

The Viennese "Gewölbe"

A highly decisive factor for the functioning of public space

Angelika Psenner

Key Words: Urban Space Research; Public Space; Ground Floor; Use Structure; Vienna

In original Gründerzeit¹ plans the term "Gewölbe(e)"² was used for rooms directly facing the street. They had alley doors and thus were connected to public space; on the rear side, they were attached to small kitchens or so-called magazines—in this way featuring a micro unit for living and working. Our studies document the originally semi-public usage of this crucial part of the Viennese StadtParterre and thus prove the Gewölbe to play a decisive role in the functioning of urban public space. Due to high visitor frequency, this particular open, street facing use, caused the façade to function as a permeable: it allowed a consistent interchange of public and semi-public spheres. However, concerning the actual state of the Viennese StadtParterre our studies determine a significant decline of this semi-public usage. On the basis of our analytical approach and the micro-structural visualization of the urban parterre system architectural deviations and changes in usages can be determined, thus the (historical) structure of the StadtParterre can be analysed. Changes in the façade design regarding building openings and with it its permeability are also recorded so that type and quality of the connections between the building, the yard and the road can be classified. Ultimately, we use this systemic, holistic approach to gain insight into the functional contexts of the current situation. From this it is possible to derive valid statements regarding the Viennese StadtParterre, which can ultimately be integrated into a corresponding evaluation of the general organisation of urban space constellations.

¹ 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 so called "Gründerkrach" (stock market crash of 1873). The somewhat fuzzy expression "Gründerzeitstil", equals to the—from an art-historical point of view—more correct term "Historism" and as such mainly describes the drawing on older styles (style pluralism), 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 style also cover economic, social and political backgrounds, the term "Gründerzeit" has to be preferred. The Viennese Gründerzeit is timed with 1848-1918 (sometimes also 1840-1918).

² The term "Gewölbe" (vault) is based on the specification within the first Viennese Building Regulation of 1829, which stipulated a vault for the ceiling construction above the ground floor "for reasons of fire safety" - but also for reasons of static strength. Although only "massive ceilings" were required in later Building Regulations (1859 and 1868), the "Gewölbe" was consolidated as a term in the general language usage. Thus, the historian Manfred Schenekl recognizes a typical, often documented Viennese conceptuality, which describes both the sales area and the workshop. (Psenner 2017: 78)

1 Introduction

The current state of affairs—concerning the urban parterre situation in Vienna—is not satisfactory: moving and stationary traffic make the street an unattractive space to be in, without much amenity value and usability for the pedestrian public. Ground floor vacancies are on the rise, and consequently, even more space is being converted into (indoor) parking. Thus, the residential levels move upward one or sometimes even two floors. The situation becomes

Figure 1: Ground floor zone, allowing a consistent interchange of public and semi-public spheres



Source: Psenner 2017

Figure 2 and 3: Actual situation, moving and stationary traffic make the street an unattractive space to be in



Source: Psenner 2014

even more precarious when attic conversions and pent-houses mitigate efficient daylight supply on ground floor.³ This imbalanced tendency is also reflected in new

construction types: residential buildings are often raised on stilts, with a ground floor being completely left away or walled up and residential use only starting on the first upper floor. Municipal authorities have no oversight or control over this on-going urban transformation, as no data on the actual ground-floor situation is being collected, nor are there exact numbers available about store vacancies or private ground floor garages.

But we know, that the street spaces' potential is directly correlated to the constitution and usage of the adjoining ground floor. Consequently, in our studies⁴ the Urban Parterre is treated as a cohesive system: built up as well as open areas—ground floor, street and courtyard—are considered as an entity; so that interrelations become apparent and can be analysed and handled accordingly. This approach is being conceptualised by the term Stadt-Parterre. As a matter of fact, analytical tools and planning instruments currently available for the city of Vienna are hardly applicable for this approach:

- » The existing digital cadastre contains detailed information about public space, but no information whatsoever on single plots. Since the cadastral map mainly documents the buildings' outline, the inner micro structure of a city is omitted: ground floor, street space and courtyard usages are not documented with the necessary clarity and thus cannot be analysed objectively in a structural framework.

to the historic building regulations—minimum street widths of 9 meters at the beginning and later on 16 meters, the building regulation effective from 1870 allowed for a maximum building height of 25 meters (cf. Psenner 2005: 8).

⁴ The text is based on findings from various studies and research projects carried out under the author's leadership at the department for urban planning, TU Vienna as well as on the present FWF-financed research project "Urban Parterre, Vienna".

