# Vienna's Resistance to the Neoliberal Turn: Social Policy through Residential Architecture from 1970 to the Present

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## The Resilient Welfare State

Vienna's residential architecture is unusual. In the late twentieth century, when most of Europe experienced a 'neoliberal turn' and municipal and national governments handed over the responsibility for housing to the private sector, the City of Vienna chose a different path. Rather than dismantling the welfare state, it increased interventionism to the extent that in the early twenty-first century the housing market was more tightly regulated than in the 1970s. The basic parameters of this approach were maintained. To date, the City of Vienna owns over a quarter of the city's housing stock, and the vast majority of construction is carried out with different forms of state subsidy. This situation is not only beneficial for the Viennese, who tend to enjoy high-quality housing at an affordable price. It also created a unique built environment in which architectural design was used to promote social policy.

In this article I will argue that the resistance against neoliberal housing policies and the resilience of the welfare state in Vienna was a matter of political choice rather than economic necessity, and favoured by particular socio-cultural and historical conditions.[1] I will also show that as a result of this choice Vienna's residential architecture has effectively contributed to a social agenda, furthered a sustainable lifestyle, and promoted the integration of diverse social groups.

By focusing on recent residential architecture, I will also show that Vienna adopted certain aspects of postmodern, post-Fordist urban policy in a way that made them compatible with welfare state principles. These include spectacular design – such as, for example, the Hundertwasser House – connected with city marketing and image politics, as well as the diversification of architecture designed for particular social groups, such as the Car-Free Model Estate or the Frauen-Werk-Stadt. While in other European cities such diversification aligned with a greater market influence and an increasing polarisation and fragmentation of society, in Vienna they were integrated into the municipality's cohesive and egalitarian goals. [Fig. 1]

In recent years, there has been an increasing pressure on this system of welfare-state housing provision, resulting from rising demand in a growing city as well as from EU regulations against protective local policies. And increasing numbers of people are unable to gain access to those provisions. While there is no denying either these obvious challenges or the necessity for continuous reform and adaptation, I would argue that the benefits of this system have so far outweighed the deficiencies.

Vienna's residential architecture is distinctive because it evolved in a city characterised by both inherent conservativism and continuous innovation. *Wien bleibt Wien* (Vienna remains Vienna), the title of Johann Schrammel's relentlessly popular nineteenth-century tune, is not only programmatic for a tourist industry banking on operas, emperors, and Sacher cakes. It also mirrors the experience of

many Viennese, who cherish their cosy and some-what stuffy city, relive memories of past glory, and traditionally have a strong attachment to their neighbourhood.[2] And it is exemplified in the astounding political continuity of a city which, with the exception of the Nazi period, has been ruled by the same Social Democratic Party since 1919, and whose previous mayor, Michael Häupl, had been one of the longest-serving democratic leaders in Europe when in 2018, after twenty-six years in office, he was relieved by his fellow social democrat Michael Ludwig.[3]

And yet Vienna is also, and always has been, a dynamic and innovative metropolis. This is reflected in a vibrant architectural culture connected with the big names of the late twentieth century such as Hans Hollein, Friedrich Kurrent, Viktor Hufnagl, Harry Glück, and Wolf Prix, as well as with up-and-coming offices such as Delugan Meissl, BKK, Einszueins and Querkraft.

Vienna's residential architecture has been subject to intense research. Recently, Liane Lefaivre's excellent book stands out for providing a concise and yet comprehensive history of Vienna's architecture since the 1900s.[4] Other publications on recent residential architecture contain portions on Vienna.[5] There are also several books sponsored by the Vienna municipality, which despite a certain bias are based on sound research.[6] Many publications, particularly those by Vienna-based scholars, are designed for a local audience and only to a small extent show the bigger picture.[7]

## Modernist Continuities

Vienna's promotion of social policy through architecture is not an innovation of the late twentieth century but has a long history. The most significant predecessor was the 'Red Vienna' housing programme of the interwar years, which was initiated by the Social Democratic city council. Today these buildings are almost universally acknowledged for their efficiency in mitigating the housing shortage as well as for their high-quality design.[8] This assessment, which has not always been so unambiguous, has certainly been influential for the acceptance of similar approaches. Schemes such as the Karl-Marx-Hof (1930, Karl Ehn) or the George-Washington-Hof (1927, Karl Krist/Robert Oerley) still attract flocks of architecture students today. In a way, the momentum was never lost, as throughout the twentieth century the City of Vienna sponsored internationally renowned architecture and at the same time, defying the image of self-centredness, occasionally also allowed outsiders to design innovative buildings. In the late twentieth century, these included Jean Nouvel, Herzog and De Meuron, Hillmer and Sattler, Rob Krier, and Timo Penttilä. Most of these projects derived from competitions (co)-financed by the municipality.

Vienna's innovative conservativism with regard to architectural policy was also facilitated by the structure of the urban fabric. The destructions of the Second World War were limited and did not inspire radically modernist replanning. Some inner-city motorways and large-scale demolitions similar to those that ravaged many European metropolises during the 1960s and 1970s were also planned in Vienna, but they were never implemented. Rather, the promoters of a conservative modernisation took a lead, and they maintained the primacy of the historic centre and filled the gap sites left by wartime destruction with modernist perimeter block buildings of similar dimensions. Vienna's medieval inner city and the surrounding nineteenth-century districts are therefore visually intact. The *Zinshäuser* (tenements) of the late 1800s with their four storeys, courtyards, and lushly ornamented stucco façades are now carefully preserved. They are still ubiquitous: close to a third of the population live in buildings that are more than a hundred years old, which is one of the highest rates in any large European
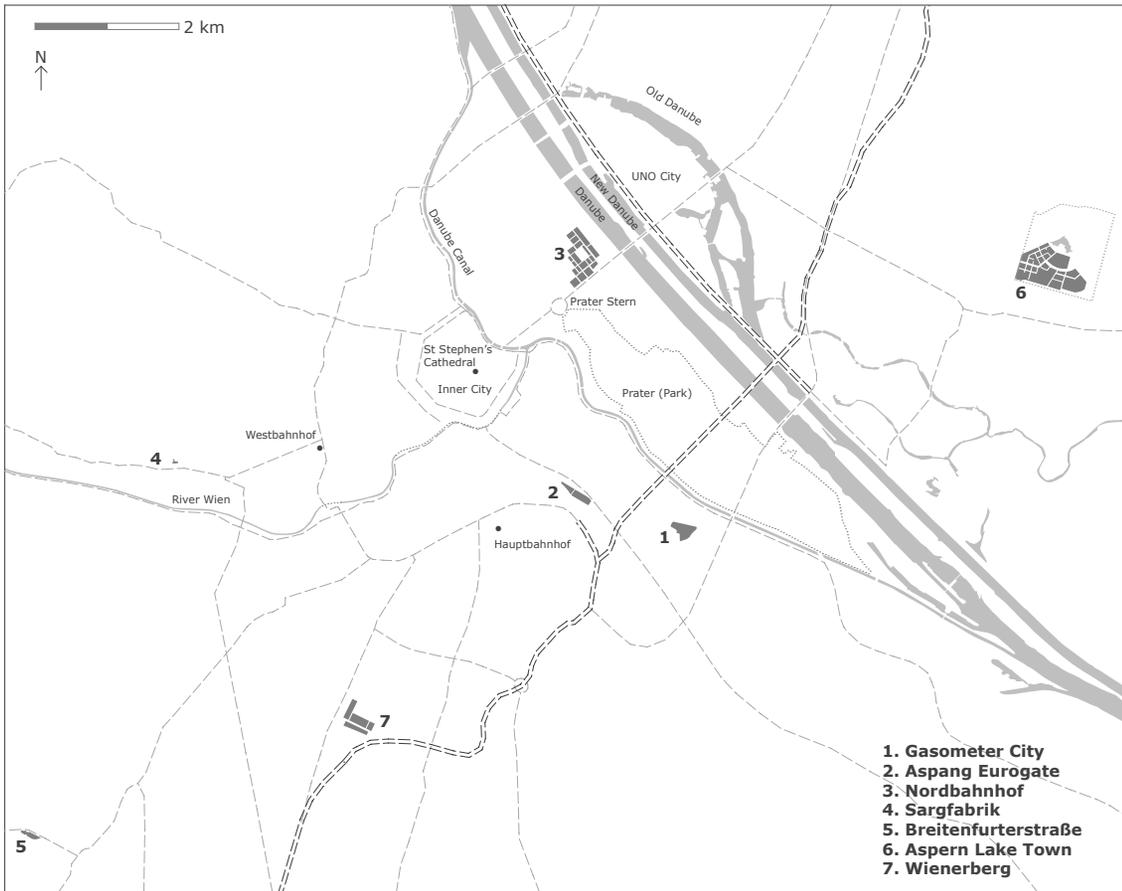
Fig 1: Select recent housing developments in Vienna. Plan: author.

