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URBAN GROWTH AND URBAN EXPANSION MEASURES IN LATE 19TH CENTURY EUROPE. ANALYSIS OF THE SITUATION CONCERNING THE CITY OF ROME WITH REFERENCE TO THE VIENNESE GRÜNDERZEIT-DEVELOPMENTS

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Abstract

Nineteenth-century European urban planning seems to follow similar guidelines everywhere. Did the institutionalisation of town planning lead to comparable outcomes? And where do the national urban design strategies differ? Did the topographic and climatic conditions have a major impact? The paper addresses these questions and pursues the goal of better understanding the Gründerzeit style as an international valid answer to the political, social and architectonical circumstances of the time.

Keywords

19th-century urban design; Vienna; Rome

Introduction

All around the First World, the cities of the 19th century experienced a major wave of industrialization and urbanization. The technical and medical achievements of the time led to a greater population survivability, to regional demographic peaks, and – supported by the prevailing political situations – to an unprecedented rural exodus. Also did the technical inventions and political shifts of that time fundamentally change the established social order. Interestingly, urban planning and architecture responded to what was happening globally with similar means: a gridded urban structure, the emergence of public transport, the rise of social housing, the boosting of housing in general and – somewhat surprisingly – a strongly historicizing architectural language. From an urban planning perspective, the Viennese Gründerzeit and the late Ottocento in Rome also recorded similar, yet in some respects unquestionably diverse developments; which are to be illuminated in the following.
Originating from economic history the term “Gründerzeit” actually refers to a period of promoterism in Central Europe of the 19th century, which began with the broad industrialization and lasted until the stock market crash of 1873. The somewhat fuzzy expression Gründerzeitstil, equals to the term “historicism” and as such mainly describes stylistic eclecticism, a phenomenon that was widespread in the 19th and early 20th centuries in art, design and architecture. In describing urban developments that, beside mere questions of stile also cover economic, social and political backgrounds, the term “Gründerzeit” is clearly to be preferred. The Viennese Gründerzeit is timed with 1848-1918 [Psenner 2018, 35].

Urban development of the late Ottocento in Rome

While Vienna and other European capitals in early Gründerzeit were already demolishing their fortification walls and elaborating first expansion plans, Rome was still largely undeveloped. The political and clerical play of forces of the past centuries had shrunk the world capital of the Roman Empire to a secondary location and thus to a small town: less than one third of the city area was actually built on and more than half was deserted or used for agriculture, only a few farmsteads and ruins were scattered here and there [Bauer 2009, 64; Cuccia 1991, 5].

After Italy’s political unification (1861) and a first impulse of industrialization in the north (with Turin and later Florence as first state capitals) a further revival of clerical power (1864) and the accompanying anti-liberalism and anti-modernism prevented from any significant urbanization impact. It was not until Rome was officially declared capital of state in 1871 that the city – which by that time had only just 240,000 inhabitants – was finally able to establish itself as a centre of power and develop accordingly (Fig. 1).

1: Population development in comparison: Vienna – Rome [Chart elaborated by Angelika Psenner 2019].
A commission of engineers and architects was set up to deal with «projects to expand and beautify the city» [Cecchini, Insolera 1993, 12]; it was decided to develop the city towards the East, where «better hygiene conditions, a more pleasant view and solid, dry ground» were offered [Caracciolo 1956, 64]. Unlike Berlin (Hobrecht Plan), Barcelona (Plà Cerdà) or New York City (Commissioners Plan), Roma Capitale did not develop on the basis of a unique master plan, but was shaped by a series of distinctive urban development plans. Just like late 19th century Vienna – meaning above all the development outside the Ring, following the second Stadterweiterung in 1890.

Piano Regolatore 1873

In October 1873, the city council approved a first Piano Regolatore. The foundation for its implementation was amongst others laid by the law of expropriation (Legge sulle espropriazioni per causa d'utilità pubblica) passed in 1865 with the «purpose […] to promote public health, to facilitate traffic and to beautify cities through road facilities and regulations in the inner-city districts» [Heiligenthal 1929, 74 cited in Albers 1997, 67]. The plan (a rough zoning plan without differentiation of use) refers to the area within the walls (approx. 1,500 ha) and envisages new districts for slightly more than 150,000 inhabitants on 278 ha and a mainly industrial area of approximately 28 ha (Testaccio: in this first draft the industrial site was to be complemented with only 3% housing). The development areas in the east, in particular Esquilino and Castro Pretorio cover almost half of the population growth, the western ones on the right bank of the Tiber host 23% and some smaller integrative projects in the existing urban structure (Trastevere, Gianicolo) absorb a further quarter of the population growth. Prati di Castello to the northwest is approved as an additional special project site outside the plan.