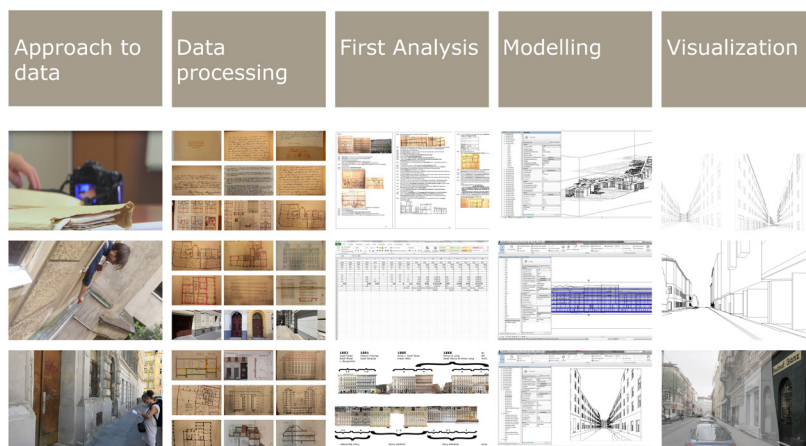
³ Gründerzeit Vienna was very densely built: with—conforming

- » The classic 3D city model, on the other hand, turns out to be unsuitable for a microstructural analysis since the parameters currently in use produce wide meshed models, which are primarily designed for a bird's eye view. Hence, the information at eye level, which we are looking for, cannot be provided in this way.⁵

2 Methodology

In the course of a pilot study at Vienna University of Technology in the years 2012-2014⁶ the delicate and detailed Comprehensive Ground Plan Survey (CGPS) method was taken up and developed further, by digitalizing it and by merely transferring it to three-dimensionality. So that we now refer to it as the Three-Dimensional Urban Parterre Modelling, UPM (Psenner 2014a). Although familiar since the 1960s, the classical technique—which merely consists in depicting the delicately structured fabric of an urban area by putting floor plan next to floor plan—had been forgotten on account of the wave of digitalization at the beginning of our century.⁷

Figure 4: Making of UPM



Source: Kodydek and Psenner 2017

For creating an Urban Parterre Model, the relevant documents (plans as well as manuscripts containing information about business licenses and certain utility fees), archived by the building authorities, are gathered, photographed

and analysed. Historical and current data, collected by these means, are verified on-site, amended if necessary and subsequently modelled on the basis of the digital cadastral map.⁸ As a result, two model implementations are created: a current one and one which is equivalent to the building condition around 1910. At the same time, so called house biographies are drawn up for each plot of land. They cover structural changes of the whole building and provide insight into changing usages of ground floor, courtyard and sidewalk space over the years.

3 Measurement and analysis

The exact and detailed depiction of the UPM allows a thorough structural analysis of the urban development: on the basis of business licenses and utility fees, the historical usage patterns can be identified and compared to the current use structure. This comparison and further spatial analysis allow for the disquisition of fundamental research questions: How did the historical, Viennese StadtParterre work? Which urban functions and processes can be identified today? Which coherence can be observed between public space busyness and the life inside adjoining buildings?

In the context of the actual study, an alleyway is being analysed that is located in a high density Gründerzeit area in one of Vienna's inner districts. The almost one Kilometre long street stretch is neither a main traffic road nor a proper shopping street.⁹ Around 1910 a long list of various—mostly production oriented—commercial uses were accommodated within the ground floor of these streets. In a short section of 190 metres length we found 7 restaurants / coffee houses / wine spirit shops, 4 general stores, 3 bakeries / pastry shops, 3 underwear and linen makers or linen cleaners, 2 shirt makers, 2 carpenters, 2 butcher shops and smoked meat productions, one each a pharmacy, dairy, printing house (of the Sonn- und Montagszeitung), synagogue, necktie sewing school, producer of cork goods, frame and moulding maker, glass-cutting workshop and 12 more merchants and businesses.

This extensive list exemplifies a great and rich variety, which contributes to assuming that the StadtParterre during Gründerzeit was extraordinarily lively—an assumption that is substantiated by numerous historic, visual as well

⁵ The 3D city model of Vienna offers the following tools: building structure model, roof model and digital terrain model.

⁶ „Wiener Parterre. Das Wiener Gründerzeit-Parterre – eine analytische Bestandsaufnahme. Pilotstudie" partially financed by the 2012 Science Award of the Austrian Economic Chambers, Research Funding Grant „Hochschuljubiläumsstiftungs-Preis" by City of Vienna and the 2012 Research Grant by Vienna University of Technology.

⁷ By now almost every large city has its own 3D city model, a suitable visualization method for project planning (simulation of planned buildings), and an efficient tool for analysis in the fields of visibility, noise dispersion, potential for solar panels, shading calculations, flood simulations, wind tunnel studies, etc.