city.[9] Accordingly, recent design has respected the historical plan. The frequency of dense medium-rise architecture in the central districts is thus to a large extent a result of the historic block structure, which was only broken up in exceptional cases.

The architectural continuity was matched by an unusual combination of demographic decline and economic stability. Unlike most metropolitan regions worldwide, where the population exploded in the second half of the twentieth century, Vienna reached its all-time high of 2.2 million inhabitants around 1914, after which it continued to shrink. Only in the late 1980s, at a size of 1.4 million, did the city slowly start growing again.[10] Neither did Vienna experience an economic downturn in the 1970s.[11] Given a diversified economy with little reliance on heavy industry, the economic crisis after the Oil Shock was comparatively moderate and was only noticed much later, that is, in the 1980s. It was soon mitigated by the new economic opportunities after the fall of the Iron Curtain. In this context Vienna, which is situated only about sixty kilometres from the Hungarian, Czech, and Slovak borders, was able to reactivate its long-standing connections with East Central Europe and the Balkans.[12]

In the early twenty-first century Vienna, after almost eighty years of decline, experienced a period of economic growth and increasing immigration. The city grew at a pace unmatched in any other Central or Western European metropolis. At the same time the composition of its inhabitants became increasingly international: in 2014 one out of three Viennese was born abroad.[13]

The strong continuities notwithstanding Vienna is anything but an open-air museum. New architecture can be found almost anywhere. Contrary to what one might expect in a historically conscious city this architecture is largely modernist. This might be related to the fact that Vienna has no shortage of real historic buildings and therefore little need to copy them. It also might be an outcome of the long-standing acceptance of nineteenth-century architecture which, unlike in many other European cities, was never subject to collective devaluation, and which therefore did not need to be powerfully rediscovered.[14] And it also might result from the strong tradition of Red Vienna modernism, discussed below. In any case, it reflects the city's dynamism.

Modern architecture not only remained influential as a model for design but also as a social project connected to state-led redistribution, social welfare, and the promotion of acceptable living conditions for all. In the 1980s and 90s, when Britain, the US and many other countries embraced neoliberal politics and engaged in the large-scale privatisation of housing, the level of state intervention in Austria was growing. This period of 'Austro-Keynesianism' was heralded by the government of Social Democratic chancellor Bruno Kreisky (in office from 1970 to 1983), who was nick-named the *Sonnenkanzler* (sun chancellor) for his unshakeable position at the centre of a flourishing economy.[15] At a time when Margaret Thatcher broke the power of the trade unions and Ronald Reagan cut back on social services the Austrian welfare state grew stronger than ever before.

Two factors are likely to have been influential in Vienna's unusual political development. One is the above-mentioned stability of the local economy and the time lag, which meant that the Oil Shock and the decline of heavy industry that hit other European metropolises at the time was not felt until much later, when it was soon mitigated by the economic upsurge resulting from the lifting of the Iron Curtain.[16] In the Vienna of the 1970s unemployment was low, and given the demographic decline the housing market was relaxed.[17] The second factor, which should not be underestimated, was the political commitment.

Fig 2: Hundertwasser House (1983–85, Friedensreich Hundertwasser, Josef Krawina, Peter Pelikan). Photo: ThomasLedl/Wikimedia Commons.

The Social Democratic city council was eager to invest abundant public funds in improved standards of dwelling, and the conviction that tax revenues should be used for the improvement of housing was widely shared.

Such 'modernist' political programmes were easy to promote, since, in contrast to other cities, Vienna's modernist architecture tended to be modest, of high quality, and above all well maintained. There were no crumbling 'sink estates', as Vienna's few tower block developments were comparatively small and showed few signs of ghettoisation.

At the same time the original promises of the welfare state housing programmes were fulfilled. The housing situation had improved significantly since the Second World War, and modernisation was still continuing. In 1971 only 19 percent of Vienna's households had central heating and 40 percent had no bathroom.[18] Against this background the Social Democrats' commitment to subsidised housing and modernisation was widely supported.

**Subsidised housing in a neoliberal era**

The *Gemeindewohnung* (council flat) built and owned by the *Gemeinde Wien* (Municipality of Vienna) has been the most influential planning tool in Vienna's housing policy since the interwar period. Its significance has barely waned during the minor restructuring of the subsidy system at the turn of the twenty-first century. Vienna's council flats could not be further removed from the associations that council housing, public housing, or social housing carry in other countries. There is no social stigma attached to municipally owned flats. They tend to be well managed, many are located in desirable neighbourhoods, and many feature innovative design.

The scope of this article does not allow for a comprehensive overview of the complex access regulations to social housing in Vienna, which depend, among others, on income and family status. But broadly speaking, they were originally designed for the working classes (not necessarily the poorest strata among them) and modified over time to include large portions of the middle classes as well. As a result, Vienna's municipal flats are not necessarily the dwellings of the poor. As alluded to earlier, in the early twenty-first century there were approximately 220,000 council flats, housing about half a million Viennese, that is, over a quarter of the population.[19] Most importantly in the context of this article, the history of housing architecture in Vienna at the time of the neoliberal turn elsewhere is thus to a large extent a history of the municipally built, owned, and managed *Gemeindewohnungen*.

