



From Vienna to Frankfurt Inside Core-House Type 7:
A History of Scarcity through the Modern Kitchen
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This paper traces a history of war-induced scarcity through the material and technological properties of household appliances and kitchens from 1914 to 1930. Investigating the Austrian settlement and allotment garden movement, it argues that the practices of users, self-help builders, and inhabitants who reacted to living with limited resources in the state of emergency found their way into the designs of modern homes, and into the works of canonical modern architecture, in particular the famous Frankfurt Kitchen. This paper thus investigates the design and production of the modern kitchen and its transformations, from Vienna to Frankfurt, moving from a cooperative vernacular building movement to one of the largest construction endeavors to standardize and prefabricate modern housing in Germany.

Prelude

In the late 1980s, when the classification of her papers at the archives of the University of Applied Arts in Vienna was under way, Margarete Schütte-Lihotzky, then more than eighty years old, was asked to comment on the collection that would encompass her life's design work. With a blue pen she overwrote previous descriptions, corrected dates, and added names and places. On the back of one document she remarked, 'Who wrote this nonsense?'¹ Drawing additional sketches and tracing over photocopies, she prepared supplementary records and notes. Once completed, her annotations left a secondary personal trace in the archive.

It was this supplemental material that caught my attention when I visited the collection in 2012. In particular, two sets of documents depicting kitchens held extensive remarks by Schütte-Lihotzky. In the first set she had scribbled over two rough photocopies of canonical views of the Frankfurt Kitchen, which showed its 'stove complex' and 'wet complex', and outlined each of its architectural elements (**Figures 1, 2**). On the back of a second set of images, a series of photographs of another kitchen, Schütte-Lihotzky had written extensive additional descriptions and added a sketch of the space and the position of its individual appliances. The effort was striking. Had not the first set, the photocopies of the Frankfurt Kitchen, been published prolifically in much better quality, and were its elements not captured in lists and famous time-motion diagrams? And why had Schütte-Lihotzky added so much information to the second set of images, which depicted a little-known project? Puzzled by the detail and attention Schütte-Lihotzky had paid to explaining these kitchens long after she had designed them, I started to

wonder if there was a deeper relationship between them and whether the individual histories of their appliances had been overlooked in the historiography because of Schütte-Lihotzky's greater achievements in standardization and rationalization.

Early in the 1920s, the young Margarete Lihotzky had already begun to rationalize her designs:² 'The standardized kitchen arrangement', she wrote, 'is built on scientific principles based on the new working methods of rational housekeeping; we shall build small kitchens not only to save space and money, but most of all to save time' (Lihotzky 1922: 1). The year was however not 1926, as a reader familiar with her work might assume, but 1922, and the place was not Frankfurt but Vienna. The kitchen she was describing was thus not her Frankfurt Kitchen, but the other less famous kitchen, depicted on the second set of papers in the archive that had drawn my attention. Lihotzky had developed it for a self-help building movement.

In Frankfurt, Schütte-Lihotzky would advance her kitchen designs in similar terms, but there they would be implemented on a large scale. Standardized and prefabricated, from 1925 to 1930 Frankfurt Kitchens became the core of 10,000 German households in the extensive undertaking to develop affordable housing, under the direction of the architect and city planner Ernst May.³ Schütte-Lihotzky's Kitchen was featured in May's magazine *Das Neue Frankfurt* (The New Frankfurt), where many of Europe's celebrated proponents of modern architecture showcased their latest works.⁴ Covering a wide variety of topics, from performing and fine arts to construction, *Das Neue Frankfurt* featured drawings, photographs, and collages, but also vast illustrated advertisements by large German corporations. Supported by the municipality and industry, the magazine soon became one of the premier avant-garde magazines in Weimar Germany and in Europe generally. In the spring of 1930, the Frankfurt

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participation and input of many women and girls and their professional organizations.