⁸ The modelling is realized by using the building planning software Autodesk Revit®, which allows a coordinated and consistent model based planning approach—especially with regards to future research or planning projects.

⁹ For data protection reasons, all information on the chosen field is anonymized.

Figure 5: Comparison between the historic use structure of 1910 (up) and the today status (down) of the StadtParterre: the disappearance of the colour green (Gewölbe) illustrates the decline of semi-public usages on the ground floor.



Source: Psenner 2017

as written documents. The large selection existing back then goes way beyond the retail industry today and raises the issue of the currently widely debated urban research topic of the "productive city"; but a substantiated dialog of which would reach far beyond the scope of this article.¹⁰

4 The StadtParterre system: an assemblage of intermeshed spaces

4.1 The Gründerzeit buildings' ground floor, including the Viennese Gewölbe

The architectural concept of the Viennese Gründerzeit architecture offers a unique "Stadthaus" solution (town-house). Although the buildings are said to be the prototypes of a profit-driven capitalistic idea, by performing the task of being use-neutral, they also convey in a rather consistent and resilient urban quality: Right from the beginning they served both as residences and workplaces. And to this day they accommodate uses as diverse as apartments, hotels, offices, nurseries, cinemas, churches, fitness centres... even boulder climbing halls are situated in Gründerzeit houses (Psenner 2012a).

¹⁰ The idea leads to a systematic rethinking of the eclipsing power of an economy of growth and of our current mobility concept. In summer 2017 the so-called Fachkonzept "Produktive Stadt" was launched by the city of Vienna, thus representing a substantial part of the official urban development plan STEP2025 (<https://www.wien.gv.at/stadtentwicklung/studien/pdf/b008500a.pdf>). Before "the productive city" had been title and program of the urban research and planning journal "Stadtbauwelt" and the Bauwelt-congress in Berlin.

Use-neutrality is primarily defined through a flexible architectural structure and an adequate ceiling height. By typically measuring between 3.20 and 4 meters—on ground floors, up to 5 meters—the generous ceiling heights basically constitute the framework for the 'grand and lordly' façades and furthermore allow for diverse usages and adaptation at any time; as the modular and small-scale structure of the units can be merged or separated as required, while at all times conserving the well-balanced spatial proportions. In this way, the ground floor can accommodate spacious and prestigious offices as easily as small versatile premises.

In urban development theory, the term "semi-public" describes spaces open to the general public, yet with a temporary accessibility defined through social interaction. They actually are private property: areas inside private houses or units that have an intended yet organized and controlled visitor frequency. Semi-public usages are e.g. restaurants, eateries, cafés, shops and offices with customer service. They play an essential role in the socio-urban structure of the StadtParterre. From comparing the two UPM models-states "1910" and "2017" (cf. figure 5) a clear decline in semi-public usages on the ground floor is gathered, and thereby the disappearance of the so-called Gewölbe.

4.2 Permeability of the Facade

The use structure analysis shows that from a historic point of view, the Viennese ground floor zone contained a crucial semi-public space. Due to high visitor frequency, this particular open, street facing use, caused the façade to function as a permeable: it allowed a consistent interchange of public and semi-public spheres. Original photographs prove that the doors of alley joints and the so called Gewölbe, as well as various windows, gates and entrances were kept open most of the time.

Likewise, pictures of many southern European cities—namely those who immediately bring to mind an animated, well-functioning ground floor level—show that the façades there are permeable to this day: not only visually transparent (through large glass panes) but actually functionally connected.

It is necessary to examine this state of permeability in new buildings and building alterations: The visual permeability should be of a certain quality during the day as well as at night, when illuminated alley windows and display cases elicit a sense of security by indirectly enlightening the public space. This factor therefore exposes the installation of ground level garages¹¹ or storage rooms as nonsensical.

¹¹ During the past two decades, inner city ground floor locations were converted into small garages at an alarming extent. The currently effective requirements have caused this development (primarily the so-called garage law) and in course of a rising demand for roof extensions further expedited (cf. Psenner 2005, Psenner 2014a, Psenner 2015).

Merely fixed glazing on the ground floor also has to be questioned, since it makes openings and connections impossible. As besides the visual permeability, it is all about the actual accessibility, which enables semi-public or even private utilization of the Parterre to spread to the street and in reverse it opens indoor-space to the "public flow". Thereby a fundamental requirement for an appealing, bustling StadtParterre is fulfilled, for we know (not only since Gehl) "that utilization attracts further uses".