Apart from the *Gemeindewohnungen* there are several other forms of subsidised housing.[20] There are *gemeinnützige Bauvereinigungen* (non-profit housing associations, often partially owned by the municipality), there are *Baugruppen* (building groups – in Austria a form of subsidised cooperative housing), and there are private developers profiting from *Wohnbauförderung* (housing subsidies) and in return committing to the conditions set by the municipality, including rent caps and minimum standards. In fact, only a minority of Vienna's housing is built without subsidies[21] – in 2010, the share was less than 20 percent.[22]

This system is built on tenant protection and a generally shared conviction that state authorities have the right to legislate the housing market, regulate tenancy, and cap rent levels. It is to a large extent based on the fact that the vast majority of Viennese, including a considerable share of the middle classes, are renters and not owners. In 2013, the number stood at 78 percent.[23] In London, for example, the share is less than 50 percent.[24] Against this background no Austrian politician would feel the need to request, along the lines of British Prime Minister Theresa May's condescending remark, that 'renters must be treated like human beings'.[25]

The most significant constraint on the free market was placed in 1984: private developers were banned from buying land. Instead, all land used for subsidised housing development (that is, almost all multi-family housing) was bought by a municipal agency and passed on to developers.[26] Dietmar Steiner, the founding director of Vienna's Centre for Architecture, called this measure 'a form of enlightened Stalinism' unique in the Western world.[27] To an even greater extent than before housing became a municipal enterprise, and has largely remained so to date. While in 2004 the City of Vienna discontinued the direct commissioning of housing in favour of subsidising and tightly regulating private developers such as the company Wiener Wohnen, this apparent end of the *Gemeindewohnung* did not end the regime of state-financed housing. Compared to other countries, Austria still invests a large share of its tax yield in housing.[28] And Wiener Wohnen, although working on market principles, is also tightly regulated and thus very different from a profit-oriented housing company in Britain or the US. Even the *Gemeindewohnung* programme has been resumed. In 2017 mayor Michael Häupl declared that 'we stand internationally for social housing', and the City of Vienna started building the first 120 flats on Fontanastraße as part of a plan to complete four thousand council flats in the whole city by 2020.[29]

Vienna made only small concessions to the neoliberal spirit of competition. There was no sale of municipal housing, but rather an increasingly cautious use of economic resources along the lines of a 'social investment welfare state'. In 1995, a small competitive element was introduced. This was the so-called *Bauträgerwettbewerbe* (developers' competitions), masterminded by the Councillor for Housing and Urban Regeneration and future Austrian chancellor Werner Faymann.[30] Now developers had to collaborate with architects and submit 'package proposals' as entries to public competitions. This led, to a certain extent, to a greater variety of design. It did not, however, lead to developers cutting cost at the expense of future inhabitants as one might have expected. The municipality continued to set the guidelines and tightly monitored the quality of execution and future rent levels. Non-compliant developers could be forced to repay subsidies. From the perspective of the developers the competitions were still advantageous, as they put private developers in a position similar to that of non-profit housing associations, where previously they had been at a disadvantage.[31]

**Showcase council housing:**
**the Hundertwasser House**
Among the policies of the neoliberal era that Vienna has at least partially adopted was place marketing through architecture – a conscious break with the modernist goal of similar living conditions for all. But even here, social policy goals for the entire city predominated, as the signature buildings were an integrative part of welfare state housing provision, designed to celebrate the achievements of this system, and aimed at inspiring the bulk of non-signature architecture.

About a decade before the term 'Bilbao Effect' entered the architectural discourse, the City of Vienna commissioned a very peculiar example of signature architecture: the Hundertwasser House (1983–85, Friedensreich Hundertwasser, Josef Krawina, Peter Pelikan). [Fig. 2] Like Frank Gehry's Guggenheim Museum in Bilbao, the Hundertwasser House soon appeared on postcards, t-shirts, and shopping bags, and became a symbol for Vienna's cultural dynamism. Unlike the Guggenheim it did not celebrate the post-industrial leisure society, but rather the achievements of the welfare state.

The Hundertwasser House was the showpiece of the state-subsidised housing programme. It was a social housing scheme, inspired by the pressing ecological concerns at the time, and held the promise of a new and better society. With its turrets,

oriels, multi-coloured tiles and irregular windows it looks like a child's drawing of a dream house and at the same time points to a friendly vision of sustainable urban life.

This building was the work of a world-famous artist. The painter Friedensreich Hundertwasser (1928–2000) made his name in the 1950s with colourful, decorative paintings (from which straight lines are banned) that communicate an ecological vision imbued with childish optimism and a strictly anti-authoritarian attitude. In his 1958 'Mould Manifesto against Rationalism in Architecture' he indicted tower blocks and repetitive slabs as inhumane and worthy of rotting away. His catchphrases such as 'The straight line is godless and immoral'[32] evocatively rebuffed Le Corbusier's equally catchy 'Man walks in a straight line because he has a goal and know where he is going'.[33] They thus went down well with a generation disappointed with Corbusian modernism.

Hundertwasser's bright colours and curved forms combined a yellow-submarine aesthetic with inspirations from Gustav Klimt and Otto Wagner. He was thus, in a very Viennese way, at the same time conservative and progressive. He touted an ecological revolution and the obsolescence of existing cities while also harking back to an early twentieth century Jugendstil with a bucolic inflection. As a cantankerous eccentric, he was able to embody both the image of the visionary rebel artist and that of the well-rooted, dyed-in-the-wool Viennese. In the early 1970s he appeared on national television, promoting his visions for a 'humanist architecture' to millions of Austrians, and showing undulating multi-coloured houses surrounded by greenery and grazing farm animals. His ecological, anti-authoritarian ideas struck a chord with the generation of 1968 student protesters. At the same time his love for gold ornamentation and rural idylls made him equally acceptable to nostalgic traditionalists.

The Hundertwasser House was constructed in the Landstraße district, a densely built-up neighbourhood in the city centre, where it both complements and contrasts with the surrounding late-nineteenth-century tenements.[34] The building consists of two rounded volumes on a roughly rectangular plan. Right angles are avoided wherever possible. The multi-coloured façade features irregular windows, protruding ornaments, and turrets. There are three communal and sixteen private roof terraces, some of them situated behind an inclined parapet wall. There is greenery on balconies and roofs, which over the years have almost overgrown the building. In addition to fifty-two flats the building includes a children's playroom, a party or meeting room, a winter garden, a doctor's office and a restaurant. There is also a subterranean car park. Most of the building is carried out in brick and reflects Hundertwasser's love for traditional materials. Only the ceilings and other load-bearing portions were executed in reinforced concrete.

The goal of administering social policy through architecture was part and parcel of the project. Contemporary observers praised the city council's goal of reinvesting surplus wealth not only in increased square meterage and modern amenities, as was customary in the 1960s, but also in aesthetic harmony and organic design.[35] Designed to increase the quality of life, the municipality agreed to 'green materials', customised doors and windows, and costly ornamentation. For example, the half-round balconies were adorned with undulating hand-wrought iron banisters.

