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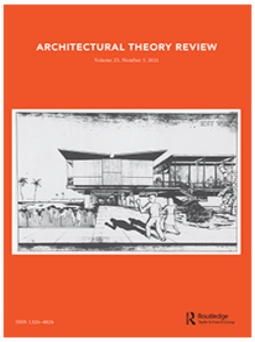
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Financialized Berlin: The Monetary Transformation of Housing, Architecture and Polity

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ABSTRACT

A financialized real estate market is both an abstraction of global capital flows and a localized driver of gentrification. Under this premise, architectural form and urban design become a performance of contradicting value formations. Drawing on the methods of urban history, geography, architectural criticism and performative writing strategies, this paper develops a theoretical perspective on the architecture of financialized rental housing based on a relational understanding of architecture and social space. The paper's point of departure is the financialization of Germany's social rental housing stock. Recent housing projects undertaken in the metropolitan region of Berlin by the real estate investment companies Vonovia SE and Deutsche Wohnen SE serve as case studies. The analysis identifies five strategies for cost-optimization that, taken together, outline the characteristics of an ideal city of financialization which promotes the destruction of social cohesion in the interests of shareholders.

KEYWORDS

Financialization; architectural heritage; housing design; affordability; Berlin

Introduction

From my kitchen window, I can see the makeshift shelter of a homeless person located underneath the balcony of a raised ground floor apartment. It forms part of the corner building by Hinrich and Inken Baller at the Admiralsbrücke crossing Berlin's Landwehrkanal: one of the icons of the 1987 International Building Exhibition (IBA), sited on one of the city's most beautiful waterfront promenades. The sloping underside of the balcony and the angled basement window—typical of the Ballers' design language—provide shelter from rain, and, to a limited extent, from wind. When I go down to the street and walk fifty meters along the southern bank of the canal, to the overpriced coffeeshop, I come across the next shelter: this time in a somewhat more weather-protected tent that occupies a portion of the lawn separating the canal from the sidewalk.

Admiralsbrücke, Landwehrkanal and the surrounding residential quarters not only attract tourists and homeless people, the latter deriving an income from recycling the

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former's garbage while finding refuge in the interstices of nineteenth-century urban landscaping and the niches of IBA buildings. For over a decade, the lampposts, building entrances and pinboards of neighborhood stores have also been covered with classified ads by those seeking an apartment to rent in the area, always with the same urgent plea for an affordable rent based on the average net salary in Germany of €2,100 per month. However, the 1980s—when university professors and welfare recipients lived in the same apartment buildings throughout Berlin-Kreuzberg and supported one another by sharing skills, labor and time—are long gone. Over the last two decades, the neighborhood has become something of an eye within the storm of gentrification in Berlin. The homemade posters remind me of faded missing-pet notices, suggesting the death of what had been sought rather than its successful retrieval. Our lease of eight euro per square meter, signed close to twenty years ago, is now as precious as a paid-off home loan. Where do those who are pushed to the outskirts by gentrification end up? Where do average-income households find a place to settle in Berlin?

Since the mid 1990s, the rental housing market in Germany has undergone a process of financialization that has, especially in the last decade, affected social cohesion in urban centers like Berlin.[1] Germany's twentieth-century social housing stock, through its privatization, now facilitates the upward redistribution of wealth at the expense of social cohesion and sustainability. Since the late 2010s, stock-listed housing companies have turned toward the construction of new apartments in pursuit of political approval and lucrative portfolio expansion. These new housing projects are situated beyond the S-Bahn ring or close to the train stations of the wider metropolitan region. This new construction and its inherent logic of cost-optimization are the focus of this paper. It explores the ways in which a cost-optimized production process inscribes itself into, and becomes legible in, the materiality of housing. Through the investigation, I develop three main arguments. First, that the case of Berlin evidences what the political theorist Nancy Fraser has described as a "crisis of care" and a systemic "political crisis of capitalist society." The latter relies on social reproduction, natural resources and a political realm that guarantees smooth trade transactions while its intrinsic logic simultaneously exploits and destabilizes all of these conditions.[2] Second, I reveal how the conditions of financialized urbanism involve a concept of urbanity that eliminates all non-commodifiable collective space and subordinates the production of the built environment under cost-optimized economies of scale. Third, I show that architectural and urban history should be reconsidered in terms of their involvement as tools in the production of non-commodified urban and social space.

The arguments presented in the paper are based on empirical data collected during site visits to current projects, an interview with a real estate developer of Deutsche Wohnen SE and publicly available records, including national statistics, government reports, company press releases and annual reports, planning documents and newspaper articles.[3] Methodologically, I combine feminist theories of performativity and situated writing practice with recent critical urban theory concerned with processes of urbanization and neoliberal restructuring.[4] In doing so, I adopt three authorial positions that shift throughout the paper. I write from the compromised position of an advocate for the decommodification of housing and for the right to the city, one who is experiencing the effects of gentrification and social polarization in her neighborhood while also being fortunate enough to rent from a nonprofit landlord. I also write as an architecture critic and scholar who has studied architectural design and typology throughout her career and who seeks to understand the role of architecture within a process of upward redistribution.[5] Finally, in the third authorial position, I adopt the tools of urban sociology and geography to evaluate recent housing projects by financialized housing providers in the metropolitan region of Berlin, an undertaking which is based on the current state of research on processes of financialization in Germany.[6] Together, these positions allow me to analyze the complex mechanisms of financialized housing and its deleterious effects on social reproduction and cohesion. Moreover, they allow me to understand built form as procedural—as something that takes place within the use-patterns of residents and the territorial governing of a population.

I begin by introducing the case of the Marienufer development in Berlin-Köpenick by Deutsche Wohnen SE, which evidences how cost-optimization strategies affect the built environment. I then discuss the historical trajectory of the commodification of housing in Germany and its implications for the contemporary appraisal of twentieth-century housing design. Finally, I analyze five strategies of cost-optimization at work in current housing projects developed by stock-listed housing providers in Berlin: densification, the elimination of shared spaces, standardization, the shaping of public opinion and the esthetics of place.

"Marienufer" by Deutsche Wohnen SE, or the Ideal City of Financialization

The construction site of "Marienufer" in Berlin-Köpenick is well secured with a steel fence reinforced with spikes set into concrete foundations. Two four- and five-storey shells of precast concrete elements rise behind it. The sign that might have provided information about the 1,200 apartments planned for this location is a simple A4 printout attached to the fence with plastic fasteners (fig. 1). The information it does contain is outdated and incomplete. Condensation and dirt suggest that the paper and its plastic folder have been hanging there for quite some time. Moreover, the sign provides no information about the urban form of the future neighborhood and its 2,000 residents, or any indication of the name of the developer—investor, Deutsche Wohnen SE. The number of apartments indicated in the images depicted on the sign refers to only a fraction of the overall project, and the name of the architectural firm involved is no longer current. Neighbors and potential critics of the project, it seems, should not have any sense of what is happening here.

Online research gradually reveals fragmentary information about the project. A 2020 issue of Deutsche Wohnen SE's shareholder magazine declares that 1,200 "living spaces of tomorrow" will be built on a sixteen-hectare site in Berlin by 2026, and an advertising brochure published in July 2021 for future commercial tenants reveals the basic details of an urban design scheme.[7] Three roads divide the site into four longitudinal sections, densely packed with sixty-four building blocks that take the form of squares and rectangles. Offices and commercial units are located along the main street, with a childcare center in the middle of the project site and a publicly accessible plaza along the riverside.[8] From a local heritage website, I learn that the area of Marienhain

Figure 1. Construction sign at the Marienufer development, October 2021. © Anne Kockelkorn, 2021.

served as the location of the Institute for Ornamental Plant Cultivation of the Humboldt University between 1953 and 1990. After reunification, the area was returned to the heirs of its pre-World War Two owners and was resold several times after 2011.[9] In March 2015, the district submitted a "project-related development plan"—a planning instrument primarily designed for the swift implementation of investor demands.[10] The block perimeter scheme of this plan resembles the design proposal by Deutsche Wohnen SE, especially with regard to the uniform building depth of eighteen meters (figs. 2 and 3). The landscape design proposal published in the same document reveals that the building depth is intended as a margin for slimmer housing typologies. The landscape design features a central neighborhood square with collective amenities, an urban entrée toward the main street and a public plaza on the waterfront. Comparison of the two schemes shows that the proposal by Deutsche Wohnen SE not only occupies the entire perimeter up to what is allowed by zoning laws but also minimizes open spaces and social amenities: the central neighborhood square has disappeared and the urban entrée toward Wendenschlossstrasse has been turned into a series of parking lots.

On the homepage of the software firm Probis-Expert, I find an un-dated rendering of the project that estheticizes the scheme's attempt to eliminate all non-commodifiable collective space (fig. 4). The software firm specializes in the control and optimization of financial flows for developments such as airports, banks and luxury real estate.[11] The rendering depicts a densely built, white modernist city extending to the waterfront, well beyond the building zone of the 2015 development plan. The serial variation of a square four-storey apartment block with white plaster facade and floor-to-ceiling

Figure 2. Aerial view of the construction site at Marienufer, October 2021. © euroluftbild.de/ Robert Grahn.

