railways on this type of landscape was relatively limited. The railway networks, like the extra urban tramways – which in contexts such as Lombardy provided an effective response to the demand for local transport (Longhi, 1984) -, were in fact established as "integral elements of the Italian landscape" (Sereni, 1961, p. 366). This was probably not a conscious choice. In fact even then, the underlying regulations for the definition of layout answered to a logic that was removed from any form of town planning composition, so much so that the routes were decided upon quite simply "on the basis of the lowest cost of equipment" (Maggi, 2009, p. 24). Nevertheless, this new infrastructure did not in general detract from the "traditional landscapes [where] manmade interventions, when present, were authentically blended into nature" (Picon, 2006, p. 134). To give one example of many, the case of the bold metal bridges that were used in the old continent to connect riverbanks or valley sides, such as the bridge in Paderno d'Adda that "was for its time one of the most important of its kind in Europe and the whole world" (De Miranda, 1984, p. 39).
It was instead the indirect impact that was more evident. The railways – which opened Italy up to international exchange thanks to passes and tunnels and connections with the main ports – served in fact as the driving force behind the transformation of our country's landscape. In the more economically dynamic regions, and where the landed estate system did not obstruct the process, the new markets of reference for agricultural production would determine changes in cultivation, exacerbate exploitation of the territory – especially wooded land – and encourage the establishment of forms of industrial production strictly connected to agriculture: spinning mills, factories, mills, sawmills and furnaces. But not even this activity – equally due to its limited quantities and dimensions and its architectural language which was often in harmony with the local aesthetic traditions – would cause that macroscopic discord that the Italian landscape would see over the twentieth century.

2. The season of indifference towards territorial contexts

The development of the national railway network in the late nineteenth century occurred at the expense of the modernisation of the main road network which, especially in some southern regions, was in a particularly dire state. In the twentieth century however, the spread of alternative means of transport to the train and animal-drawn carriages rapidly changed the situation, so much so that "the history of the Italian railways [resembles] the story of the eradication of the street" (Maggi, 2009, p. 50).
A first significant impulse toward the implementation of the Italian road network was provided between the two wars. This coincided with the increase of motor vehicles in circulation on national soil, which went from just over 2,000 at the beginning of the century to 270,000 on the eve of the Second World War. During the Twenties therefore, development got underway of these road infrastructures that – especially in the period after the Second World War – would mark the Italian landscape more than anything else: the Milano-Laghi motorway was finished in 1925, the Milano-Bergamo in 1927, the Roma-Ostia in 1928, the Napoli-Pompeii in 1929, the Bergamo-Brescia in 1931, the Milano-Torino in 1932, the Firenze-Mare and Padua-Mestre in 1933. Until the mid-Fifties however, despite its 190,000 km, the Italian motorway system lagged behind other western countries. This divide was rapidly covered however, so much so that towards the mid-Seventies "Italy had double the motorways [of] France and two and half times those of Great Britain" (Maggi, 2009, p. 117).
Compared to the first railway infrastructure built on the territory, the impact on the landscape was entirely different. The car was the means of transport that would change society more than anything before it and the Italian landscapes in the period after the Second World War and the motorways were "one of the most conspicuous demonstrations […] of the process of cementification that, with its large artefacts (bridges, embankments, flyovers, overpasses, tunnels, etc. constructed to make the streets flow quickly), newly artificialized landscapes that were once marked only by the patient manual labour of farmers and bricklayers" (Turri, 1994, p. 40). The Autostrada del Sole, opened in 1965, was perhaps the symbol of that season of great territorial changes that occurred in a climate of significant indifference to the landscape. Its position spanning the peninsula from north to south not only sought no mediation or relationship with the surrounding landscape, but actually encouraged radical change. This and other coeval infrastructure for territorial mobility were crucial components in the economic growth of the country and, along with this, of that process of consistent and irrational anthropisation of the territory that has not ceased since. These were the years that saw the development of large industry, but also a proliferation of small businesses, vast growth of the urban suburbs and the depopulation of the countryside. It was essentially a phase of virulent disintegration of the agricultural landscape and general destruction of the most beautiful natural and historical landscapes in Italy (see, for instance: Cederna, 2006; Settis, 2010; Turri, 1990). With the oil crisis this critical season seemed to stall, at least until the early Eighties when another hundred odd kilometres of new motorways and a series of interventions to develop

the existing road structure were planned. These were generally planned and carried out according to the same logic that characterised the years of the ‘economic boom’, but from that moment onwards there was increasing awareness within civil society of the negative aspects that this use of the territory entailed. It especially became increasingly clear to public opinion that it was necessary not to further disfigure landscapes that were already significantly marked by infrastructure for mobility and often rough and vulgar construction.