Despite its alignment with some of the battle cries of the 1968-generation, the Hundertwasser House resulted from an initiative not by rebellious students but rather by the older generation of the Viennese establishment. The first impulse came from chancellor Bruno Kreisky, who recommended Hundertwasser to mayor Leopold Gratz (in office from 1973 to 1984).[36] Both the mayor and

Fig 3



Fig 4

Fig 3: Karl-Waldbrunner-Hof (1981–84, Erwin Fleckseder, Sepp Frank, Peter Lindner and Heinz Neumann) on Lechnerstraße 2–4. Photo: author.

Fig 4: Roman-Felleis-Hof (1927–28, Johann Rothmüller) on Hagenmüllerstraße 32. Photo: author.

the painter were in their fifties at the time; Kreisky was approaching seventy. They were united in the conviction that, as Kreisky put it, Hundertwasser's ideas 'represent the romantic longing of the population'. The city council was in favour – the decision was supported by three councillors: housing councillor Johann Hatzl, planning councillor Rudolf Wurzer, and culture councillor Helmut Zilk, later Gratz's successor as mayor of Vienna.[37] As for the general population, widespread approval took slightly longer. Throughout the 1980s a somewhat benevolent battle between supporters and opponents of Hundertwasser's design dominated the local press.[38]

In addition to being an emblem of Vienna's council housing programme, the building soon became a tourist magnet at a time when weekend trips to cities became popular, and it added to the appeal of the Austrian capital as a tourist destination. An exhibition catalogue from 1991 spoke of a 'colourful media spectacle, which offers fun and variety to every tourist to Vienna'.[39] The building's showcase status became particularly apparent when, somewhat painfully for the municipality, Hundertwasser fell out with his collaborator, the architect Josef Krawina. With the building still under construction, they became embroiled in a legal battle over the intellectual ownership of the design, dragging on for years. In 2010 the court finally ruled that Krawina had to be acknowledged, along with Hundertwasser, as the author.[40] Hundertwasser, a painter who lacked architectural training, depended on professional advice. Eventually he collaborated with the architect Peter Pelikan to finish his design.

The building's unique style and its subsequent popularity led to many follow-up commissions for Hundertwasser. Until his death, he designed more than thirty buildings, mostly in Austria and Germany, including Hundertwasser Houses in Plochingen and Wittenberg and the garbage incineration plant in Vienna-Spittelau. The style also influenced a few other dream castle-style council houses in Vienna, most importantly those co-designed by Hundertwasser's collaborator Peter Pelikan: the house on Wallgasse 13 (1986–88, Peter Pelikan) and the Arik Brauer House on Gumpendorfer Straße 134 (1993–96, designed by Peter Pelikan and the painter Arik Brauer).

The lushly ornamented Hundertwasser House might appear unusual against the unpretentious modernism of most other city-sponsored residential buildings at the time. At the same time, it exemplifies the City of Vienna's typical approach. Architecture was employed to promote a vision for the future, change social behaviour for the better, and increase standards of living beyond the confines of the self-contained flat. Tax revenue was reinvested in both physical and social improvement, and the city council used emblematic buildings to tout the merits of its policy; the Hundertwasser House was a particularly successful example.

**Red Vienna revival**

Vienna's more mundane council residences built since the 1980s were visually connected to the city's social project at a different level. Their design language often bore references to the architecture of Red Vienna whose value was by now more or less universally acknowledged.[41] Consciously or unconsciously, the city council promoted this revival, possibly because an inventive modernism was widely appreciated by the population, and possibly to recapture the success of interwar housing, corresponding with the council's social goals. After all, the housing programme of the 1920s was credited to the Social Democratic Party, which still dominated the city council sixty years later. Concomitantly, along with the critique of functionalist planning, the typologies of the early twentieth century were vindicated. This included the small mixed-use courtyards of the Austro-Hungarian era, and even more significantly, the larger courtyards of the First Republic prominently built in the Red Vienna programme.[42]

The most important formal references were geometrical elements, jagged protruding forms, and horizontal partitions in the windows. The Karl-Waldbrunner-Hof (1981–84, Erwin Fleckseder, Sepp Frank, Peter Lindner and Heinz Neumann) on Lechnerstraße 2–4 is a good example. [Fig. 3] It was built on a disused dairy and occupied the inner portion of a block with two exits towards the street. Hence the traditional courtyard typology was an obvious design choice. The large portion towards Lechnerstraße was designed by Peter Lindner and boasts a triangular gable with angular bay windows. A possible model was the Hanusch-Hof (1923–25, Robert Oerley) on Ludwig-Koeßler-Platz 2–4, almost opposite the building, a classical Red Vienna example, or the Roman-Felleis-Hof (1927–28, Johann Rothmüller) on Hagenmüllerstraße 32 close by. [Fig. 4]

Similar design principles can be found in the scheme of Adolf-Scharner-Hof (1993–94, Erich Amon) on Goldeggasse 28. [Fig. 5] The six-storey building has a jagged protruding roof. The façade is divided into three volumes and resembles models from the 1920s, as do the horizontal grooves on the ground floor. These and many other buildings at the time exemplify the increasing popularity of Red-Vienna references, which paralleled the continuity of state intervention and strong regulation of the housing market.

**Diversification and group-specific architecture**
Another element of neoliberal housing policy was adopted by the municipal authorities, and again in a way that made it compatible with welfare state goals: the diversification of the housing market. No longer was the aim only to provide equal housing standards for everyone, but now, in addition, to cater to different needs. Architecture was to provide an environment that favours the integration and empowerment of particular groups such as women, young people, the elderly, or immigrants. The projects nonetheless were part of the municipally

led housing provision for the whole of society. The new buildings were also integrated into the overarching goal of promoting social policy through housing, which remained as significant at the turn of the twenty-first century as it had been in the mid-twentieth century.

A few projects are particularly noteworthy in this context. The Margarete-Schütte-Lihotzky-Hof (1993–97, Liselotte Peretti, Gisela Podreka, Elsa Prochazka, Franziska Ullmann), also known as Frauen-Werk-Stadt (women's work city, and a play on *werkstatt*, workshop), was built on Donaufelder Straße 97 and Carminweg 6 in Floridsdorf on the Danube's left bank, the site of many recent housing developments. [Fig. 6] The scheme was supported by the City of Vienna's Women's Office. It was named for Margarete Schütte-Lihotzky (1897–2000), the first practicing female architect in Austria and designer of the famous Frankfurt Kitchen, the prototype of the modern built-in kitchen. In her spirit the project was to reflect a women-centred approach, reflected not only in the the all-female team of architects. The development was designed with working mothers as projected inhabitants.[43]

From the outside, the design is rather unspectacular. The dense medium-rise ensemble comprises over 350 flats in several buildings assembled on an irregularly shaped block around a courtyard. The southern portion towards the main street, Donaufelderstraße, designed by Franziska Ullmann, consists of five-storey buildings with unadorned modernist façades. Their middle part is structured by alternating rows of windows and loggia balconies of different sizes, while the corner portions are painted bright red.