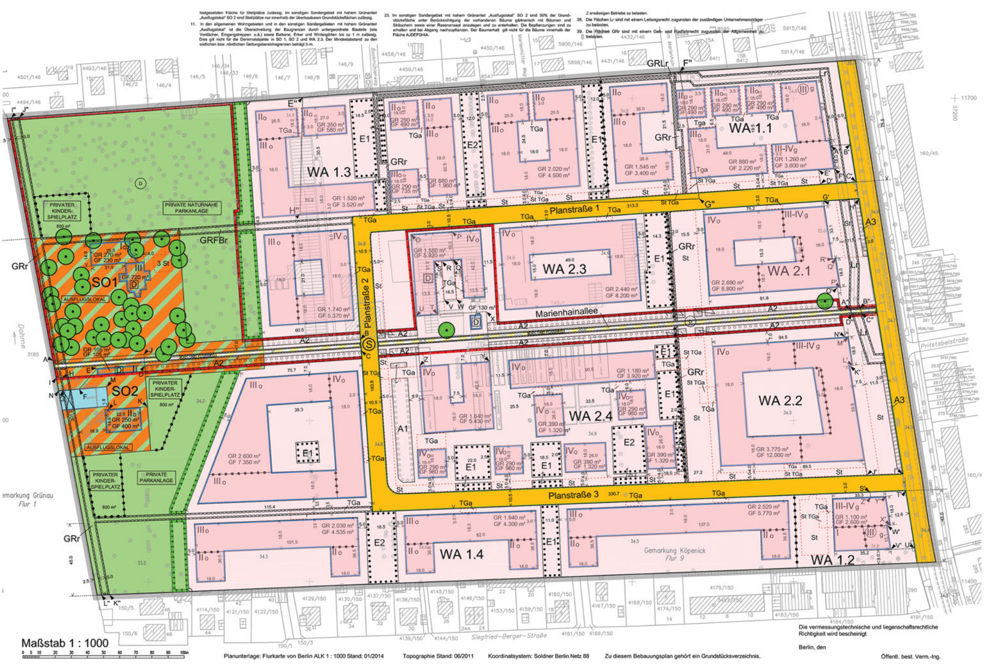

Figure 3. Land Development Plan "Marienhain" by the District of Berlin-Köpenick, 2015. Highlights by the author. © Bezirksamt Berlin-Köpenick.

Figure 4. Rendering of Marienufer for Probis Expert, undated. © Markus Gröteke.

glazing covers the entire site with low-maintenance green space depicted in between. It is an imaginary representation of maximum densification and standardized production that reduces non-commodifiable common spaces to the bare minimum. Alluding to the ideal city planning of the Renaissance, I refer to this scheme as an ideal city of financialization. However, the project will not be implemented according to this ideal in any strict sense. The current renderings in the marketing brochure prepared by Deutsche Wohnen SE show a vertically structured facade of beige plaster. The same rendering can be located on the homepage of Nokera AG—a company specializing in BIM-integrated, process-optimized prefabricated modular building technologies, based in Switzerland and acting via German subsidiaries. One of Nokera AG's German subsidiaries, Nokera Planning GmbH, is the former Leipzig office of Fuchshuber Architekten, whose name was listed on the construction sign at Marienufer in October 2021, even though the merger of Fuchshuber Architekten with Nokera AG had already occurred in January 2021.[12] Another subsidiary of Nokera is Stengel GmbH, a German bath-system manufacturer specializing in the assembly line production of windowless bathrooms for hotels, micro-apartments and cruise ships. In 2019, the firm produced around 2,000 prefabricated bathrooms for installation as complete units, saving time and labor cost.[13] In April 2022, the website of Swiss Nokera AG had removed all background information about their CEOs and eliminated the portraits of other team members, while the website of its German subsidiary Nokera Planning GmbH had disappeared entirely.[14] Anonymous and obscure company structures increase the agility of businesses untethered from any immediate public scrutiny and critique. This and other cost-optimization strategies are evident in the development of Marienufer: densification, elimination of non-commodified collective spaces, standardization of building elements, land speculation and the shaping of public opinion. Yet it is not these singular strategies of cost-optimization as such that characterize contemporary processes of financialization in Germany's housing sector and their repercussions for the built environment.[15] Rather, it is the ensemble of territorial, regulatory and design strategies that entail a fundamental transformation of social space, and an equally fundamental transformation of the meaning of urban form and architectural esthetics.

How Rental Housing Became a Globalized Financial Product

From Marienufer, we drive back to the inner-city, to a project by Vonovia SE on the former village green of Alt-Tempelhof, just south of the S-Bahn ring. It takes a while until we can identify the yellow-and-white punched facade with surface-mounted rain gutters as the project we know from renderings (figs. 5–8). The building is an unadorned five-storey housing block, approximately sixteen meters deep and thirty-five meters long, divided by two stairwell units. Incorporated into its depth are shared circulation spaces and bathrooms without windows. The facade faces south and includes a series of bolted-on steel balconies that are oriented toward a wide inner courtyard. The simple shape, rough esthetics and cost-saving construction processes are reminiscent of the minimum standard design of emergency shelters. This is not the pragmatism of poverty, however. Attracting rent at twelve euro per square meter, the apartments are precisely aligned with the local rent index and are considerably above the six to eight euro rate for social housing. One of the most valuable German stock-listed companies renting out low-to-medium-quality housing at a high price indicates a business model of redistribution from tenants to shareholders. This process, in which the profit expectations of a debt economy are redirected to other social areas is characteristic of recent processes of financialization.[16] In the field of housing, Manuel Aalbers and Gerald A. Epstein have defined financialization as the increasing dominance of housing's asset status over its service role.[17] Yet the trade and societal understanding of housing as a financial product transcends mere commodification. More specifically, the

Figure 5. Twenty-four new apartments in Berlin-Tempelhof by Vonovia SE, 2020. Rendering: Koschany + Zimmer Architekten, Essen. © Vonovia SE.

Figure 6. Street facade of the Berlin-Tempelhof project by Vonovia SE. © Anne Kockelkorn, 2021.

Figure 7. Street entrance of the Berlin-Tempelhof project by Vonovia SE. © Anne Kockelkorn, 2021.

Figure 8. Courtyard facade of the Berlin-Tempelhof project by Vonovia SE. © Anne Kockelkorn, 2021.

financialization of housing ties the product of real estate to the logic and mechanisms of digitalized and globalized financial flows, creating high-profit expectations that are more radically disconnected from the service and use aspects of housing than in other historical periods.[18] This disconnect between the financial and the use-value of housing becomes apparent, for example, in the way information about the Marienufer project by Deutsche Wohnen SE has been withheld from the general public and neighborhood residents while being promoted to the company's shareholders. Better understanding the emergence and development of the financialized rental housing stock in contemporary Germany requires an analysis of the political, legal and financial conditions that enabled it, revealing how expectations of profit generated in the domain of finance have changed the social structure of German rental housing.

The financialization of housing is typically associated with the lending practices of financial institutions in the US, which cheapened credit, increased debt and repackaged it for laxly regulated secondary markets from the 1970s on, practices that culminated in the subprime mortgage crisis and global recession of 2008. Since the early 2000s, housing financialization via mortgage securitization has also occurred in European countries like the Netherlands and Spain. However, Germany's economy and housing market have had a very different trajectory, as examined by the architectural historian Florian Urban and the political theorist Philipp P. Metzger.[19] In Germany's bank-based financial system, production in general is financed through banks and not, as in the US, through shares, while a restrictive credit market does not grant easy access to homeownership mortgages.[20] Unlike in the US or the United Kingdom, there is no subprime mortgage market in Germany and households are not exorbitantly indebted.

Until the early 2000s, housing prices declined rather than increased and, as of today, Germany's home-ownership rate of forty-eight percent is among the lowest in Europe.[21] The high market share of rental tenure has also resulted from the long-standing ban on individual apartment ownership by the German civil code (*Bürgerliches Gesetzbuch*) between 1900 and 1951. For half a century, individuals could only own entire apartment buildings, such that apartment rental was the norm even for the middle to upper classes of the rapidly growing cities. This, in turn, guaranteed public consensus for strong tenant protection in times of crisis, such as the inflation in 1923 or the dire housing shortage after World War Two.[22] In the decades that followed this policy, the political support for rental housing through strong tenancy laws and low rents complemented the country's export-oriented economy. The Fordist compromise between labor and capital entailed low rents for high-quality housing in return for low wages, increasing the competitiveness of exported goods in global markets, while also making it more attractive, affordable and secure to live in rental housing.[23]

The privatization and financialization of German housing in the 1990s affected the formerly nonprofit rental market, arising through the en-bloc sale of entire housing companies to transnational private equity funds. This process was enhanced by a shift in the legal framework that transformed nonprofit-oriented housing into a globalized financial product, replacing the Fordist provision of welfare benefits with the imposition of market discipline on public and private actors. An emblematic moment of this change was the 1990 tax reform, which repealed tax benefits for nonprofit housing companies, thereby abolishing the notion of collective benefit in housing politics altogether.[24] Another key moment was a law on municipal debt, the so-called *Altschuldenhilfsgesetz* of 1993, which forced municipalities in East Germany to privatize fifteen percent of their public housing companies to amortize debts carried over from the former GDR. But privatization did not occur by selling the apartments to their existing residents, as had occurred in Great Britain in the 1980s, or in the former Comecon countries after 1990. Because of Germany's restrictive credit market, homeowners' tax benefits were not sufficient to enable lower-income groups to access mortgages; and for the majority of Germany's urban population, rental housing tenure remained a more sustainable choice than repaying a mortgage.