Road Network

The new urban development areas were laid around the existing city and their traffic-related connection ensured by a rigid reorganisation of the existing road network. In order to make the historic city permeable to traffic, existing streets were straightened and widened, thereby breaking new traffic arteries through the urban fabric: the «complex labyrinth of narrow streets» [Sica 1981, 469]. Among the most important interventions of the following years are Corso Vittorio Emanuele, Via delle Muratte (partly), Via Tomacelli, Via del Tritone, Via Arenula, Via Cavour and some sections of Lungotevere. To this day, the simple, “uninspired”, pure crossing goal is criticized here, which apparently did not come close to an urban redevelopment and design according to the European model (Cerdà’s Barcelona or Vienna’s Ringstrasse). Only Haussman’s axis could be cited as a reference, although Rome is said to lack the vision of a new “bourgeois city” as a system and strategy.

The street widths in the new districts are 12, 16, 18, 22 and 25 meters; the avenues surrounding a quarter are 30 m wide, the promenades 40. The streets within the historic city vary from 12 (side streets) to 15 or 16 meters (main streets) and reach 18 meters in some very relevant sections.
Building Types

The plan did not define different building structures or classifications, nor did it specify any areal zoning. In general, however, Roma Capitale developed using two different types: the *casa da pigione* (pigeon loft), a 4 and 5 storeys high apartment building, modelled on the 18th century palazzi; and the *casa signorile unifamiliare* with 2 or 3 floors, called *palazzina* or *villino* (depending on whether it was based on the 16th century palazzo with ashlar base and gable windows or the neoclassical villa with arches and columns) [Giannantonio 2017, 67-80]. The apartment building thus replaced the independent urban palais (*isolato*). The *isolato* – like the Viennese Gründerzeit-building later on – had a vertical, social scaling: it housed shops and workshops on the ground floor; the first floor, the piano nobile, comprised representative apartments (mostly also those of the owners themselves) and the floors above modest rental apartments for middle-class and craft families.

The Roman apartment house of the *Ottocento*, the *casa da pigione*, was composed of ten to fifteen apartments, each with six to eight rooms. In contrast to the Viennese Gründerzeit style, the plots were preferably built in blocks and with a uniform façade design. For example, in the districts of Esquilino, Celio, Testaccio, Castro Pretorio and Prati di Castello. Only in some cases, e.g. at Piazza Vittorio, the ground floor was equipped with porticoes according to the Turin arcades. Often the areas were monofunctional as pure residential quarters with isolated supply lanes.

Implementation

This first *Piano Regolatore*, however, was never approved; rather, under a new mayor the previously initiated expropriation initiatives were suspended and the already passed municipal council resolution was not passed on to King Vittorio Emanuele II. For the new state had considerable political and structural problems: lack of reputation abroad, parliamentarism without established parties, restrictive voting rights, constant financial crises, extreme economic North-South divide, low degree of industrialization, backward social structure (above all in the South), high proportion of illiterate people [Lippert 2014], so that almost one third of the Italian population emigrated, mostly to America. Nevertheless, as a result of the rural exodus Rome’s population still increased moderately. So, the unapproved development plan was used as a guideline for the urban redevelopment in the coming years; for example, at Piazza Vittorio, Piazza Cavour, Via Nazionale, al Celio and Testaccio.

**Piano Regolatore 1883**

In 1881 Alessandro Viviani, the author of the 1873 plan and meanwhile city councillor and director of the city’s technical office, had been officially commissioned to draw up the master plan for the further development of Rome. He produced the *Piano Regolatore*
in 1883, which essentially corresponded to the 1873 plan and which was finally enacted by decree. Its validity was set at 25 years.

The approved plan covered the same areas, but was designed for a slightly higher population forecast. It also included the restructuring of the road network system; major changes concern public and military facilities for which specific sites had now been identified.

The plan was largely implemented over the following 25 years, and over time the city council approved additional development areas, such as the Ludovisi district, San Lorenzo, San. Saba, large parts of the area on Via Carlo Felice, and other industrial sites inside and outside the city walls. In addition to a large number of public buildings, five new Tiber bridges (1886-1901), three railway stations (1890) and the Gianicolo Park were built. In 1877 the first horse-drawn tramway line was introduced and from 1895 onwards electric trams [Sica 1981, 475].

In 1907, the two Giolitti laws were passed: the first granted a tax on building land, the second allowed the expropriation of building land. At the same time, compliance with the building regulations became mandatory.

The – in relation to other European capitals – slow urban growth around 1900 led to a blatant housing problem and thus to the necessity of state intervention: several laws for the improvement of housing were passed and the IACP - Istituti per le case popolari (Institutes for people’s housing) established [Albers 1997, 69]. In addition, cooperatives and saving banks were made the cornerstones of worker housing construction.