The inner portion of the block is more noteworthy. It is connected to the architects' goal to foster community life, seen as especially important for working mothers. The development includes a kindergarten accessed from the courtyard, a

doctor's office, and several common spaces such as a laundry room and a 'multi-purpose room' for meetings and celebrations. The courtyard, entered from Donaufelderstraße, is publicly accessible and forms a sequence of flowing spaces that are fitted out with greenery and two playgrounds. The buildings on the right side of the courtyard, designed by Lieselotte Peretti, feature a modernist design with classical harmonies. Those on the left, designed by Elsa Prochazka, have four storeys and feature a high modernist vocabulary with white façades.

The goal of gender equality is hard to detect for the uninformed visitor. It is also probably not central to the scheme's mode of operation. After all, in Vienna and elsewhere male and female lifestyles are far more similar than during Schütte-Lihotzky's youth. Hence the innovative aspects of the Margarete-Schütte-Lihotzky-Hof are somewhat directed at both sexes, and the ensemble houses both male and female residents.

One goal is to facilitate other modes of living than the nuclear family with a single breadwinner, reflected in the transition between private flats and semi-public courtyard spaces, and particularly in the common spaces and amenities that aim to support community life. Another aim is to design for different user groups, evident in the four flats for wheelchair users and six flats for the elderly, as well as flats for both families and single residents. And there is the goal of sustainability: a concern with the conservation of resources is apparent in the use of energy efficient construction materials, the provision of storage facilities for bicycles, and the dense and community-orientated design aiming at low levels of (car) traffic.

Among Vienna's many housing ensembles that follow similar approaches the Autofreie Mustersiedlung (car-free housing project, 1996–99, Cornelia Schindler and Rudolf Szedenik for Domizil and Gewog) is particularly interesting. [Fig. 7]

The project is located on Nordmanngasse 25–27 approximately two hundred metres southwest of the Margarete-Schütte-Lihotzky-Hof. Like the latter, the development does not stand out for its exterior design. It consists of three five-storey buildings with a total of 244 flats. The buildings are assembled around two approximately square partially open courtyards.[44] The courtyards are publicly accessible and connect Donaufelder Straße with its parallel street, Nordmanngasse. The buildings are carried out in a modest modernist style with white concrete walls, flat roofs, and rows of similar transomless windows interrupted by bright red balconies. Only the courtyard plan, the density, the comparatively small size, and the lush landscaping are concessions to post-functionalist late-twentieth-century planning.

The unusual aspect is the programme. As the name suggests, the Autofreie Mustersiedlung was built as a pilot project to decrease car traffic in the city. It goes back to a 1992 initiative by the Green Party and councillor Christoph Chorherr. The project was explicitly exempted from the requirement to build at least one parking spot for every new-built flat, a regulation that from the 1990s onwards was reinforced less and less. Tenants for the estate were asked to sign a voluntary commitment to renounce car ownership. At the same time the funds saved on car parks were invested in community facilities, offered to the tenants free of charge: a children's room, a meeting room for grown-ups, a party room, a 'youth room' with a roof terrace, a laundry room, and of course the large subterranean bicycle storage spaces. The ensemble also included facilities available to all tenants for a small fee: a sauna with fitness room and a workshop.

Like the Margarete-Schütte-Lihotzky-Hof, the Autofreie Mustersiedlung uses green technology, and some of the technological solutions were particularly sophisticated. These include a 'sewage warm-water pump' in which sewage is used to gain

Fig 5



Fig 6

Fig :. Adolf-Scharner-Hof (1993–94, Erich Amon) on Goldeggasse 28. Photo: author.

Fig 6: Margarete-Schütte-Lihotzky-Hof (1993–97, Liselotte Peretti, Gisela Podreka, Elsa Prochazka, Franziska Ullmann), also known as Frauen-Werk-Stadt, courtyard view. Photo: author.

heat and then, after bacterial cleaning, for toilet flushing. There are also solar panels on the roofs. Some flats have private vegetable gardens, and the communal greenery is looked after by resident volunteers.[45]

What sounds like an idea too good to be true seems to stand the test of reality. Not only the press greeted the Autofreie Mustersiedlung with great enthusiasm.[46] The residents also seem to be content, as is evident from an independent evaluation commissioned by the municipality and published in 2008.[47] The basic principle, the renouncement of car ownership, is respected by most residents, despite the fact that it could not be legally enforced or even monitored. Residents also declare that they strongly identify with the scheme. Of course, widespread acceptance of the scheme partly results from positive selection, since the project attracted like-minded ecologically conscious people with similar political views. Particularly interesting in this context are the answers of potential tenants who initially expressed an interest in the project but later declined to apply. Asked about their reasons, 47 percent declared that they did not want to live in the (comparatively remote) Floridsdorf district, and 28 percent stated that, upon reflection, they would not like to renounce car ownership.[48]

Nonetheless, the goals of creating a mixed community and keeping families in the city were to a large extent fulfilled. Over 30 percent of residents are households with children. While the middle classes dominate they are not exclusive: 47 percent of adult residents have a university degree, but 16 percent are skilled workers and 5 percent unskilled workers. Ecologically conscious behaviour is widespread. Most residents commute to work by bicycle, and many also use the car-sharing agency that was established especially for this scheme. The shared facilities are well used, and vandalism ranges below average. A strong sense of community is also evidenced by the fact that about 60 percent of the inhabitants regularly volunteer in community activities, and 90 percent point out that there is 'a positive community atmosphere'. Overall resident satisfaction with their scheme is high – on a scale from 1 (very good) to 6 (unsatisfactory) the average stood at 2.1 (good).[49]

## The architecture of the leisure society: Bike and Swim

The social-policy approach inherent in the Margarete Schütte-Lihotzky-Hof and the Autofreie Mustersiedlung was widely followed in other housing projects, although not always in such a consistent way. A good example is the Nordbahnhof area (master plan 1992 by Boris Podrecca and Heinz Tesar, buildings 1992–2015 by various architects), a seventy-hectare site north of the Old Town. [Fig. 8] After decades of neglect, the former freight train station was redeveloped into a post-industrial estate designed to strengthen the inner city as a place of residence, similar to urban renewal projects all over Europe at the time.

The post-functionalist planning principles also reflect the spirit of the time. Dense, medium-rise residences, often built on the block perimeter, employ a modern rather than neo-historical idiom. The open courtyards are publicly accessible, and the area is, to an extent, designed for mixed use, with offices, shops, cafés and restaurants in addition to the residences, as well as schools and kindergartens. The comparatively dense medium-rise buildings and the legible street grid give the area a feel similar to Vienna's nineteenth-century neighbourhoods; at the same time the open courtyards and the abundant greenery are reminiscent of modernist estates.