The subsequent privatization and commodification of former social rental housing stock occurred through private equity funds, which are non-listed limited partnerships that buy and restructure companies. Since the mid 1970s, private equity funds have acted as agents of financialization, offering strategic investments and means of accumulation for large sums of capital that would be much more difficult to attain through investment in production. Profit margins of up to twenty percent result from high-risk leveraged buyouts, the thoroughness of the restructuring process and the under-valuation of the purchased company. In Germany, the appearance of private equity funds was enhanced through tax exemptions on equity holdings issued by the first Schröder Cabinet (1998–2002), governed by the social democrats and the Green Party in 2002.[25] Globally, central banks' near-zero interest rate policy since the mid 2000s rendered fast buyouts with high-debt leverage extremely profitable. Between 1999 and 2006, the federal states and municipalities in Germany privatized approximately 730,000 former social rental housing units previously built and financed through public subsidies.

These units were sold primarily to private equity companies (Cerberus, Oaktree, Fortress and Terra Firma) at heavily discounted prices of between €20,000 and €40,000 per dwelling.[26] Influential politicians began to work for the private equity sector of the financial industry after resigning from office, illustrating the private equity industry's increasing use of lobbying as a market strategy. Both Volker Rühe (CDU) and Rudolf Scharping (SPD), Ministers of Defense between 1992–98 and 1998–2002 respectively, worked as advisors for Cerberus from 2007 onwards. Florian Gerster (SPD), Head of the Federal Employment Agency between 2002 and 2004, began working for the private equity firm Fortress precisely when the Agency privatized its public housing company Gagfah, which previously owned 80,000 housing units.[27] Such professional transfers from the public to the private sector are a striking example of how financialized capitalism "authorizes finance capital to discipline states and publics in the immediate interests of private investors."[28]

In 2016, stock-listed housing providers owned four percent of Germany's rental housing market. If one expands this toward the entire market segment of large-scale, for-profit housing operators—including private equity funds, insurance companies and other corporate entities—the figure rises to fourteen percent.[29] These figures reflect a fundamental transformation of the rental market and the power relations that underpin it. New actors such as the DAX-listed Vonovia SE, which owned 355,000 housing units in Germany as of 2020, have become the country's biggest housing companies and enjoy a dominant position in the market.[30] For such companies, housing serves as a financial product. Profits are based on an expansive model of large-scale housing stock acquisition and the guarantee of a continuous increase in rental income over time. Simultaneously, companies such as Vonovia SE and Deutsche Wohnen SE also influence housing policy decisions through lobbying work.[31] The resulting transformation of the housing market has affected cities like Berlin in particular, where the percentage of rental housing units is as high as eighty-four, but also in smaller cities like Dresden, or the former industrial belt of the Ruhrgebiet, which also have high proportions of financialized former social housing.[32]

The Rise of Deutsche Wohnen SE and the Destruction of Social Cohesion

The financialization of rental housing in Germany's major cities affected the modernist social housing stock of the short twentieth century and reversed its meaning, societal ambitions and territorial implications.[33] The sale of Berlin's former social housing company GSW (Gemeinnützige Siedlungs- und Wohnungsbaugesellschaft Berlin mbH) and the rise of Deutsche Wohnen SE illustrates this reversal as well as the privatization of profit and the creation of market monopolies that go along with it. In 2004, GSW was sold to Cerberus for €405 million, including the assumption of €1.6 billion in debt.[34] This sale included GSW's IBA buildings in Kreuzberg together with the emblematic housing project by Hinrich and Inken Baller at Landwehrkanal, rendering the architects' original concept of combining affordability with spatial generosity obsolete. After optimizing and restructuring GSW, the buyers' financial consortium approved a distribution of shares worth €447 million in 2009—more than the 2004 sale price—and listed the GSW on the German stock

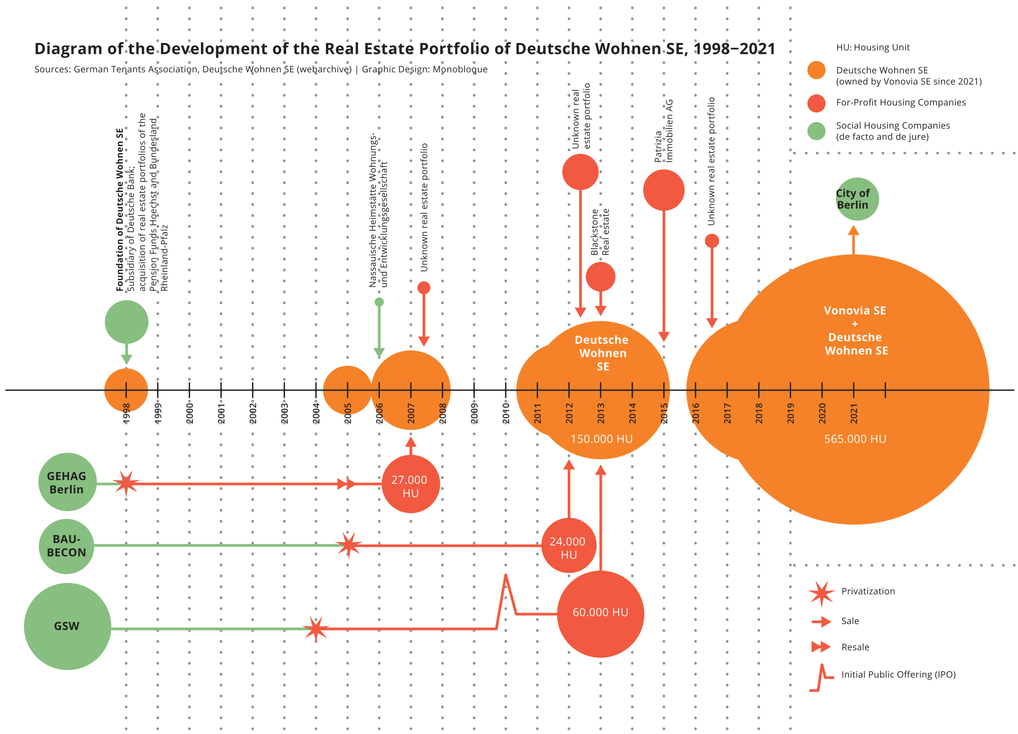

Figure 9. Timeline of the real estate portfolio of Deutsche Wohnen SE, 1998 – 2021. Sources: Deutscher Mieterbund, Deutsche Wohnen SE, Vonovia SE. Graphic Design: Monobloque.

market in 2010.[35] In 2012, GSW estimated the value of its real estate portfolio at €3.3 billion—around four times the 2004 sales price.[36] In 2013, the company's shares were acquired by the real estate company Deutsche Wohnen SE, which was founded in 1998 by Deutsche Bank.

Prior to the acquisition of GSW, Deutsche Wohnen SE had bought the Berlin-based housing company GEHAG (Gemeinnützige Heimstätten-, Spar- und Bau-Aktiengesellschaft) in 2007, which had already been privatized through its 2003 sale to the US hedge fund Oaktree. In 2008, four former GEHAG housing estates (now Deutsche Wohnen SE) were listed as UNESCO World Heritage Sites: The Horseshoe Estate (Hufeisensiedlung) in Britz (1925–33) and the housing estate (Wohnstadt) Carl Legien in Prenzlauer Berg (1928–30), both designed by Bruno Taut; the Siemensstadt settlement in Charlottenburg designed by Hans Scharoun (1929–31); and the "White City" in Reinickendorf designed by Otto Salvisberg (1928–31).[37] Only two other housing estates in Berlin from the 1920s received UNESCO listings in addition to the Museum Island in the city center and the Babelsberg Palace near Potsdam. With the takeover of GSW, Deutsche Wohnen SE had become the largest real estate company in Berlin and the second largest real estate company in Germany. In 2015, the company's profit amounted to €1.2 billion. In the same year, the salaries of the executive board increased from €2.5 to 6.5 million.[38] In 2020, Deutsche Wohnen SE was recognized by the German share index DAX as one of the most valuable stock corporations in the country (fig. 9).