4.3 Sidewalk

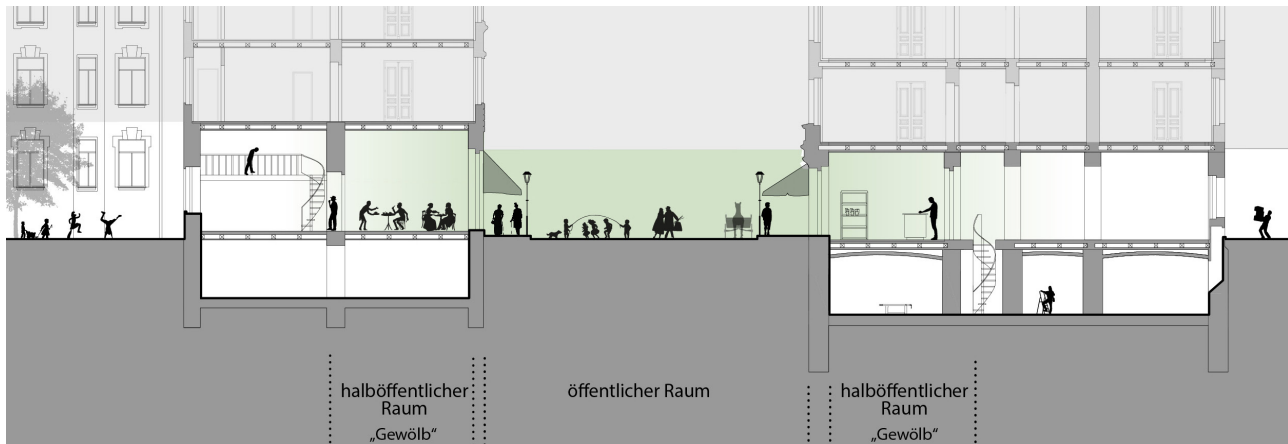
With the systemic aspect of the StadtParterre concept, and supported by the microstructural visualization of the UPM, the primary function of the sidewalk is put into perspective once again: The easily and directly accessible sidewalk is a highly sensitive urban area, the space where people move and meet, where minorities and majorities of a diverse society can integrate interactively. Obviously, it should be possible to use this—at best spacious—urban area in various manners, corresponding to its versatile functions. However, our UPM illustrates how very restricted lingering and moving freely is in public space nowadays, and how much open space was surrendered to parking cars. It is well known that a convenient sidewalk width is a prerequisite for moving at a comfortable distance and staying in groups and that social gathering in turn does lead to a favourable perception of public space (Psenner 2011a: 200).

But the actual legal situation works against these goals: according to the Austrian traffic regulations StVO, the sidewalk is an integral part of the street and thus reserved for traffic. The utilization of sidewalks "for other purposes than street traffic" is subject to approval. As stated in §78 it is also explicitly forbidden to "hinder foot traffic by stopping without a reason" (detailed analysis concerning this subject: Psenner 2011a: 203).

4.4 Street space

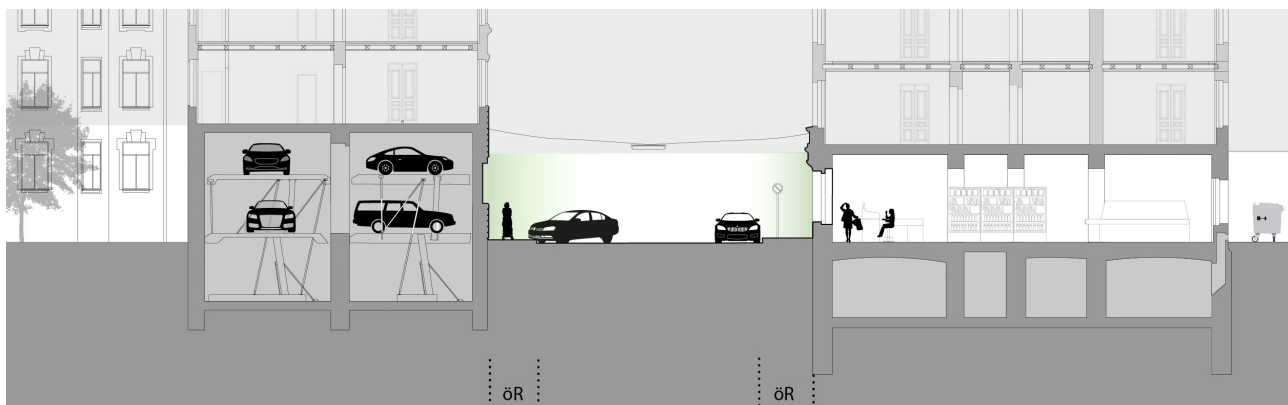
Historically speaking, Vienna's alleys were open for use to everyone; they were reserved for residents and citizens and met the needs of their day to day lives. Occupying the street space with private goods of any kind was banned and punishable by jail time (see reference at the end of this paragraph). Not before 1938—for then the NS-StVO took effect—was the nightly parking of vehicles allowed. Thereby the legal foundation for the privatization through the privileged, which has persisted to this day, was established. In other cities (i.e. Tokyo) parking cars on public space is allowed only at a few designated spots. To ensure a well-balanced StadtParterre it is necessary to completely rethink the legal set of rules. The Viennese garage law and in particular the obligation to create parking spaces must be radically changed in order to aim for a new approach to