The different competitions through which the architects were selected specified communal facilities aiming at a sustainable lifestyle. The Bike City building (2006–08, Claudia König/Werner Larch) on

Fig 7: Autofreie Mustersiedlung (1996–99, Cornelia Schindler and Rudolf Szedenik). Photo: author.

Vorgartenstraße 130–32 serves as an example. The modernist façade with an elevated volume reaching from the first to the sixth storey and the regular horizontal windows look rather unspectacular, but the same cannot be said about the interior. The flats are mostly maisonettes with one corridor every three storeys (like in Le Corbusier's Unité d'habitation). The designers significantly reduced the number of underground car parks – only fifty-six are available for ninety-nine flats, as opposed to at least one per flat in normal developments – and invested the savings in meeting rooms, and in thirty-three bicycle racks on each floor, as well as large lifts allowing for bicycle transport.[50]

A similar focus on cycling and exercise is apparent in the design of Bike and Swim (2012, Günter Lautner and Nicolaj Kiritsis). [Fig. 9] The U-shaped building was erected along Vorgartenstraße, Hausteinstraße and Engerthstraße, featuring alternating protruding and inset balconies on all floors. Those on the first floor are protected by shell-shaped wind shades. Window frames are a conspicuous orange. The building is entered through bridges across a sunken garden. Bike and Swim also significantly reduced the number of car parks – only 104 are available for 231 units, compared to 515 bike spaces. The communal spaces are luxurious: there is a spa area on the top floor equipped with a sauna, gym, sun deck and swimming pool on the roof, with spectacular views. The project, which in any other city would be an upmarket development, has surprisingly low rents: 6.83 euros per square meter, that is, approximately 550 euros for an eighty-square-metre two-bedroom flat (2012 numbers).[51] The positive reviews in the press suggest that the buildings are highly valued.[52]

**An unusual new town: Aspern Lake Town**
The modernist approach to housing – in the sense of state-led, redistribution-orientated, and supportive of social policy – was also applied to other construction projects that otherwise reflected the goals and challenges of the postmodern era. An example is Seestadt Aspern (Aspern Lake Town, begun in 2005, with the first portion opened in 2014, master plan by Johannes Tovatt, buildings by various architects), Vienna's largest construction project of the early twenty-first century. On the one hand it is a new town in the modernist vein, erected around an artificial lake like Brasilia or Canberra, planned by the local authority to provide homes for twenty thousand and workspaces for six thousand people, and based on comprehensive planning and state intervention.[53] On the other hand it is a post-industrial development on a former airfield, situated on the periphery but clearly a part of the Vienna municipality, and designed according to the principles of traditional urbanism.[54]

Aspern Lake Town features a traditional block scheme on both sides of a ring road called Sonnenallee. The street plan is hierarchical; from the ring road, the main boulevard, smaller radial streets lead to the lake at the centre and the *Seepark* (lake park) at its side.[55] The buildings are medium-rise structures rarely higher than eight storeys. The many architectural competitions used to recruit architects had the aim of quality design and at the same time of an architectural variation within the traditional urban scheme. The town is designed for mixed use: there are social tenants, unsubsidised tenants, cooperatives and owner-occupiers. Functions are mixed, with residences alongside shops and offices, as well as designated industrial areas.

Aspern embodies the goals of sustainability, bicycle use and community building inherent in the previously mentioned examples. The development also includes buildings designed for particular groups, for instance the B.R.O.T. building (2013–15, Franz Kuzmich) on Hannah-Arendt-Platz 9 derived from an interreligious *Baugruppe* (construction

Fig 8



Fig 9



Fig 10

Fig 8: Looking southeast on Vorgartenstraße, Nordbahnhof area. Left: Bike and Swim (with plastic-shaded balconies on the first floor, 2012, Günter Lautner and Nicolaj Kirisits). Right: Wohnen am Park (with protruding volumes, 2003–09, Anna Popelka and Georg Poduschka), and in the distance Bike City (behind the cross-shaped element, 2006–08, Claudia König and Werner Larch). Photo: author.

Fig 9: Bike and Swim (2012, Günter Lautner and Nicolaj Kirisits) on Vorgartenstraße, Nordbahnhof area. Photo: author.

Fig 10: B.R.O.T. building (2013–15, Franz Kuzmich), Aspern Lake Town. Photo: author.

group) committed to spiritual values. [Fig. 10] These explicitly extend beyond Christianity, although name and symbolism of the building are taken from Christian faith: *Brot* (bread) alludes to the Eucharist and the acronym stands for 'beten, reden, offensein, teilen' (pray, talk, be open, share). The group operates two other buildings in Vienna. This one has forty-one units and extensive common spaces (over 40 percent of the total space). It is a six-storey building with stepped terraces and balconies on all sides.

Other buildings were commissioned by *Baugruppen* without a spiritual background. Austrian construction groups, in contrast for example to such German groups, are usually organised as cooperatives and often organisationally and financially supported by the municipality. Members own shares of the building which they can sell if they wish to move out, but they are unable to speculate on their real estate and profit from a potential value increase of the building. An example is the Seestern building (2014–16, Einszueins) on Gisela-Legath-Gasse 5 next to the B.R.O.T. building, with which it shares some formal properties, and the Jaspern building (2014, Fritz Oettl/pos architekten) on Hannah-Arendt-Platz 10 with its conspicuous, slightly undulating façade. [Fig. 11] Both buildings have community rooms and roof terraces accessible for all residents; the Jaspern building also has an event space for up to sixty people and a basement workshop.

Whether the goals of sustainable lifestyle and community building will be fulfilled in Aspern Lake Town remains to be seen. But already a few years after completion of the first buildings it is clear that Viennese housing policy created an unusual neighbourhood: lively, architecturally innovative, and despite its peripheral situation, reliant upon public transport.

**Conclusion**

Vienna's residential architecture after the neoliberal turn is largely characterised by the absence of neoliberal policy. To date the powerful Austrian welfare state has not been ideologically questioned. Rather, certain influences of post-Fordist urban policy were taken up and integrated into the system of welfare-state provision, including city marketing through architecture and the diversification of the housing market for particular groups. These adaptations gave rise to a number of innovative projects. Social housing as such, however, has not been undermined or stigmatised. And housing provision did not undergo any radical changes.

Viennese observers might not entirely agree with this assessment and rather point to the recent modifications of the system of housing provision, namely the introduction of some market elements and the municipality's outsourcing of housing construction. They may also mention that under the recent conditions of growth the system is working less than ideally, and a growing number of Viennese residents, particularly newcomers, are left in the cold and have few ways to access the system. And they will possibly point out that there are likely to be significant changes in the near future.

All these points are valid. But, rather than speculating about the future, this article has assessed the recent past of Vienna's unusual system of housing provision. The examples show that, compared to most other countries in Europe, welfare-state provision of housing is still working well, in the sense that it provides attractive housing to a large portion of the population. As elsewhere, an attractive flat is a scarce commodity in Vienna, but the housing shortage is less extreme than in other European metropolises and flats are far more affordable. So why, one could ask, have the Viennese fared better than others? The question is significant because in many respects Vienna is very similar to other West

European metropolises: it is a wealthy city inhabited by an egalitarian middle class, and it is a cultural hub with a vibrant architectural culture.