The financialization of rental apartments reverses the goals and mandates of a housing association. The aim of a private equity fund or publicly listed housing company is to satisfy investors' expectations of profit, not to provide tenants with high-quality housing at a low cost. The business strategy of private equity funds involves restructuring and the quick resale of housing companies. As the housing scholar Sabina Uffer has shown, the more specifically a real estate portfolio is described in terms of location and income group, the more profitable its resale value.[39] Such strategies of social homogenization include the quick resale of attractive residential buildings and the maximization of legal rent increases in central locations. Another strategy is a company's specialization in providing housing for low-income tenants, a business model based on the payments made to tenants by public social welfare offices (*Sozialämter*). Other socio-spatial consequences of cost-optimization strategies include the neglect of buildings through lack of maintenance, the radical downsizing of employees, the withdrawal from labor agreements and the reduction of below-board-level salaries.[40]

Following a company's initial public offering (IPO) and transformation into a stock corporation, the business strategy changes. The focus is no longer on the resale of housing stock, but on its long-term cost-optimized management aiming at the highest possible net present value on future dividends. The sale and resale of company shares also remains an important generator of fictitious capital gains, further increasing market monopolization. The most striking example of this strategy is the successful 2021 takeover of Deutsche Wohnen SE by Vonovia SE, which resulted in the formation of an enormous rental housing provider owning 550,000 units and dominating the German rental market. Cost-optimization remains an important strategy, but it now occurs via the centralization and standardization of services, as well as through the in-sourcing of maintenance work rather than through blunt neglect. However, these strategies discourage renters from claiming appropriate services and create a legal framework that prevents a transparent understanding of maintenance cost accounting.[41]

Perhaps the most important tool in increasing the asset value of the housing stock, however, is to ensure a continuous increase in rents. This can be achieved through the strategic assessment of rent-gaps, which is a core driver of gentrification, as demonstrated by Laura Calbet i Elias.[42] Continuously rising land prices and rental indexes are not only drivers of gentrification, but also represent a favorable business environment for the future increase of value. Another instrument for securing rental increase is the modernization of amenities—that is, the comprehensive renovation of housing in order to increase its energy efficiency and comfort, the costs of which, unlike maintenance, can be passed on by raising the rent. Modernization can also be combined with "patrimonialization," such as the targeted renewal, staging and commodification of cultural heritage, as described by the sociologists Luc Boltanski and Arnaud Esquerre.[43] This approach figures among the strategies of Deutsche Wohnen SE as exemplified by the modernization of the former railway housing estate in Elstal, fifteen kilometers west of Berlin, in keeping with heritage requirements for the preservation of historic monuments; or the modernization of the housing estate Onkel-Toms Hütte designed by Bruno Taut in Zehlendorf, labeled as an "architectural jewel" on Deutsche Wohnen SE's website.[44]

The Territorial Performance of Financialized World Heritage

The modernist Siedlungen of Berlin, dating to the interwar period, was the outcome of a decades-long struggle to provide high-quality housing for lower-income groups. The functional urban design was based on public ownership of land and the establishment of cooperative housing developers committed to non-speculative modes of housing production.[45] Modern housing was understood as a social and technical infrastructure that effectively disciplined its subjects into patriarchal family units and the routines of a modern, hygienic lifestyle.[46] As a form of modern welfare provision, the urban and architectural design of modern housing projects was dedicated to improving the quality of life and the conditions of social reproduction of its residents. It is the interplay of these features that qualify the six Berlin Siedlungen for their UNESCO World Heritage status. They express "a broad reform of housing construction and *Siedlungsbau*" that combined "esthetic research with new social and hygiene standards" and served as "guidelines for social housing in Germany and beyond."[47] The German UNESCO webpage also emphasizes that two of the six Siedlungen still operate under a cooperative mode of housing tenure, a model of human cooperation added to UNESCO's Intangible Cultural Heritage register in 2016. However, the website fails to mention that four of the six Siedlungen are now owned by a financialized housing provider, constituting a reversal of their original social purpose; the urban forms and architectural esthetics of the former Fordist compromise now serve as tools in the upward redistribution of capital. This reversal calls for a reconsideration of the exclusive attribution of the Siedlungen's urban form as constitutive of World Heritage status, as opposed to recognizing them as a coherent ensemble of urban politics, housing tenure and urban design. If a Siedlung is owned by a financialized company, only the shareholder benefits from the value added by the expectation of future rental income accrued as a result of the symbolic value of a World Heritage listing. Seen as a socio-political ecology, the heritage listing thus contributes to undermining the very conditions upon which this listing is based. These conditions include: a concept of citizenship inseparable from the right to high-quality affordable dwellings; an art of governing that supports a nonprofit notion of collective benefit in housing policies alongside the cooperative housing associations that implement them; and an architectural response to housing needs, care and social reproduction, which, according to Fraser, is not only a matter of private households, but of neighborhoods, civil society and state agencies.[48] The example of the Berlin Siedlungen therefore highlights how the premise of financialization turns architectural form into a performance of contradictory types of value formation that no longer make sense as immutable attributes. Instead, architectural design and urban form *happen to take place* within the territorial and regulatory settings of a certain place and the processes of subjectivation of its users.

Cost-optimization by Design

Residents of financialized rental housing in Berlin, as elsewhere, are the unwilling subjects of a regime of neoliberal austerity that includes the destabilization of employment, the shrinking value of income and the pressure to prove creditworthiness.[49] In contrast to the financialization of mortgaged homes, the financialization of rental housing contains no promise for tenants of upward social mobility or transgenerational wealth creation. Its inhabitants know that there is no return on any financial sacrifice made to pay higher rents; instead, they are confronted with highly visible, large-scale actors facilitating the upward redistribution of wealth for shareholders and private equity stakeholders. These conditions call for resistance, especially in the midst of a shortage of affordable homes and even more so when nineteen percent of the inhabitants of a city are at risk of poverty, as is the case in Berlin.[50] Between 2010 and 2020, the average rent in the city almost doubled, while median apartment prices tripled—during the same period, however, salaries increased by only twenty-four percent.[51] In May 2019, the Berlin assembly of the Green Party noted that one in six Berlin households spends more than forty percent of its income on housing costs, while half of the city's residents live in fear of displacement.[52] Activism against unacceptable living conditions has a long-standing tradition in the city and, in 2011, a city-wide demonstration against increasing rental prices took place. Seven years later, this resistance gained wider momentum in the form of a referendum initiative to re-socialize Berlin's financialized housing units owned by Deutsche Wohnen SE, Vonovia SE and other investors.[53] In September 2021, the referendum succeeded: three of five Berlin voters—more than one million people—approved of the idea.

For Vonovia SE and Deutsche Wohnen SE, which together own nearly ten percent of Berlin's rental housing market, this political resistance was an existential threat and required a coherent appeasement strategy to convince politicians and the media of their public benefit.[54] A straightforward way to do so is through a commitment to build new dwellings, which the city of Berlin urgently needs, and thereby to combine political goals with economic benefits. Because of population growth and the lack of affordable dwellings, the demand for new construction in Berlin is estimated at 200,000 units by 2030.[55] In 2020, Deutsche Wohnen SE added new construction to its core business activities. In September 2021, both Deutsche Wohnen SE and Vonovia SE committed to building 13,000 new housing units in Berlin by 2026. Since 2018, both companies have built approximately 1,100 dwellings in the metropolitan region of Berlin.[56] This is notable in that other listed housing companies in Berlin still do not invest in new construction at all, but generate their profits exclusively through portfolio optimization, purchase and sale as well as rental income.[57] For Deutsche Wohnen and Vonovia SE, however, new apartment construction has become a substantial means of profitable portfolio expansion.[58] Since land prices have risen too high to render projects in the inner-city profitable, these new construction projects are predominantly located beyond the S-Bahn ring or close to the train stations of the metropolitan region, such as Elstal in the West of Berlin—famous for its 1936 Olympic village—or in Potsdam in the Southwest. In what follows, I summarize the typical esthetic and territorial characteristics of these projects, arguing that the cost-optimized logic of production has been inscribed, like a concrete abstraction, into their materiality.[59]

Densification

The most apparent urban design strategy in these projects is densification under the premise of creating as much commodifiable space as possible within the legally permitted building volume. In Berlin, such a logic of densification applies to two main

Figure 10. Densification project by Vonovia in Elstal, Wustermark. © Anne Kockelkorn, 2021.

project types: the re-densification of already existing built-up plots and the development of new zoning plans for large-scale projects. The former is mainly undertaken by Vonovia SE and concerns the densification of two- to six-storey modernist slab housing (*Zeilenbau*) from the interwar and postwar periods, including the densification of a 1930s settlement for the German Wehrmacht in Elstal. These projects appear to embody the lowest common denominator of building standards, cost reduction strategies and the attempt to maximize commodifiable areas through built form (figs. 10 and 11). The profitability of redevelopment projects is all but guaranteed since purchasing land is not required, which, according to current land prices, would generally amount to between fifty and seventy percent of the total cost for new construction.[60] The second type of densification is the establishment of new zoning plans set up by municipalities for large-scale projects of up to 1,000 apartments, currently mainly projects undertaken by Deutsche Wohnen SE or the Vonovia SE subsidiary, BUWOG. The gradual densification of the development plan for Marienufer exemplifies the ambition to maximize the built-up volume and rentable square meters to what is permissible. The requirements of densification affect dwelling standards and daily routines: the new standard building depth is sixteen to eighteen meters, and windowless bathrooms and mirrored windows become the new normal for tenants. Densification under the premise of maximizing commodifiable space seemingly operates in the absence of imagination and knowledge that cost-efficient construction and affordability can go along with increased dwelling comfort. Cost-optimized design for density ignores the reality that densification requires the co-creation of high-quality shared spaces, public spaces and social infrastructures, not only for the residents, but also for the surrounding neighborhoods.