3. Local mobility and urban landscapes

Over the course of the nineteenth century and in the first decades of the twentieth century, the need to adapt urban structures to the demands of modernity became increasingly pressing, as was the case in the rest of Europe. The main centres were equipped with public parks and shared facilities, but above all with plans for expansion that developed new urban fabrics near the historical nuclei and in areas close to railway stations. While they never achieved the coherence and scale of previous examples from France and Germany, long straight avenues and wide tree-lined boulevards – often built along the lines of old demolished walls – were not only efficient infrastructure for local mobility but also became characterising elements of the urban landscape of Turin, Milan, Genoa, Florence, Rome, Naples and Palermo. Generally speaking, the tendency was to bring “monumental and architectural elements and natural space [back into an organic urban design] based on the concept of a panoramic route connected to movement in green spaces” (Maniglio Calcagno, 1983, p. 279).
In parallel to the consolidation of the national railway system, which was entirely brought under state control in 1905, new infrastructure for local public transport became a part of the national urban scenery. While in London or New York, congestion had forced the construction of elevated or underground railways since the late nineteenth century, in Italy it was trams and trolley buses that dominated the first season of local public transport. For a few decades then, while Italy awaited the underground – which would only open in Rome in 1955 and in Milan almost 10 years later – tracks and overhead cables would mark the prettiest streets and piazzas of Italy and therefore the landscape of the largest cities. This lasted at least until the second post-war period, when the trams and trolley buses generally made way for motorised buses, more flexible and economical thanks to lower installation costs. The fact that they caused more pollution was not a problem at the time.
However, what would alter the urban landscape even more so was the diffusion of private vehicles. This process happened later in Italy than the other western countries. Generally speaking, “until the early Sixties individual motorisation in Italy remained more or less ‘on two wheels’” (Maggi, 2009, p. 131). However, from that moment onward – at least until the late Seventies – the process of motorisation proceeded rapidly, so much so that the automotive industry became the driving force of the entire national economy. It was a phenomenon of such importance that it inspired a momentous revolution in the fruition of open urban spaces. Moreover, this new means of transport would completely alter the spatial and functional relationships between the different parts of the city and the territory. That is to say, it created the conditions that led – to a much greater extent than in the nineteenth century and between the two wars – to that crevasse that opened up between the consolidated methods for urban construction inherited from the past and those typical of twentieth-century modernity.
The spread of the automobile also had a significant impact on the town planning culture and, especially, on the design of infrastructure for mobility. Already from the Thirties, a planning technique quickly took root from North America to Europe which considered the street to be merely at the service of vehicular traffic (Riboldazzi, 2010). Rather than a luxury, the variety of open spaces in the historic city – traditionally theatre of the social and place for collective identification – were progressively viewed as an obstruction to the movement of men and goods. All the social, cultural and aesthetic merit of these roads and piazzas was ignored, castrating de facto any potential for promoting the overall experience of civil living (see, for instance: Consonni, 1996). In just a few decades road expansion, demolition of historical fabrics, deviations and ring roads, underpasses, flyovers and roundabouts became the elements of a new kind of urban planning that, following the traffic regulations, characterised the design and use of the open spaces in the twentieth century city. There is no doubt that this had a positive effect on traffic flow but contributed to throwing both the vitality of the urban street and the city as a whole into crisis.

4. An unresolved issue

Today the creation of infrastructure for urban and regional mobility in comparison to the construction of landscapes in which society can fully recognise itself seems to be an unresolved issue. Other than some virtuous examples (see, for instance, some of those in: De Cesaris, 2004; Marinoni, 2006), examination of how the majority of large infrastructure has been planned of late makes it immediately clear that – where they have been considered in the planning process – scenic aspects have taken a secondary role to say the least, or at any rate have not received immediate reading or perception. For example, the corridor of infrastructure between Turin and Milan, in which tracks for the high-speed trains (opened in mid-2000) run alongside a renovated stretch of

motorway with three lanes (not yet entirely completed). It is an impressive job that has certainly improved communications between two of the largest cities in northern Italy and, more generally, national and international communication, but which nevertheless – probably in spite of any preliminary assessment on environmental impact – seems incapable of establishing any kind of aesthetic rapport with the landscapes it cuts across. And not only that: the development of this infrastructure has generated such a quantity of commercial and industrial headquarters, import-export centres and even residential and leisure structures (constructed moreover very close to it) in the last few years that a vast section of the landscape of western Milan, Novara, Vercelli and Turin has been significantly changed, undoubtedly for the worse. This is not an isolated case. Rather this example is symptomatic of a widespread situation that is even more paradoxical if one thinks of the multiplying context analysis techniques, planning tools and regulations ("there are in fact, in Italy, too many rules: there's the Constitution of the Republic, there's the Code for Cultural Heritage and the Landscape, there's the European Landscape Convention and an endless series of national and regional laws." Settis, 2010, p. 45), if one considers the proliferation of university courses and specific professional skills available on the market, the wealth of critical and theoretical reports, the quantity of specialist journals, columns in the weekly papers or TV shows about the landscape. All this ultimately shows that there is no objective or significant ability for improvement of the quality of these contexts to correspond to an evident increase in the collective sensibility with regard to landscape issues.

The reasons for this are complicated. Among the elements that have created this situation however, we can certainly number the separation between the actions of the town planner and the landscape architect (due to the complexity of the planning tools provided for by current legislation) and more generally between the culture of the urban and regional plan and the plan for landscape protection and construction (both conditioned by the absence of a shared idea of the landscape) (see, for instance: Jakob, 2009; Clément, 2005). Add to this the inability/impossibility of much current professional practice to tune in with the contexts in which they operate, not only for technical-economic reasons (which exist too and heavily condition the plans) but for the characteristics of the disciplinary culture themselves (in particular, that technical culture developed over the twentieth century which viewed the road as extraneous to its context) and for the increasingly widespread lack of formally coherent landscapes (see, for instance: Tonon, 2007) (which block any attempt to adhere to the aesthetic canons of the context). In short, what seems to be lacking – and what probably we will have to attempt to recover – is that 'shared code' (Settis, 2010) which meant that for hundreds of years all over Europe "the same idea of dignity and pertinence was embodied in home and palace, in cathedral and the chapel lost in the woods" (Settis, 2010, p. 52), that 'shared sense' that meant that that many of the artefacts that over the centuries have altered the territory instead leave the impression of having "always [been in] that place and having [always] been part of that landscape, becoming an intimate part of it that is quite necessary for its description (Gregotti, 2011, p. 136).

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