In 1903, the magazine «Le case popolari e la città giardino» was published, it propagated the idea of the garden city and thus also introduced it into Roman urban planning. In 1908, the Assoziazione italiana per la città giardino was founded [Zucconi 1995, 221 cited in Albers 1997, 69]. Since no Italian specialist literature had yet developed [Albers 1997, 69], the systematic planning approaches developed by Baumeister (1876) and Stübben (1890) began to flow into urban planning considerations, especially with regard to the layout of building blocks and plots, road systems, traffic management and
Urban growth and urban expansion measures in late 19th century Europe

building typology. Evidence of this influence is the paper published by Aristide Caccia in 1915: Costruzioni, trasformazione e ampliamento della citta. Compilato sulla traccia dello Städtebau di J. Stübben (Milan, Hoepli). Stübben was also invited to Rome and became an honorary member of the Roman Architects’ Association.

Historical building regulations that shaped the Roman Ottocento against the background of the Viennese Gründerzeit

The first Regolamento Edilizio was not passed until 1864; it applied to the area “within the city walls” (whereas the first Viennese building regulation dates from 1829). It forms a basic framework and regulates for the first time that new buildings and conversions must be approved by the municipal “magistrate” upon submission of a regular application for authorisation which also includes graphical explanations. For residential units, this building regulation stipulates that a bathroom – which in Italy always includes a toilet – is required per apartment [Jamonte 2003, 107f]. In contrast to this, the third Viennese building code, the one from 1883, still permitted external Aborte (latrines); at least one toilet was to be provided for each two residential units [Bauordnung für die K.K. Reichshaupt- und Residenzstadt Wien, Fünfter Abschnitt, § 59]. Thus, the Viennese Garçonnière, a low standard apartment type for the masses with community toilets in the hallway, was prevented in advance. By now Garçonnières have vanished, but a few years ago this minimum housing form could still be found in Vienna’s Gründerzeit-districts.
In consequence, the 1866 amendment *Regolamento Specifico* controlled building heights and courtyard dimensions. A minimum width of 5m was required for the inner courtyards and the permissible building heights were defined in relation to the road width: 14 m for roads under 6 m; 16 m from 6-7 m; 18 m from 7-8 m; 20 m from 8-9 m; 22 m from 9-10 m; 25 m over 10 m. In addition, a prohibition for vertical building extensions was introduced for buildings that deserve to be preserved in their “art-historically valuable entirety”. While in Vienna high-density building development and thus the total exploitation of the building site was only prevented in 1883 with the introduction of a regulation that provided for a maximum 85% building development of plots, 15% should remain unbuilt, whereby – in addition to the courtyards – small light and air shafts could be taken into account.

In 1872 the scope of the building regulations was extended to an area of three kilometres around the city wall and a “notice of completion” was introduced. Now a permission for habitation of new buildings had to be obtained; but there were still no stipulations on ventilation, lighting or minimum room heights – for which Vienna provided precise specifications since the very first building regulation of 1829.

The second *Regolamento Edilizio* of 1886 generally regulated that the permissible building height should not exceed one and a half street widths and that inhabited ground floors were situated at least one meter above the surrounding terrain. This regulation, which is still valid today, had no correspondence with Vienna, where the so-called “Hochparterre” is only found in certain areas where a souterrain-use was intended on the part of the developers (also, it seems to correspond above all to the architectural preference of individual architects). Souterrains – on the other hand – were not allowed to accommodate living spaces (in contrast to Vienna, where this – at least at the beginning – was not forbidden from the outset).

The third building regulation, the one of 1912, partly corresponds to the current version. It was developed at the same time as the 1909 master plan, but was not officially approved until later. For the first time, the city was divided into two sectors: the inner city (essentially the current old town and the Flaminio) and the outer city. Different maximum building heights were applied to the sectors (the first zoning plan for Vienna – dated 1893 – also regulated the building heights according to different zoning, of which there were four). This Ordinance finally controlled the room heights: shops (*botteghe*) on the ground floor had to be at least 4m high, while the minimum height for the standard storeys was 3m. In practice, for aesthetic reasons, at least half of the floors had to be more than 3m high.

Souterrains were now also allowed for living but had to fulfil special requirements. The notion of direct daylight (*rapporto aeroluminante*) and ventilation was introduced – concepts which a renowned group of Viennese physicists (doctors) – against the

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1 Regolamento edilizio del Comune di Roma deliberato dal Consiglio comunale […] approvato dalla deputazione provinciale il giorno 24 gennaio 1887 e omologato dal Ministero dei Lavori Pubblici il giorno 1° febbraio corrente.
background of a strikingly high population density – had already brought closer to the Viennese city administration around 1864 and which had found its way into the building regulations with the BR of 1868 [Psenner 2012, 465ff].