Figure 11. Entrance detail in the densification project by Vonovia in Elstal, Wustermark. © Anne Kockelkorn, 2021.

Elimination or Commodification of Shared Spaces

The counterpart to densification is the elimination of non-commodifiable shared spaces. This means, for example, that circulation spaces in the interior of an apartment building are reduced to the bare minimum—such as granting approximately one meter between the main entrance door of a building and the elevator door and staircase serving twenty-four apartments (fig. 12). Strategies of elimination also refer to the reduction or removal of collective spaces and the mitigation of maintenance costs. Bike storage is necessarily located outside of the building; "a planted roof" may lend itself to an ecological label but does not necessarily mean that it is accessible to residents. Spaces of non-commodifiable encounters, such as generous, inviting and accessible communal spaces for residents' activities and gatherings are non-existent. Children's playgrounds are reduced to a vandalism-proof minimum, while dwellings equipped with burglar-proof facades occupy the ground floor. Open-air parking on the street must be paid for, while rentable co-working spaces are all that remains of urban activity in the age of online trade (figs. 13 and 14).

Standardization

Today, standardization no longer needs to mean sacrificing individuality and diversity in mass housing. Pioneering social housing projects in Germany have recently shown that standardization and cost-saving measures can be implemented alongside plan diversity and dwelling comfort. "Bremer Punkt," a project commissioned by Bremen's

Figure 12. "Living by the Waterside," entrance to a stairwell serving twenty-four apartments by BUWOG, subsidiary of Vonovia, in Berlin-Treptow. © Anne Kockelkorn, 2021.

Figure 13. Car park in the densification project by Vonovia in Elstal, Wustermark. © Anne Kockelkorn, 2021.

Figure 14. "Living by the Waterside," 319 new apartments by BUWOG, subsidiary of Vonovia, in Berlin-Treptow. © Anne Kockelkorn, 2021.

municipal housing company GEWOBA and realized by LIN architects between 2011 and 2017, exemplifies this. Increasing density by introducing affordable housing to a postwar neighborhood, LIN developed a set of twenty-two floor plan types ranging from studios to six-room apartments that can be variously assembled into four-storey buildings of between four and eleven dwellings with a footprint of fourteen-by-fourteen meters. This system offers a plurality of configurations for different households and forms of living resolved within a compact urban form; but it also offers standardized elements of luxury and comfort, such as floor heating and sheltered loggias. Such a notion of luxury of use value is nonexistent in financialized rental housing where notions of plan diversity and the provision of dwelling comfort, at an affordable rental rate, would constitute systemic errors. The densification projects undertaken by Vonovia at Elstal and Tempelhof, rented out at the current average market rate of twelve euros per square meter, reveal a vandalism-proof, low-maintenance standard solution associated with the neoliberal conceptualization of social housing: just slightly worse than necessary so that it does not become desirable for all.[61] The apartments of these new standardized projects lack diversity and flexibility in floor plan layouts and the ways in which they can be occupied and lived in. External facade elements such as balconies or awnings are fixed to the building from outside, allowing these modular building elements to be transported to site and installed at a lower cost. The entire built form follows the imperative of reduction: elements, weight, assembly time and maintenance costs (figs. 8 and 11). Cost-efficient economies of scale and standardization also feature in the higher-priced segment of financialized housing, as illustrated by the process-optimized prefabricated modular building technology of Nokera AG set to be used at the Marienufer development. Finally, standardization also applies to the provision of services, which are centralized (for example, through a single national call-center for all renters' requests) and—in relation to building maintenance—integrated into the development company via subsidiary service providers, saving on the nineteen percent VAT and avoiding tariff contracts.[62]

The Shaping of Public Opinion

"Sustainable," "affordable," "ecological," and "high-quality dwelling space" are the terms used in the companies' press releases to promote the projects described above. This terminology is irresistible to local politicians in need of new housing construction in their district. To a certain extent the terminology is also accurate. The increased environmental performance of CLT construction has long been widely accepted. The solar panels that adorn its roof, in combination with charging stations on the street, transform the building into a company-owned power station, able to provide (and sell) electricity to residents. In some new projects, a certain percentage of apartments are rented out at subsidized rents. On closer inspection, however, each claim, such as Vonovia's intention to implement a carbon-neutral housing stock by 2050, turns out to be yet another instrument for profit maximization. The adoption of sustainable building technologies coupled with insourcing strategies ensures both public approval and substantial tax benefits. If a certain proportion of dwellings are subsidized and hence labeled as affordable, German social housing legislation protects the developer against financial risk or loss.[63] However, most of the new construction projects under discussion here are rented either at market-rate or above, which drives up the rental price in the surrounding neighborhoods. For-profit housing development is not problematic in and of itself, but the ideological framework that defines continuous increases in the value of real estate as the fundamental goal of urban development clearly is. According to such logic, entrepreneurial profit maximization is the main condition for any other societal goal, including the increased sustainability of development or affordability. As a result, the upward redistribution of wealth at the expense of social cohesion and a right to high-quality, affordable housing becomes naturalized. This conflict of interest between dwellers and investors is captured in the contrast between the sign attached to the construction fence at Marienufer and the promotion of the project to its shareholders. Masking this conflict in the media and political discourse requires skillful lobbying and refined exercises in marketing.[64] Language plays an important role, justifying the removal of public open space from an urban masterplan as delivering greater "neighborhood proximity" and promoting the reduction of non-commodifiable shared space as providing increased "floor area efficiency" (*Flächeneffizienz*).

Esthetics of Place

As explained to me by a board member of Deutsche Wohnen Construction and Facilities GmbH in an interview, the most important factor in the profitability of development is land value and its potential increase, not the quality of residential space or urban design. Indeed, the potential for increased value arising from location is directly

Figure 15. "Alboingärten," 432 apartments by Vonovia in Berlin-Tempelhof. © Anne Kockelkorn, 2021.

tied to a site's accessibility by public transport, which is why Deutsche Wohnen SE is also negotiating tram connections with the respective municipality for its large developments in Köpenick and Potsdam.[65] However, architectural esthetics can also play an important role in creating value, especially when a given site evokes a specific architectural language derived from the heritage value of its immediate context. The esthetics of place varies according to location. In the district of Tempelhof-Schöneberg, for example, Vonovia SE adhered to a crude example of functionalism in the housing developed on an empty plot adjacent to a historic village green. Just one and a half kilometers farther west, on the southern edge of an industrial quarter in the same district, Vonovia adopted the language of 1930s cooperative housing for a luxury development in which rents are set substantially above the local rent index (fig. 15).[66] In any case, the board member continues, for Deutsche Wohnen SE, the reputation of an architectural firm is more important than the esthetic language selected. On the one hand, "reputation" refers to a firm's experience and size, thus minimizing risk in the delivery of large-scale housing projects. On the other, reputation is what guarantees public approval from the media and the municipality.

Architecture and Polity in the Ideal City of Financialization

The Berlin variant of financialized rental housing derives from a broader political crisis in capitalist society. The pulverization of the owner into a multiplicity of entities governed by myriad contractual relationships radically disconnects the residents of urban housing from atomized shareholders mediated via the globally distributed networks of corporations. Surely it cannot be in the public interest that the profits derived from ever-higher rental payments benefit the shareholders of financialized housing companies. Nor can it be in the public interest to have urban and architectural design quality eroded in pursuit of lower costs and higher returns on investment. Yet, since the onset of financialized housing developments in Berlin around 2018, city representatives have expressed their approval of such projects and delight that they are being realized.[67] Paradoxically, the same population that voted for the referendum to re-socialize financialized housing providers in September 2021 also voted for the ruling Social Democratic Party (SPD) which, as announced by its mayoral representative, Franziska Giffey, has decided *not* to implement the demands of the referendum in favor of other, less threatening means of providing what German law defines as affordable housing. This conflict of interest between governments, corporations and individuals is specific to the condition of financialization, as is their codependency. Citizens who want to resist processes of commodification are likely to be entirely caught up in it themselves, whether by contradictory voting behavior, buying shares in Deutsche Wohnen SE or Vonovia SE, or investing in pension funds that, in turn, sponsor financialized investors. Michel Feher has described these diverging interests as follows: "corporations [are] determined to provide what their shareholders value, governments [are] obsessed with the attractiveness of their policy to bond markets, and individuals [seek] to exhibit behavior likely to be sponsored."[68] In Berlin, this conflict not only reveals the glaring gap between the interests of shareholders in generating reliable profits and the interests of tenants in being able to live adequately and at reasonable cost—as far as financialized housing development is concerned—but it also reveals a striking absence of imagination in questioning how people might live together that is indicative of an acute crisis of care. This absent vision relates to the provision of long-term affordable housing and socially mixed neighborhoods, and to an idea concerning how people might share time, labor and resources with one another in a period of increasing social polarization and loneliness. An alternative sponsoring in the field of housing that would benefit the population in these ways could operate via community land trusts and non-profit cooperatives, the latter already figuring in UNESCO's Intangible Cultural Heritage listing.[69]

An analysis of Berlin's famous (and now financialized) Siedlungen and other recent housing projects highlights that financialized housing materializes the abstraction of global capital flows and operates as a driver of gentrification.[70] It also emphasizes that social polarization is an inherent and economically profitable feature of financialized urbanism. The materialization of financial processes invites theorists to think not only of urbanization but also of architecture itself as a procedural performance of power and as a process that translates territorial power relations into everyday routines. Corresponding design strategies include standardized modular construction technology, deep housing typologies, the re-interpretation of recognizable architectural styles and the privatization of the ground floor combined with increased security measures. The impact of cost-optimization on the programming of social space is even more tangible, such as the blatant neglect or absence of non-commodifiable shared space, the shaping of public opinion and the esthetics of place. And yet, all of these strategies of cost-optimization are not unique to financialized housing providers but have also been used by other, and not necessarily profit-driven, developers and investors in other historic constellations. In Berlin, it is the coherence, scale and systematization with which these strategies are being deployed that reveals a new model of housing of the twenty-first century: an ideal city of financialization which promotes the destruction of social cohesion for the sake of shareholders' interest. The premise of density puts public legislation under pressure to expand the modernist housing slab from twelve to eighteen meters. The elimination or commodification of shared spaces undermines or denies socio-spatial resources of collectivity. Cost-optimized-driven standardization denies the potential of plan diversity and dwelling comfort, while the esthetics of place instrumentalizes architecture to render the increase of shareholder value culturally acceptable. Taken together, these strategies circumscribe a city of rentable minimal standard bereft of any vision of how to live together—a city that denies the possibility of non-commodifiable collective life.