There is much to suggest that the resilience of the welfare state relied to some extent on Vienna's unusual characteristics, in particular the stable economy combined with a shrinking population, the extraordinary political continuity, and the continuous popularity of architectural modernism with its social underpinnings.

But to a great extent this resilience is also the outcome on conscious decisions rooted in a particular political culture. Vienna was characterised by slow policy change and strong social and political continuities. In the 1950s and 1960s plans for comprehensive restructuring of modernist buildings were developed slowly, and they were implemented in a less extreme way than in other cities; as a result, modern architecture as such was never discredited. Political struggle never led to a disruption of society. And the economic stability hardly tempted politicians to look for neoliberal inspiration. Rather, the Viennese attitude was that as long as certain policies worked, there was no reason to change them. Hence the themes of postmodern urbanism, including signature projects, diversified planning, leisure-oriented programmes and group-specific architectural design were accommodated within the modernist framework of governance characterised by redistribution and a strong state.

Obviously, Vienna's inherent conservativism has significant downsides. The influx of refugees and other immigrants in recent years has led to marked social tensions, and the growth of right-wing populism in the last decades is endangering Vienna's liberal culture and integrative potential. It seems that the uncontested leadership of the Social Democratic Party in the city council may slowly be coming to an end after almost a hundred years.

While these factors are increasingly disruptive to Viennese society they have not yet manifested at the level of architecture and housing provision. Vienna's newest residential buildings are to a large extent well designed, attractive, and affordable. In this respect, Vienna's resistance to market-oriented ideologies and the resilience of the welfare state has proved to be effective in the creation of an attractive city with a high quality of life.

## Notes

1. The term neoliberal is used here, rather generally, as shorthand for different urban policy approaches, particularly since the 1980s, that aimed at removing or reducing state responsibility for housing and giving greater power to the market, for example through the cutting of housing subsidies and the privatisation of municipally owned flats. For an analysis of these policies see for example David Harvey, *The Condition of Postmodernity* (Oxford: Blackwell, 1990) or Sarah Glynn, ed., *Where the other half lives: Lower-income Housing in a Neo-liberal World* (London: Pluto Press, 2009). For the theory of welfare state policy see for example Gøsta Esping-Andersen, *Politics Against Markets* (New York: Princeton University Press,1985)
2. Up to the 1970s the average Viennese only changed his or her flat once every thirty years. Manfred Lang, *60 Jahre Wien: 1945–2005* (Vienna: Bohmann, 2005), 211.
3. Gustav Biehl, 'Wien 1945–2005: Eine politische Geschichte' in *Wien, Geschichte einer Stadt: Von 1790 bis zur Gegenwart,* ed. Peter Csendes and Ferdinand Opll, vol. 3 (Vienna: Böhlau, 2006), 599–650
4. Liane Lefaivre, *Rebel Modernists: Viennese Architecture Since Otto Wagner* (London: Lund Humphries, 2017).
5. See, for example, Florian Urban, *The New Tenement: Residences in the Inner City Since 1970* (Abingdon: Routledge, 2018), 159–84.
6. Karl Mang and Felix Czeike, *Kommunaler Wohnbau in Wien* (Vienna: Presse- und Informationsamt der Stadt

Wien, 1978); Magistrat der Stadt Wien, ed., *Wiener Wohnbau: Wirklichkeiten* (Vienna: City of Vienna, 1985); Magistrat der Stadt Wien, ed., *Gemeinde Baut: Wiener Wohnbau 1920–2020* (Vienna: City of Vienna, 2014); Wolfgang Förster, *80 years of Social Housing in Vienna* (Vienna: City of Vienna, Department of Housing Subsidies, c. 2010).

7. Lutz Musner, 'Ist Wien anders? Zur Kulturgeschichte der Stadt nach 1945', in *Wien, Geschichte einer Stadt*, ed. Csendes and Opll, 3: 739–820; Friedrich Achleitner, *Wiener Architektur: Zwischen typologischem Fatalismus und semantischem Schlamassel* (Vienna: Böhlau, 1996); Peter Marchart, *Wohnbau in Wien 1923–1983* (Vienna: Compress, 1984); Erich Bramhas, *Der Wiener Gemeindebau: Vom Karl-Marx-Hof zum Hundertwasserhaus* (Basel: Birkhäuser 1987); Wolfgang Förster and William Menking, eds., *The Vienna model: Housing for the Twenty-First-Century City* (Berlin: Jovis, 2016); Christoph Reinprecht, 'Die Zukunft des Wiener Gemeindebaus und die Transformation des Sozialen', in *living rooms: Politik der Zugehörigkeiten im Wiener Gemeindebau,* ed. Florian Bettel, Julia Permoser, Sieglinde Rosenberger (Vienna: Springer, 2012); Andreas Rumpfhuber, 'Vienna's Housing Apparatus and its Contemporary Challenges: Superblock Turned Überstadt" *Dérive* no. 46 (Jan–Mar 2012): 25–29.

8. Eve Blau, *The Architecture of Red Vienna 1919–34* (Cambridge, MA: MIT Press, 1999); Helmut Weihsmann, *Das Rote Wien* (Vienna: Promedia, 2001 [1985]).

9. In 2013 the percentage of residences (for each household is counted as a residence, regardless whether it is a flat or a house) completed before 1919 was 27.9. Statistik Austria, *Wohnen–Zahlen: Daten und Indikatoren der Wohnstatistik* (Vienna: Statistik Austria, 2014), 19.

10. Statistik Austria, *Statistisches Jahrbuch 2009* (Vienna: Statistik Austria, 2009).

11. Musner, 'Ist Wien anders?', 779.

12. Gerhard Meißl, 'Ökonomie und Urbanität: Zur wirtschafts- und sozialgeschichtlichen Entwicklung Wiens im 20. Jahrhundert und zu Beginn des 21. Jahrhunderts' in *Wien, Geschichte einer Stadt,* ed. Csendes and Opll, 3:724.

13. 33.14 percent according to 2014 census data, Statistik Austria, http://statistik.at.

14. This argument is for example brought forward in Achleitner, *Wiener Architektur*, 175. See also Urban, *The New Tenement*, 162.

15. Musner, 'Ist Wien anders?', 779.

16. Meißl, 'Ökonomie und Urbanität', 724.

17. 'An Arbeit herrscht kein Mangel', *Wien Aktuell* 80 no. 9 (1975), 7–8.

18. Häuser und Wohnungszählung Wien', *Wien Aktuell* 80 no. 11 (1975), XIII.

19. Vienna's official website, accessed July 2012, http://wien.gv.at.

20. A 1980 calculation mentioned 200,000 *Gemeindewohnungen* and 250,000 other flats funded through public subsidies. A.l.f., 'Modern, komfortabel und eschwinglich', *Wien Aktuell* 86 no. 4 (1981), 2–4.