Urban district development by the example of Rione XX – Testaccio

The 60 hectares south of the city, located directly on the river Tiber, were zoned in 1873 as a merely industrial site and thus started as a pure working-class district. The development of Testaccio (in Latin “testa” stands for earthenware or fragments) took place in several phases between 1880 and 1910. After an initially rather slow growth – due to the remote location and the unprofitable market for purely worker housing – Giulio Magni, Quadrio Pirani and Giovanni Bellucci together with the Istituto per le Case Popolari, ICP realized first major projects with urbanistic dimension in 1909-1917: by concerting a gradual integration of middle-class office workers these projects should bring about a much-needed social transformation of the quarter.

In contrast to Vienna, Roman plots were not distributed individually, but each building block was constructed in a homogeneous and coherent design. Thus, it must be seen as a prototypical example of programmed industrial urbanization. The buildings realized

4: Building development [Elaboration of Nadine Hamader and Angelika Psenner 2019].
in the first urbanization push comprise 10 almost square blocks (58x66 - 52x52 meters) around Piazza Testaccio; they on average have five floors.

**Conclusions**

Due to the given length specification, the present text cannot deal with land ownership issues and the special form of financing urban development. Nonetheless, I would like to touch on these aspects in the concluding statement, since they – together with the previously analysed (legal) conditions – represent a basic prerequisite for the special shape of the urban fabric in Rome.

As in Vienna, the possibilities for unhindered expansion in Rome in the 19th century were not favourable: the surrounding countryside was hilly and the ownership conditions precarious and in the hands of a few nobili. It was not until the decision on the expropriation law of 1865 that the conditions were created for taking land for public purposes. In consequence – mostly northern Italian – finance companies (e.g. Genoese or Venetians) then developed the areas specified by the city administration via the respective master plans (Piano Regolatore 1873, 1883, 1909) speculatively and under cost-saving, purely profitable aspects.
These circumstances led to the fact that the first urban expansion areas in Rome were just as densely and closely gridded as those of the Viennese Gründerzeit. The situation in Testaccio, with an average street cross-section of 11.40 m, is absolutely comparable to that in Vienna, where in Gründerzeit-areas we find street widths of 9, 12 and less often 16 m (Fig. 5). Vienna and Rome are thus clearly different from cities such as Berlin, Copenhagen and NYC, where the urban fabric is much looser.

And although the maximum building height – as in Berlin – was set in relation to the existing street width, the precarious proportions (25 m for streets with a width of 10m or more) finally led to the development of extremely narrow street canyons, analogous to Vienna.

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Webliography


<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Le Grindelhochhäuser</em>: il principio insediativo della casa alta come modello residenziale per la ricostruzione di Amburgo*</td>
<td>533</td>
</tr>
<tr>
<td>Giacomo Calandra di Roccollino</td>
<td></td>
</tr>
<tr>
<td>Identità e memoria. La ricostruzione delle città-fortezza di Jülich (1947-1986) e Wesel (1945-2011) nel dibattito post-bellico tedesco</td>
<td>543</td>
</tr>
<tr>
<td>Andreina Milan</td>
<td></td>
</tr>
<tr>
<td>Modernization in Greece after WWII and OECD policy proposals: the establishment of the University of Patras</td>
<td>553</td>
</tr>
<tr>
<td>Vassiliki Petridou</td>
<td></td>
</tr>
<tr>
<td><em>The Price of the Modern City: forgotten histories and lost houses</em></td>
<td>564</td>
</tr>
<tr>
<td>Miiä Perkkiö</td>
<td></td>
</tr>
<tr>
<td>I Piani di Ricostruzione in Italia: da strumenti per l’emergenza ad occasione per ripensare alla città</td>
<td>573</td>
</tr>
<tr>
<td>Raffaella Simonelli</td>
<td></td>
</tr>
<tr>
<td>Giuseppe Zander e la ricostruzione di piazza municipio a Terracina nel Secondo Dopoguerra</td>
<td>582</td>
</tr>
<tr>
<td>Caterina F. Carocci</td>
<td></td>
</tr>
<tr>
<td>Il contributo di Plinio Marconi urbanista alla ricostruzione del Secondo Dopoguerra in Italia</td>
<td>594</td>
</tr>
<tr>
<td>Annarita Teodosio</td>
<td></td>
</tr>
<tr>
<td>La visione dello sviluppo di Milano nella ricostruzione dopo la Seconda guerra mondiale. Questioni di urbanistica, architettura e restauro nella realizzazione di una nuova arteria stradale nel centro storico, la Racchetta</td>
<td>604</td>
</tr>
<tr>
<td>Serena Pessenti</td>
<td></td>
</tr>
<tr>
<td>I grattacieli nella Milano del secondo dopoguerra. Un dibattito assente nella pubblicistica architettonica</td>
<td>615</td>
</tr>
<tr>
<td>Simona Talenti</td>
<td></td>
</tr>
</tbody>
</table>