However, even the premise of financialization offers the possibility of alternatives. The combined analysis of histories of finance and architectural form uncovers the performative *ensemble* of housing tenure and the material form of housing. Moreover, it shows how value-extraction is at work in the built environment, as well as the ways in which densification without a concept of non-commodifiable collective life strictly limits the possibility of social cohesion. In addition, it helps to highlight how histories of plot ownership can bring tangible arguments against commodification to light. Using the knowledge of architectural and urban history to provide intellectual tools for non-commodified urban development means determining the value of design not only in terms of form and esthetics, but in terms of collective benefit. In housing, collective benefit is relational. It emerges between the individual and collective practice of social space, architectural form and the regulatory environment governing parcellation, land ownership and zoning. A corresponding relational understanding and valorization of architecture establishes a basis for asserting that design should deliver the luxury of use value and contribute to collective benefit rather than maximizing shareholder returns. For architectural design practice this could mean, for example, aiming for both socio-spatial and esthetic innovation by developing the appropriate form for the appropriate budget, as Bruno Taut claimed in his *Architekturlehre* in 1938.[71] Today, however, appropriateness cannot aim at housing the *Existenzminimum* as it did during the inter-war period. Architectural appropriateness means designing a social ecology of living-together-across-difference.

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Notes on contributor

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Notes

1. My definition of financialization draws on the work of Randy Martin, Manuel Aalbers and Gerald A. Epstein in the fields of urban sociology and geography and the work of Nancy Fraser and Michel Feher in the field of critical theory.
2. Nancy Fraser and Rahel Jaeggi, *Capitalism: A Conversation in Critical Theory* (Cambridge: Polity Press, 2018), 39, 71–77, 86–87; Nancy Fraser, "Behind Marx's Hidden Abode," *New Left Review* 86 (2014): 55–72.
3. SE is the abbreviation for "Societas Europaea" and designates a public company registered according to the corporate law of the European Union.
4. Katarina Bonnevier, "Postscript: Drawing the Curtains," in *Behind Straight Curtains: Towards a Queer Feminist Theory of Architecture* (Stockholm: Axl Books, 2007), 366–432; Jane Rendell, *Site-Writing: An Architecture of Art Criticism* (London: I.B. Tauris, 2010); Neil Brenner, *Implosions/ Explosions: Towards a Study of Planetary Urbanization* (Berlin: Jovis, 2017); Neil Brenner, Jamie Peck and Nik Theodore, "Variegated Neoliberalization: Geographies, Modalities, Pathways," *Global Networks* 10, no. 2 (2010): 182–222.
5. To correlate emerging findings with architectural history and theory, I draw on the writings of Catharina Gabrielsson, Reinhold Martin, Helena Mattsson, Łukasz Stanek, and Bruno Taut.
6. Regarding financialized housing in Germany, I draw on the work of Laura Calbet i Elias, Philipp P. Metzger and Sabina Uffer.
7. *Deutsche Wohnen Magazine* (Berlin: Deutsche Wohnen SE, 2020): 44–45.
8. "Marienufer," Deutsche Wohnen, accessed October 29, 2021, https://www.deutsche-wohnen.com/marienufer.
9. "Köpenick von A-Z," Koepenick.net, accessed October 29, 2021, https://koepenick.net/koepenick-a-z.htm#marienhain.
10. "Vorhabenbezogener Bebauungsplan 9–57 VE („Marienhain"")," (Berlin: Bezirksamt Treptow-Köpenick von Berlin, 2015), accessed October 29, 2021, https://www.berlin.de/ba-treptow-koepenick/_assets/aemter-und-se/spk/bzr13-koepenick-sued/entwurf-des-vorhabenbezogenen-bebauungsplans-9-57-ve-nebst-begruendung-11-06-2015.pdf.
    Regarding the difficulty of genuine citizens' participation within a "Vorhabenbezogener Bebauungsplan" (project-related development plan), see the activist group Initiative Hermannplatz, Berlin, which aims to resist the realization of a luxury shopping-mall development by Signa holding: https://initiativehermannplatz.noblogs.org/.
11. "Marienufer, Berlin," Probis-Expert, accessed October 29, 2021, https://probis-expert.com/en/references/marienhain-berlin-2/.
12. "Nokera Planning," BauNetz Architekten, accessed April 16, 2022, https://www.baunetz-architekten.de/nokera-planning-gmbh/758213.

13. "Homepage," Stengel GmbH, accessed April 16, 2022, https://www.stengel-gmbh.de/.
14. "Team," Nokera AG, accessed April 16, 2022, https://nokera.com/en/team. The information contained in this paragraph is based on the version of this webpage that was available in October 2021, which has since been updated and simplified several times. Information concerning Georg Fuchshuber had been removed from Nokera's Swiss website as of March 2022. For additional information concerning Nokera AG, see "Nokera AG," Business Monitor, accessed October 29, 2021, https://business-monitor.ch/de/companies/1066244-nokera-ag; and Thomas Bremer, "Nokera AG eine neue Gesellschaft des dubiosen Geldverleihers Norbert Ketterer," *Diebewertung,* April 4, 2021, https://www.diebewertung.de/nokera-ag-eine-neue-gesellschaft-des-dubiosen-geldverleihers-norbert-ketterer/.
15. Regarding the densification and elimination of collective spaces in housing for the proletariat in the nineteenth century, see Friedrich Engels: "Zur Wohnungsfrage," in *Zur Wohnungsfrage*, ed. Jesko Fezer, et al. (Leipzig: Spector Books, 2015 [1872]): 1–160. On the manipulation of public opinion during Haussmann's urban renovation, see the two novels by Émile Zola, *La Curée* (1871) and *L'Argent* (1891). Regarding the fact that housing markets are oriented towards provoking consumer desires rather than answering housing requirements, see Alexia Yates, "Seeing Like a Speculator," in *Selling Paris: Property and Commercial Culture in the Fin-de-siècle Capital* (Cambridge, MA: Harvard University Press, 2015): 59–97.
16. Gregory W. Fuller, *The Political Economy of Housing Financialization* (Newcastle upon Tyne: Agenda Publishing, 2019): 1–19; Greta R. Krippner, "The Financialisation of the American Economy," *Socio-Economic Review* 3, no. 2 (2005), 174; Randy Martin, *The Financialization of Daily Life* (Philadelphia, PA: Temple University Press, 2002); Nancy Fraser, "Legitimation Crisis? On the Political Contradictions of Financialized Capitalism," *Critical Historical Studies* 2, no. 2 (2015): 157–89.
17. Housing scholar Manuel B. Aalbers defines financialization as the "increasing dominance of financial actors, markets, practices, measurements and narratives, at various scales, resulting in a structural transformation of economies, firms (including financial institutions), states and households." Manuel B. Aalbers, "Financialisation," in *The International Encyclopedia of Geography: People, the Earth, Environment, and Technology*, ed. Douglas Richardson, et al. (Oxford: Wiley, 2019), 4. Aalbers develops this definition from Gerald A. Epstein, "Introduction: Financialisation and the World Economy," in *Financialisation and the World Economy*, ed. Epstein (Cheltenham: Edward Elgar, 2005), 3.
18. Since the advent of real estate during the long nineteenth century, housing has been traded as a commodity with the first global boom and bust cycle appearing in the 1880s, see Alexia Yates, *Real Estate and Global Urban History* (Cambridge: Cambridge University Press, 2021), 1–2.
19. Philipp P. Metzger, *Die Finanzialisierung der deutschen Ökonomie am Beispiel des Wohnungsmarktes* (Münster: Westfälisches Dampfboot, 2020); Florian Urban, "Germany, Country of Tenants," *Built Environment* 41, no. 2 (2015): 183–95.
20. One example of the dominant Anglo-American perspective on the financialization of housing is Fuller, *The Political Economy of Housing Financialization*, 19. The author argues that "signing a rental contract does not create a financial product in the way that signing a mortgage contract does" since "rental markets are less financialized than the market for purchased homes." For the difference between bank-based and market-based finance systems, see Costas Lapavitsas, *Profiting without Producing: How Finance Exploits Us All* (London: Verso, 2014).
21. According to the *Statistisches Bundesamt*, Germany had a home-ownership rate of 47.5 percent at the end of 2020. According to the statistical office of the European Union, *Eurostat,* Germany had a home-ownership rate of 50.5 percent in 2020, see "Gesellschaft und Umwelt: Wohnen," *Statistisches Bundesamt*, accessed July 7, 2022, https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Wohnen/_inhalt.html.