Figure 6: The historic StadtParterre functioned as a uniform, self-connected structure. It shows a succession of various zones with a decreasing degree of publicness and accessibility: (street – Gewölb – rooms = public – semi-public – private); so that the public street space had a semi-public transient zone on each side (seen as a greenish haze in the picture).



Source: Kodydek and Psenner. 2017

Figure 7: The originally existing permeability; the exchange between the various zones is no longer given today. Obscuring barriers (mostly underused or structure free areas) fragment the StadtParterre. The publicly usable street space is minimized.



Source: Kodydek and Psenner 2017

the issue. (This highly important issue cannot be discussed here in all detail; hence I would like to refer to a paper that is explicitly debating the subject: Psenner (2014b): „Don't Even Think Of Parking Here. Wiener Straßenraum: Verhandlung von Nutzungsrechten und Nutzungsansprüchen".

4.5 The spatial connection of the Stadt-Parterre

Whilst the historical StadtParterre functioned as a homogenous, interconnected structure, the ground floor façade's initial permeability and the interchange between the various zones is no longer given (fig. 4). There was a semi-public space annexed to the street; this so-called Gewölb had a high user frequency (shops, doctor's offices, coffee shops, ...). Beyond that were spaces that were not open to the general public, yet still very actively used (production

industry, workshops, living, offices, bustling courtyards). Today, in-transparent barriers (mostly unused or structurally adverse areas, such as garages, store rooms with walled windows, large units of super markets with sealed windows) disassemble the urban parterre and break it into individual, discontinuous sections.

5 Qualities to be allowed for when evaluating and (re)organizing the StadtParterre

On the basis of the UPM and the corresponding house biographies architectural deviations and changes in usages can be determined, thus the (historical) structure of the StadtParterre can be analysed. Changes in the façade design, regarding building openings and the asso-

Figure 8: City-systematic analysis of a StadtParterre section with an approach for intervention on the right

Source: Schremmer, Wimberger and Psenner 2017

ciated facade permeability are also recorded so that the type and quality of the connections between the building, the yard and the road can be classified. Ultimately, we use this systemic, holistic approach to gain insight into the functional contexts of the current situation. From this it is possible to derive valid statements regarding the Viennese StadtParterre, which can ultimately be integrated into a corresponding evaluation of the general organisation of urban space constellations.

The issues discussed are summarized in the following section: the list of recommendations is extended by viewpoints produced by the overall study, whose in-depth discussion would have gone beyond the scope of this text:

Ground floor zone. Rooms facing the street—Gewölbe—have a special function: in the zoning regulation and development plan they should be addressed as semi-public spaces, by thus imposing certain conditions (regarding structural development, but also specific usage requirements).

(Long-term) under-usage. garages, storerooms, subjective¹² vacancies. Under-usage can be prevented by imposing conditions on usages that are inconvenient to the system. A justification for this practise can be found in the fact, that every kind of (long-term) under-

usage has negative effects on the StadtParterre; in the end, this has to be borne by society: municipally organised boosting of street life, increased police control, etc.

Interconnections. The UPM proves, that a vertical connection between the basement and ground floor was originally given: basement stairs and freight elevators gave direct access to the basement magazines. Appropriate to its function within the StadtParterre system, the ground floor should be reassembled and structurally as well as logistically linked with the basement; in this way, storage spaces for offices, shops and manufactures can be situated accordingly. Moreover, basement spaces and store-rooms can be easily reached from the street via supply hatches (this is linked to a demand of broader sidewalks).