21. The relationship between the different target groups has not always been harmonious. Representatives of the City of Vienna, in one way or another, competed with the also partially city-owned non-profit association Gesiba as well as with private developers, and housing associations associated with the Conservative Party (ÖVP) competed with those connected to the Social Democratic Party (SPÖ). The rivalries so far have not led to a questioning of the system of state-led housing provision as such.

22. Wolfgang Amann, *Gewerbliche Bauträger im geförderten Mietwohnbau in Wien* (Vienna: Wirtschaftskammer Wien, 2006), 8 (study commissioned by the Vienna chamber of commerce.

23. Tenants include cooperative members; 3 percent 'other'. Statistik Austria, *Wohnen–Zahlen*, 23.

24. Greater London Authority, *Housing in London 2018* (London: Greater London Authority, 2018), 17..

25. Theresa May, speech in the British Parliament, quoted in Kate Proctor, 'Theresa May speech on housing: renters must be treated like "human beings"', *The Standard,* 5 March 2018.

26. This was the newly founded *Wiener Bodenbereitstellungs- und Stadterneuerungsfonds* (WBSF, now Wohnfonds Wien).

27. Dietmar Steiner, 'Vorwort' in Winfried Kallinger, *Wiener Baugeschichten 1970–2010* (Vienna: Bucher, 2010), 9.

28. The number of multifamily buildings (i.e. tenements) built with the aid of state subsidies each year has not substantially changed since the early 1990s. In 2010 approximately 60 percent of all newly built dwellings (two thirds of them flats) were subsidised. The level of subsidy is thus higher than in almost any other European country. See data from Institut für Immobilien, Bauen und Wohnen, accessed February 2015, http://iibw.at. See also Wolfgang Amann, *Lenkeffekte der Wohnbauförderung* (Vienna: Institut für Immobilien, Bauen und Wohnen, 2010), 3–4.

29. Press release by the City of Vienna, 2017, https://wien.gv.at.

30. As a result of the introduction of free-market competition, construction prices plummeted by 10–15 percent 'overnight'. Kallinger, *Wiener Baugeschichten*, 11.

31. Ibid.

32. Friedensreich Hundertwasser, *Verschimmelungsmanifest gegen den Rationalismus in der Architektur* (Wiesbaden: Gallery Renate Boukes, 1958), no page numbers.

33. Le Corbusier, *The City of To-Morrow and its Planning* (Cambridge, MA, MIT Press, 1971 [1925]), 12.

34. For detailed descriptions see for example Friedensreich Hundertwasser, *Das Haus Hundertwasser* (Vienna: Österreichischer Bundesverlag/Compress Verlag, 1985); Maria Czedik, 'Hundertwasser-Haus', *Der Aufbau* 40 no. 7–8 (1985), 444–47; or City of Vienna/Wiener Wohnen, Fact Sheet 'Ökohaus', accessed March 2018, https://wienerwohnen.at.

35. Erwin Melchart, 'Die Bio-Burg in der Löwengasse', *Wien Aktuell* 85 no. 11 (1980), 21–23.

36. See letters by Kreisky to Gratz dated 30 November 1970 and Gratz to Hundertwasser dated 15 December 1977, quoted in Hundertwasser, *Das Haus Hundertwasser*, 160–61.

37. Melchart, ' Bio-Burg in der Löwengasse', 21–23.

38. See for example Melchart, 'Bio-Burg in der Löwengasse', 21–23; Hans-Werner Sokop, 'Zum Thema Stadtplanung', *Wien Aktuell* 90 no. 5 (1985), VI; Christian Röttinger, 'Auch eine Revolution der Maurer und Fliesenleger', *Wien Aktuell* 90 no. 5 (1985), VI–VII; Karl-Heinz Krüger, 'Kein Stil – aber es paßt' in *Der Spiegel* 35 (1987, 173; Günther Feuerstein, *Title Transparent* 19 no. 9–10 (1988); Hermann Czech, 'Conversation with Vitus Weh' in *Zur Sache Kunst am Bau*, ed. Markus Wailand and Vitus Weh (Vienna: Triton, 1998), 80.

39. Dietmar Steiner, *Neuer Wiener Wohnbau* (Vienna: Löcker, 1991), 65. Extended version of the catalogue for an exhibition organised by the Austrian Foreign Ministry in 1986.

40. See for example the decision by the Austrian Supreme Court dated 11 March 2010, file reference 4Ob195/09v, Österreichisches *Bundesgesetzblatt*, http://ris.bka.gv.at.

41. Blau, *Architecture of Red Vienna*.

42. Large courtyards were redeemed by the eminent architect Viktor Hufnagl. See Viktor Hufnagl, 'Wohnen in Wiener Höfen' in Magistrat der Stadt Wien, ed., *Wiener Wohnbau Wirklichkeiten* (Vienna: Compress, 1985), 110–13 (exhibition catalogue).

43. Walter Zschokke, 'Über den kleinen Unterschied' *Spectrum,* 8 November 1997, https://nextroom.at. See also City of Vienna/Wiener Wohnen, Fact Sheet on Margarete-Schütte-Lihotzky-Hof, accessed March 2018, https://wienerwohnen.at.

44. Gewog, *Modellprojekt Autofreie Mustersiedlung* (Vienna: Gewog, 2000). Brochure by the housing association, June 2000, http://gewog-wohnen.at. See also the official website, accessed March 2018, https://autofrei.org.

45. Julia Schilly, 'Das Wohnen mit dem Rad neu erfinden' *Der Standard*, 17 January 2011.

46. See for example Schilly, 'Das Wohnen mit dem Rad'; Rosa Winkler-Hermaden, 'Floridsdorf: Ohne Auto im Autofahrer-Bezirk', *Der Standard,* 20 October 2016, https://derstandard.at.

47. Evaluation of the Autofreie Mustersiedlung by the

firm SRZ Stadt- und Regionalforschung Wien under the direction of Peter Moser and Eva Stocker, 2008, http://wohnbauforschung.at.

48. Ibid., 32.

49. Ibid., 33.

50. Christian Kühn, 'Stadt fährt ab', *Die Presse,* 21 March 2009, 13.

51. 'Bike & Swim', press release by the municipally owned city administration company Wien Holding, 21 June 2012, http:/wienholding.at. See also 'Rechnungshof kritisiert Wiener Bauträger Gesiba', *Der Standard,* 24 February 2015.

52. See for example Franziska Zoidl, 'Exklusiv für Bewohner: Schwimmbad am Dach', *Der Standard,* 22 May 2016; Lisa Rieger, 'Immer mehr Dächer sinnvoll genutzt', ORF [Austrian National Radio], 4 June 2016, http://wien.orf.at.

53. Vienna City Council, Department of District Planning and Land Use MA 21B *Aspern Airfield Master Plan– Executive Summary* (Vienna: Vienna City Council, 2008), 19.

54. Ibid., 8–10.

55. Ibid. See also Robert Temel, 'Urbanisierung im Marchfeld', *Der Standard,* 18 August 2007, A8.

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