22. Urban, “Germany, Country of Tenants.”
23. Metzger, *Die Finanzialisierung der deutschen Ökonomie am Beispiel des Wohnungsmarktes*, 118–99, 264–65; Stefan Beck, *Vom fordistischen zum kompetitiven Merkantilismus: Die Exportorientierung der Bundesrepublik Deutschen zwischen Wirtschaftswunder und europäischer Krise* (Marburg: Metropolis-Verlag, 2014).
24. Steuerreformgesetz 1990, July 25, 1988, Article 21, “Gesetz zur Überführung der Wohnungsgemeinnützigkeit in den allgemeinen Wohnungsmarkt” and Article 22, “Abbau von Steuervergünstigungen und Sonderregelungen im Wohnungswesen,” *Bundesgesetzblatt*, 1988, Part I, 1136–39. The repeal of tax benefits affected 1,800 non-profit-oriented housing companies that managed 3.36 million housing units, see Tilman Harlander, “Abschaffung der Wohnungsgemeinnützigkeit—Ende des sozialen Wohnungsbaus?” in *Sozialer Wohnungsbau im internationalen Vergleich*, ed. Walter Prigge, and Wilfried Kaib (Frankfurt am Main: Vervuert, 1988): 46–55.
25. Knut Unger, “Anlageprodukt Wohnung: Die Finanzindustrialisierung der deutschen Wohnungswirtschaft,” *Widerspruch: Beiträge zu sozialistischer Politik* 68 “Konzerne, Stadt, Demokratie” (2016): 96.
26. Anne Kockelkorn, “Von Höllenhunden und Festungen,” *Stadtbauwelt „Ware Wohnung,”* 173 (2007): 20–28; Andrej Holm, “Zweitverwerter der Wohnungsprivatisierung,” *MieterEcho* 322 (2007): 25–26; Marja Elsinga, Mark Stephens and Thomas Knorr-Siedow, “The Privatisation of Public Housing: Three Different Pathways,” in *Social Housing in Europe*, ed. Kathleen Scanlon, Christine Whitehead and Melissa Fernández Arrigoitia (Chichester: John Wiley & Sons, 2014), 401. The largest seller in terms of numbers was the federal government, which sold a total of 270,000 apartments with the portfolios of the German Railways (Deutsche Bahn), German Postal Services (Deutsche Post) and the Federal Insurance Agency for Salaried Employees. The sell-out was followed by the federal states with 180,000 and the municipalities with 240,000 apartments respectively. In 2006, the units of Dresden’s WOBA were cashed in at around €35,000 and at around €32,000 for those of the GSW in Berlin. As a general tendency, the price per dwelling unit of en-bloc sale transactions of formerly social or de facto social housing stock rose from €20,000 to €40,000 between 1996 and 2006. Source: Deutscher Mieterbund, 2007. The fact that both private equity firms and listed companies (German: AGs) in housing real estate utilize commercial mortgage-backed securities (CMBS) to manage their debt provides another reason why they can be defined as financialized. Metzger, *Die Finanzialisierung der deutschen Ökonomie am Beispiel des Wohnungsmarktes*, 207–218; Knut Unger, “Mieterhöhungsmaschinen: Zur Finanzialisierung und Industrialisierung der unternehmerischen Wohnungswirtschaft,” *Prokla* 191, no. 2 (2018): 211–12.
27. Metzger, *Die Finanzialisierung der deutschen Ökonomie am Beispiel des Wohnungsmarktes*, 149–52.
28. Fraser, “Legitimation Crisis?,” 176.
29. The number provided is according to GdW (Bundesverband der deutschen Wohnungs- und Immobilienunternehmen e.V.) and refers to the national share of 23.2 million rental housing units in 2016, as interpreted by Metzger, *Die Finanzialisierung der deutschen Ökonomie am Beispiel des Wohnungsmarktes*, 190–91.
30. Numbers according to the 2020 annual report of Vonovia SE. In total, Vonovia owned 415,000 housing units in 2020, including smaller portfolios in Sweden and Austria.
31. In 2021, Vonovia SE und Deutsche Wohnen SE together invested €1.5 million in political lobbying. By comparison, the Association of the German car industry (VDA) invested €4.4 million. “Lobbyregister,” *Deutscher Bundestag*, accessed March 1, 2022, https://www.lobbyregister.bundestag.de.
32. Percentage according to Investitionsbank Berlin, *IBB Wohnungsmarktbericht 2020* (Berlin: Investitionsbank Berlin, 2021), 37.
33. According to the Deutsche Wohnen SE *2020 Annual Report*, 39.72 percent of the company’s housing stock was built between 1919 and 1979; 8.6 percent was built prior to 1919, 18.3 percent was built between 1980 and 1999; only 0.9 percent of the company’s

housing stock was built after 2000. The annual report of Vonovia does not reveal these figures, but just like Deutsche Wohnen SE, its portfolio grew through en-bloc acquisition of former social housing stock from the twentieth century.

34. According to the press release of the Berlin Senate, the debt was about €1.56 billion. One month later, the *Berliner Zeitung* reported €1.7 billion of debt. See Ulrich Paul, "GSW-Verkauf für 405 Millionen €erhielt breite Zustimmung," *Berliner Zeitung*, June 18, 2004, http://www.berliner-zeitung.de/gsw-verkauf-fuer-405-millionen-euro-erhielt-breite-zustimmung-15556254. On the strategic undervaluation of GSW by the consulting firm Ernst & Young, see Andrej Holm, "Eine Zwischenbilanz der GSW-Privatisierung," in *Mieterecho* 318 (October 2006), https://www.bmgev.de/mieterecho/318/12-gsw-cerberus-ah.html.
35. Gunnar Hinck, "Ende der Wohnungsgesellschaft GSW: Am Schluss bleiben Fassaden," *die tageszeitung*, July 29, 2015, http://www.taz.de/!5213180.
36. GSW, "Jahresgeschäftsbericht/Geschäftsbericht 2012," accessed July 7, 2022, http://www.gsw.ag/websites/gswimmobilien/German/2020/corporate-news.html?newsID=1325383.
37. Two other housing estates by Bruno Taut that were also included on the World Heritage List are the Schillerpark Siedlung in Wedding and the so-called "Tuschkastensiedlung" in Treptow, both of which are still owned by the Berliner Bau- und Wohnungsgenossenschaft von 1892 eG.
38. Gunnar Hinck, "Privatisierung auf dem Wohnungsmarkt: Belohnung in Millionenhöhe," *die tageszeitung*, June 14, 2016, http://www.taz.de/Privatisierung-auf-dem-Wohnungsmarkt/!5312757.
39. Sabina Uffer, "Wohnungsprivatisierung in Berlin: Eine Analyse verschiedener Investitionsstrategien und deren Konsequenzen für die Stadt und ihre Bewohner," in *Reclaim Berlin: Soziale Kämpfe in der neoliberalen Stadt*, ed. Andrej Holm (Berlin: Assoziation A, 2014): 64–82; Desiree Fields and Sabina Uffer, "The Financialisation of Rental Housing: A Comparative Analysis of New York City and Berlin," *Urban Studies* 53, no. 7 (2016): 1486–1502.
40. Between 2004 and 2014 the number of GSW employees shrank from 950 to 170, see Gunnar Hinck, "Berliner GSW halbiert die Belegschaft," *Tagesspiegel*, October 23, 2014, http://www.tagesspiegel.de/wirtschaft/nach-der-uebernahme-durch-deutsche-wohnen-berliner-gsw-halbiert-die-belegschaft/10876382.html. Those employees who were transferred to Deutsche Wohnen SE in 2017 had to accept worse labour agreements, see Gunnar Hinck, "Privatisierung auf dem Wohnungsmarkt: Belohnung in Millionenhöhe." At the same time, Deutsche Wohnen AG increased rents to the maximum legal level in prime locations, see "Kampf um jeden Cent," *MieterEcho* 323 (August 2007), http://www.bmgev.de/mieterecho/323/06-mieterhoehung-balkon-hw.html. See also Metzger, *Die Finanzialisierung der deutschen Ökonomie am Beispiel des Wohnungsmarktes*, 228–39.
41. Unger, "Mieterhöhungsmaschinen: Zur Finanzialisierung und Industrialisierung der unternehmerischen Wohnungswirtschaft." His observation is also confirmed by the Facebook group "Mieter contra Vonovia," including the published statement of the Deutsche Mieterbund, the German Association of Renters on December 17, 2019, https://www.facebook.com/groups/238576779597304/permalink/2639856399469318.
42. Laura Calbet Elias,"Spekulative Stadtproduktion: Finanzialisierung des Wohnungsneubaus im innerstädtischen Berlin" (PhD diss., TU Berlin, 2019); Laura Calbet i Elias, "Financialised Rent Gaps and the Public Interest in Berlin's Housing Crisis," in *Gentrification as a Global Strategy: Neil Smith and Beyond*, ed. Abel Albet and Núria Benach (London: Routledge, 2018), 165–76.
43. Luc Boltanski and Arnaud Esquerre, *Enrichment: A Critique of Commodities* (Hoboken, NJ: Wiley & Sons, 2020).
44. "Berlin—Waldsiedlung," *Deutsche Wohnen*, accessed October 11, 2021, https://www.deutsche-wohnen.com/bauen-wohnen/neubau-und-quartiere/berlin-waldsiedlung.
45. See Catherine Bauer, *Modern Housing* (Minneapolis: University of Minnesota Press, 2020 [1934]).