Small-scaled structure. Manufacturing industry and local small-scale economy are evidentially reliant on small, versatile, affordable units. These needs have always been met e.g. in Italian cities: as in Rome and Venice every opening, whether the buildings' front door or the doors of premises and shops, are numbered consecutively, whereby a highly versatile small-scale structure remained fixed in the ever-changing urban layout¹³ (see figure 6). On the basis of the argument that the retail sector needs to fulfil the consumers demand for a wide choice of products, trading economy nowadays postulates the merging of smaller units to make room for extensive retail and storage spaces. But—firstly—storage rooms belong in the basement (for today we are able to (re)build every basement in a way that suites the storage of goods) and—secondly—the

¹² We use the German term "subjektiver Leerstand" (© K. Fohringer) to indicate ground floor spaces that, from an urban research point of view, are undeveloped: they are either not in use or in underuse. Official vacancies are difficult to assess, as most of the time the premises are left latent on purpose and the owners have no interest whatsoever to promulgate this status.

¹³ Cf. Psenner 2014a: 84

Figure 9 and 10: All doors in Rome (left) and Venice (right), whether the buildings' front door or the doors of premises and shops, are numbered consecutively



Source: Psenner 2003, 2016

assertion concerning "customer wishes" can confidently be doubted, since we know, that the question of a large assortment is more likely a market beneficial manipulation and commercial factor.¹⁴

Ceiling height. The knowledge of the functional and artistic vigour of a generous room height as a crucial utilization option is already present in the minds of planers and decision-makers and thus does not need to be expanded on at this point (cf. Psenner 2012a, 2014a).

Visual permeability. „The windows – which originally provided the connection between the public and the private,

which invited interaction and thereby turned ground floor locations into a semi-public space – are now being mirrored, taped with posters or altogether bricked up. So that rooms, which correlate with the streets, are entirely separated from the urban public realm. Hereby the street space loses a sphere, which goes far beyond the Euclidean space. The ambivalent supply of usages, the juxtaposition of opposing possibilities, the contradictions and the tension coming from it, which makes up the "positive moment" of urban life quality, of city life in general, is thus heavily decreased" (Psenner, 2005: 8). By now, this aspect is also 'state of the art'.

Figure 11 and 12: For a functioning StadtParterre system, the actual accessibility, the permeability of the ground



Source: Psenner 2016

¹⁴ In order to influence the consumer purchasing behavior and to increase sales, logistical and architectural shop design guidelines are created according to the latest findings from marketing research, Neuro-marketing, POS marketing etc.; furthermore, a spatial re-sorting of the products is implemented in regular time intervals—measures that demand large market halls.

Figure 13 and 14: The sidewalk is a sensitive urban area: a minimum width is required in order to meet in an agreeable distance (13: showing a common sidewalk in Valencia, Spain; 14: Vienna);



Source: Psenner 2017, 2012

Permeability. For a functioning StadtParterre, the actual accessibility, the permeability of the ground floor façade is of great importance: the exchange between inside and outside must be given. In southern European city culture, we can observe an active spreading of ground floor usages onto street space.

In the original application plans for city houses during Gründerzeit, small-scale units with alley premises, also called "Gewölb", were planned. Here, on average, every second but often also every single one of the openings were designed as alley doorways. In accordance to its special function a business portal, a delicate structure of wood and glass was located in front of the wall, by thus appropriately staging this sensible zone: enhancing permeability, accessibility and weatherproof presentation of goods.

Figure 15: Shading will play a major role in future ground floor façade design



Source: Psenner 2017

Sidewalk I. A *minimum width* of 4 to 5 Metres is required (New York City, Barcelona). In general, it should be refrained from putting up road signs in the middle of the sidewalk (to allow the opening of parked car doors). The sidewalk is a special space, which needs to be designed showing prudence. The sensible transient area between inside and outside requires a space that allows the exchange between the semi-public and the public.

Sidewalk II. Under the given climatic circumstances (climate change), a corresponding shading of the sidewalk is becoming more important for the warmer seasons. Following the once common, typically Viennese "Sonnenplache"¹⁵, a new, flexible, textile solution is thinkable. Closed ground floor façades¹⁶, which usually also do not provide temporary shading possibilities, are to be avoided.

Street Space. Reduction of motorized private transport PMT and the parking in public space: the permanent appropriation of street space through private goods must be charged accordingly. Parking in public space has to be expensive, for the indirectly created additional costs created by a dysfunctional StadtParterre, have to be borne by the city, thus by society. With this in mind, e.g. angle parking—an especially unfavourable invention of the 1970s—must vanish altogether (cf. Psenner 2014b). Ultimately a fundamental and extensive change of the currently effective traffic regulations is demanded at this point (cf. Psenner 2015; 2014ab).

¹⁵ The term "Sonnenplache" or "Sonnenschutzplache" was used in the so-called "Platzzinsgenehmigungen", which are utility licenses for the airspace above public sidewalk. Platzzinsgenehmigungen come together with the specification of a certain utility fee; they are demanded when advertising signs, displays, showcases, and so on are being installed in public space; together with application plans they are stored in the Vienna building authorities' archives.