46. Reinhold Martin, "Das Wohnungswesen in der Geschichte: der Fall des spezifischen Intellektuellen," in *Zur Wohnungsfrage*, ed. Fezer, 173–211.
47. My translation: "Modernität und soziales Denken im Berlin der Weimarer Republik," Deutsche UNESCO-Kommission, accessed February 27, 2022, https://www.unesco.de/kultur-und-natur/welterbe/welterbe-deutschland/siedlungen-der-berliner-moderne. See also note 37.
48. Fraser and Jaeggi, *Capitalism*, 31–32.
49. Michel Feher, *Rated Agency: Investee Politics in a Speculative Age* (New York: Zone Books, 2018), 202.
50. "At risk of poverty" is defined as having less than sixty per cent of the national median income, see Bundeszentrale für Politische Bildung, "Armutsgefährdungsquoten nach Bundesländern," November 28, 2020, accessed March 1, 2022, https://www.bpb.de/kurz-knapp/zahlen-und-fakten/soziale-situation-in-deutschland/158610/armutsgefaehrdungsquoten-nach-bundeslaendern/. This figure has not changed substantially since 2009.
51. The median apartment price in Berlin rose from 1,745 euro per square meter to 4,975 euro per square meter between 2010 and 2020; in the same period, median rental prices increased from 6.17 to 10.14 euro per square meter. See Investitionsbank Berlin, "IBB Wohnungsmarktbericht 2020," 60, 64; "IBB Wohnungsmarktbericht 2010," 36, 40.
52. "Mietenwahnsinn stoppen," Resolution of the Berlin Green Party, May 19, 2019, https://gruene.berlin/beschluesse/mietenwahnsinn-stoppen-fuer-eine-neuausrichtung-des-berliner-wohnungsmarktes-und-eine-starke-gemeinwohlorientierte-wohnungswirtschaft_189.
53. For an appraisal on gentrification processes in Berlin until 2015, see Kerima Bouali and Sigmar Gude, "Gentrifizierung oder Wiederkehr der Wohnungsnot?" in *Reclaim Berlin*, ed. Holm, 27–49; Ilse Helbrecht, ed., *Gentrifizierung in Berlin: Verdrängungsprozesse und Bleibestrategien* (Bielefeld: Transcript, 2016); see also note 63.
54. Berlin's rental market consists of 1,658,300 housing units, see Investitionsbank Berlin, "IBB Wohnungsmarktbericht 2020," 37. Together, Vonovia and Deutsche Wohnen SE owned 157,000 rental units in 2020, which represents approximately 9.5 percent of this market.
55. According to the Berlin Urban Development Plan for Housing, Berlin needs to build 194,000 housing units between 2017 and 2030 to meet growing demand, which corresponds to approximately 15,000 units per year. Senatsverwaltung für Stadtentwicklung und Wohnen, ed., *Stadtentwicklungsplan Wohnen 2030: Neue Wohnungen für Berlin* (Berlin: Kulturbuch Verlag, 2020), 9.
56. Press release, Vonovia, September 17, 2021, accessed March 2, 2021, https://presse.vonovia.de/en/aktuelles/210917-verkauf-beriner-wohnungsbestaende-aus-dem-zukunfst-und-sozialpakt-wohnen. The 2020 annual reports of the two companies indicate a somewhat lower scope of new construction activity in the upcoming years. Vonovia announced that 7,864 units are either planned or currently under construction across the entire portfolio in Germany; Deutsche Wohnen declared that the company intends to realize 9,000 housing units in the upcoming years. Previous annual reports of Deutsche Wohnen SE already mentioned new construction activity, but in 2020 it was included in the diagram of "organization and group structure" and explicitly mentioned as one of the core activities. Vonovia has positioned "new construction" among its core activities since mid-2010, but this has occurred mainly in smaller cities in the Ruhrgebiet; the company owns less housing stock in Berlin than Deutsche Wohnen SE. Numbers for the realized projects by the two companies are derived from the total number of new construction projects published on their respective websites, hence these figures are an estimation. About a third of Vonovia's project were realized through the subsidiary firm BUWOG.
57. Christoph Trautvetter and Sophie Bonczyk, "Profitmaximierer oder verantwortungsvolle Vermieter? Grosse Immobilienunternehmen mit mehr als 3.000 Wohnungen im Profil," (Berlin: Rosa-Luxemburg-Stiftung, 2019), 10. Listed housing companies in Berlin that

own more than 3,000 dwellings and that do not invest in new construction are Ado Properties SA and Grand City Properties SA. Already in 2018, Vonovia and Deutsche Wohnen AG invested 4–5 percent of rental income in new construction whilst public housing companies may invest up to 40 percent.

58. Board member of Deutsche Wohnen Construction and Facilities GmbH, interview with the author, October 13, 2021.
59. For a definition of the Hegelian term “concrete abstraction,” see Łukasz Stanek, “Space as Concrete Abstraction: Hegel, Marx and Modern Urbanism in Henri Lefebvre,” in *Space, Difference, Everyday Life: Reading Henri Lefebvre*, ed. Kanishka Goonewardena, et al. (New York: Routledge, 2008), 62–79. Regarding the interpretation of financialized architecture as concrete abstraction, see Catharina Gabrielsson and Helena Mattsson, “Pay Attention!” *Architecture and Culture* 5, no. 2 “Solids and Flows: Architecture and Capitalism” (2017): 157–64; Reinhold Martin, “Financial Imaginaries: Toward a Philosophy of the City,” *Grey Room* 42 (2011): 60–79.
60. This estimation was made by the former city architect of Munich, Christiane Thalgott, keynote lecture, “Boden.Wirtschaft.Gesellschaft,” Weimar, May 23–24, 2019.
61. For the essence of this interpretation, see Friedrich A. Hayek, “Housing and Town Planning,” in *The Constitution of Liberty*, ed. Hayek (Chicago: University of Chicago Press, 1960), 340–57.
62. Metzger, *Die Finanzialisierung der deutschen Ökonomie am Beispiel des Wohnungsmarktes*, 248–51.
63. For the gentrifying and developer-oriented features of social housing construction in Berlin, see Andrej Holm, “(Un)sozialer Wohnungsbau: Schwerpunkt der Berliner Verdrängungsdynamik,” *Berliner Hefte zur Geschichte und Gegenwart der Stadt*, 2 (2021 [2016]): 13–119.
64. In 2021, Vonovia SE und Deutsche Wohnen SE together invested €1.5 million in political lobbying, see note 32.
65. Board member of Deutsche Wohnen Construction and Facilities GmbH, interview with the author, October 13, 2021.
66. The so-called Alboingärten are rented at sixteen to twenty euro per square meter. As a comparison, according to the Berlin rent index (Mietspiegel) the rent of projects built after 2003 is twelve euro per square meter.
67. This observation is drawn from local newspaper articles and investors’ press releases. For local mayors attending the topping out ceremonies of the projects by Vonovia SE and Deutsche Wohnen SE discussed in this article see, for example, “Die Eisenbahnersiedlung Elstal wächst—Deutsche Wohnen feiert Richtfest,” Deutsche Wohnen, accessed July 7, 2022, https://www.deutsche-wohnen.com/ueber-uns/presse-news/pressemitteilungen/die-eisenbahnersiedlung-elstal-waechst-deutsche-wohnen-feiert-richtfest, https://bbu.de/nachricht/45510.
68. Feher, *Rated Agency*, 202.
69. Indeed, the Berlin government launched a series of measures that grant financial support to cooperatives in 2018. See Senatsverwaltung für Stadtentwicklung und Wohnen, “Verwaltungsvorschriften für die Durchführung eines Projektaufrufs zur Förderung des genossenschaftlichen Wohnens in Berlin 2019,” July 18, 2019, https://www.stadtentwicklung.berlin.de/wohnen/wohnungsbau/download/genossenschaftsfoerderung/2019_Genossenschaftsfoerd_SenSW_AMTSBLATT.pdf. However, the abolition of the non-profit notion of public benefit in housing production (*Wohnungsgemeinnützigkeit*) in the German tax system in 1990 remains in place to date, see note 24.
70. Regarding the interpretation of financialized architecture as concrete abstraction, see note 59.
71. Bruno Taut, *Architekturlehre* (Hamburg: VSA, 1977 [1936–38]), 65.