¹⁶ All glass surfaces are also counted as „closed" in this case, as long as they do not offer enough actually openable surfaces.

The constitutionally narrow, deep Viennese street canyons (cf. Psenner 2014d) have to be kept clear for a utilization by residents and pedestrians, at any rate for lingering. The necessary vegetation for the improvement of the city's micro climate therefore, must principally be achieved through courtyard greening, green roofs and façade greening and efficient planting of trees.¹⁷

Being an essential part of the StadtParterre **courtyards** are to be understood in this systematic correlation. The unsealing of surfaces¹⁸ is not least with regard to "Heavy-rain-drain"¹⁹ and „heat-island-effect" an absolutely serious factor and should be handled in any courtyard design. Accordingly, cadastre entries concerning the unsealing situation should be urged e.g. analogously to the already practiced green roof potential cadastre.

Density. Today Vienna portrays a heavily built up (see footnote 1) yet not densely populated city. In a world-wide comparison of metropolises, the city is ranked in the lower field.²⁰ The density of the built city is, as an urban development factor, difficult to steer; however, in the past three decades it has mostly been influenced negatively due to the current living culture (merging of flats). Thus, the aspect of density needs to be regulated when building within existing structures, for the problem of devastated public space arises primarily in cities, which show a liberal living space per capita (cf. Psenner 2017).

6 Conclusions

In comparison with the historical situation around 1910, the here presented study "StadtParterre, Wien" notes a disappearance of the semi-public ground floor use—which in original plans was referred to as Gewölbe—and sees in it, among other adverse changes, one of the most unfavourable developments when it comes to accomplish a well-balanced StadtParterre system. Against the background of a systemic interaction of several mutually influencing factors, this decline of semi-public usage and thus of the essential interlocking of public and private spaces, is attributed to a particularly influential basic urban function. Accordingly, the text advocates municipal administrative measures that lead to reintegration and finally to the institutionalization of the Gewölbe.

In addition, a holistic as well as systemic understanding of the StadtParterre is considered to be expedient; which in the end would allow for a new and effective argumentation-line in various affected fields: in addition to architecture and urban planning, this approach would redirect the general view of the conditions of use of public space (and thus the debates on transport, mobility, ecology, sustainability and resilience) in a new direction.

Acknowledgements

The author would like to thank the historian Manfred Schenekl for his kind and knowledgeable help in finding the correct theoretical deduction of the term "Gewölbe". The present text is based on the essential findings of the research project "StadtParterre, Wien" processed currently under the authors' lead at the Department of Urban Design at the Vienna University of Technology, and funded by the Austrian Science Fund (FWF).

¹⁷ Current (micro) climate studies prove the positive effect of ideally canopy tree planting (cf. publicized study results in Hagen et al. 2014).

¹⁸ The ongoing StadtParterre study shows, that the majority of analysed courtyards is almost completely sealed and stuffed with garbage containers and bicycles.

¹⁹ Heavy-rain-drain-problem: the city climatic problem of the so-called cloudburst scenario is, at least since the catastrophic flood in Copenhagen in July 2011, the focus of city and climate research.

²⁰ The latest numbers for Vienna show a population density of 4.332 inhabitants per km². Compared to really densely populated cities in India, Pakistan, China or Africa which have a population density between 17.000 and 30.000 our concerns grow rather pale.

References

- Anderson, Stanford (ed.) (1978): *On Streets*. Inst. for Architecture and Urban Studies. Cambridge: MIT Press
- Borio, Géraldine / Wüthrich, Caroline (2015): *Hong Kong in between*. Zürich [u.a.]: Park Books
- Breuss Susanne (2010): *Window Shopping. Eine Fotogeschichte des Schaufensters*. Vienna: Wien Museum/ Metroverlag
- Caniggia, Gianfranco (1986): "Lettura di Firenze – Strukturanalyse der Stadt Florenz". In Malfroy/ Caniggia: *Die morphologische Betrachtungsweise von Stadt und Territorium*. Zürich: ETH, Lehrstuhl f. Städtebaugesch.
- Davis, Howard (2012): *Living Over the Store: Architecture and Urban Life*. London/New York: Routledge
- Gehl, Jan (1996, orig. 1971): *Life between buildings: using public space*. Copenhagen: Arkitektens Forlag
- Hagen, K. / Trimmel, H. / Stiles, R. et al. (2014): „Urban fabric types and microclimate response- assessment and design improvement (Urban Fabric & Microclimate)". Available for download at: http://urbanfabric.tuwien.ac.at/documents/_SummaryReport.pdf; (18.01.2018)
- Krusche, Jürgen/ Roost, Frank, Dept. für ARCHITEKTUR ETH Zürich (2010): *Tokyo. Die Straße als gelebter Raum*. Baden, Schweiz: Lars Müller Publishers,
- Larice Michael; Macdonald Elizabeth (2016) *The Urban Design Reader* (Routledge Urban Reader)
- Magistratsabt. 18 (ed.) (2011): *Werkstattbericht 112. Straße fair teilen: ein innovatives Verkehrsmodell für Wien*. Vienna : Magistratsabt. 18, Stadtentwicklung und Stadtplanung
- Psenner, Angelika (2017): „Funktionen des „Ebenerds" – „StadtParterre" reloaded" in: Österreichische Gesellschaft für Architektur ÖGFA (ed.): *UmBau*. Basel: Birkhäuser, 70-83
- Psenner, Angelika (2015): „Street Life! It's the Only Life I Know. Street Life, and there's a Thousand Parts to Play" in: M. Schenk, V.V. Popovich, P. Zeile, P. Elisei, C. Beyer (eds.) *REAL CORP 2015, PLAN TOGETHER – RIGHT NOW – OVERALL. From Vision to Reality for Vibrant Cities and Regions*, Wien, 2015, p: 579-590 und zum Download im Netz: http://www.corp.at/archive/CORP2015_30.pdf
- Psenner, Angelika (2014a): „Visualität der Stadt als Wahrnehmungs- und Bewertungsressource", in: Ingo H. Warnke und Beatrix Busse (eds.), *Place-Making in urbanen Diskursen – Interdisziplinäre Beiträge zur Stadtforschung*. [Diskursmuster – Discourse Patterns; 7], Boston/Berlin: de Gruyter, 91-119
- Psenner, Angelika (2014b): „Don't Even Think Of Parking Here. Wiener Straßenraum: Verhandlung von Nutzungsrechten und Nutzungsansprüchen", in: Warnke I. H. and Busse B. (eds.), *Place-Making in urbanen Diskursen – Interdisziplinäre Beiträge zur Stadtforschung*. (Diskursmuster – Discourse Patterns; 7), 2014, Boston/Berlin: de Gruyter, 121-147)
- Psenner, Angelika (2014c): „A Smart Researching and Planning Tool for the Neuralgic Urban Zone: 3D-ZPA", in: M. Schenk, V.V. Popovich, P. Zeile, P. Elisei (eds.) *REAL CORP 2014, PLAN IT SMART- Clever Solutions for Smart Cities*, Vienna, 35-44; and available for download at: http://www.corp.at/archive/CORP2014_28.pdf (18.01.2018)
- Psenner, Angelika (2014d): *Das Wiener Gründerzeit-Parterre: Eine analytische Bestandsaufnahme. Pilotstudie (Abschlussbericht der Studie)*. Vienna: TU Vienna, Dept. for Urban Design. Available for download at: http://publik.tuwien.ac.at/files/PubDat_240533.pdf; (18.01.2018)
- Psenner, Angelika (2012a): „Mixed Building use Promotes Mixed Urbanity: Insights from Historical Use-neutral Architecture", in: M. Schenk, V. Popovich, P. Zeile, P. Elisei (eds.) *REAL CORP 2012, RE-MIXING THE CITY- Toward Sustainability and Resilience?* Vienna, 463-473. Available for download at: http://programm.corp.at/cdrom2012/papers2012/CORP2012_18.pdf; (18.01.2018)
- Psenner, Angelika (2012b): „Wie wollen wir das Wiener Gründerzeit-Parterre nützen?", in: RIESSLAND, Martina, SCHEUVENS, Rudolf, SCHÜTZ, Theresa: *Perspektive Erdgeschoss, Werkstattbericht 121. Magistratsabt. 18, Stadtentwicklung und Stadtplanung* (ed.), 2012, Vienna, 18-23
- Psenner, Angelika (2005): „Parterre. Wechselwirkung zwischen Erdgeschoss und Straßenraum in Wien", in: IWI Kulturverein zur Förderung der Interdisziplinarität (ed.), *dérive* Nr. 18/2005, 8-11
- Scheuven, Rudolf/ Schütz, Theresa/ MA18 (eds.) (2012): *Perspektive Erdgeschoss, Werkstattbericht 121*. Vienna: Magistratsabt. 18, Stadtentwicklung und Stadtplanung
- Wüstenrot Stiftung (ed.) (2014): *Herausforderung Erdgeschoss- Ground floor interface*. Berlin: Jovi