My main concern in this paper revolves around similar issues: the modern kitchen's design and production, its evolution (in three different phases), and the design input by its architects and users. The three places and periods in which I discuss the modern kitchen are Viennese allotment gardens (1914–1918), Viennese settlements (1918–1925), and Garden Cities in Frankfurt (1925–1930).⁶ These periods not only saw increasing industrialization in the realm of building and construction but also the mediation and institutionalization of modern architecture on an unprecedented scale. How mass-mediation in the form of magazines, exhibitions, and organizations through large cooperatives and governmental entities gradually came to aid the modern kitchen's proliferation is outlined by embedding it in these three phases. The primary focus of this paper, however, will be the second phase in Vienna, from 1918 to 1925, with a discussion of those settlements in which inhabitant-builders, and notably, architects, drew on everyday tools and practices, tailored to severe post-war austerity measures, to create the modern kitchen. In this manner, settlements became consciously constructed 'slow' enviro-technical landscapes that resisted common early 20th-century progress-narratives and resulted in an alternative, modern, vernacular architecture. This vernacular architecture was not antithetical to the processes of designing modern cities, buildings, and domestic interiors, as the paper will show, but often the very basis of it (Urban 2013).⁷

To make these details visible, I match a largely structural reading with intricate spatial analyses, situating the kitchen in its specific economic, cultural, and institutional environment, while at the same time charting it architecturally in close-up, not unlike a micro-history.⁸ While a detailed architectural reading shows that the state of emergency allowed the needs of multiple users to find their way into the plan, a broader, structural analysis of the kitchen reveals that an immediate response to crisis embodied the possibility, if only for a moment, to envision the production of domestic architecture largely independent of prevailing bourgeois thought.

I stress this point because the prominent architectural historian Manfredo Tafuri dismissed settlements as a radical housing typology in his seminal discussion on Viennese housing politics, *Vienna Rossa* (Tafuri et al. 1980).⁹ Confined to the first half of the 1920s and superseded by the larger communal housing projects, Tafuri claimed that settlements' architecture emerged in an unorganized manner, and that inhabitants of its single-family homes stemmed largely from the petty bourgeoisie (26).¹⁰ In this paper, I question these claims, arguing that settlements based on cooperation and communal economy stemmed from a wholly different mode of conceiving and producing architecture which represented a counter model to Vienna's larger building programs of the 1920s.¹¹ Due to the fact that they alleviated severe housing and food crises, settlements also stood as a counter example to the housing programs in Frankfurt where designers, despite their best intentions, became complicit in enforcing the

very mechanisms they were trying to combat. They used the logic of capital to resist capital.

Lastly, and from a methodological standpoint, I have tried to bridge what I perceive as a schism in the discipline of architectural history that produces two distinct types of scholarship. The first examines designs, architects, and their intellectual environments, while the second investigates the appropriation of designs by consumers and users within the larger field of material culture. In this essay, I have insisted on the overlap of these histories, drawing out their convergence and intertwining; in the realm of modern architecture, Schütte-Lihotzky's work, which was a critical response to larger pressures of its time, stands as a case in point for this overlap. Therefore, when I turn to Schütte-Lihotzky, it is not to contribute yet another piece to an already voluminous scholarship on her legacy in the realm of the kitchen, but rather to investigate the greater context in which the kitchen emerged. Schütte-Lihotzky's overriding comments in the archives stand at the beginning of this research that questions if and how the development of the modern kitchen and each of its design elements were shaped by users, designers, and builders in a specific historic moment of scarcity and crisis. It remains an architectural irony that the flexible kitchen turned into a static entity the moment its adaptable appliances were perfected.

The 'Hay Box', in Allotment and War-Produce Gardens, 1914–1918

In Vienna, mobilization for World War I in July of 1914 happened overnight and it required all available resources immediately. For the first few days, it was thought that war could be averted altogether. When it began, it was hoped that it would be over in a matter of months. A plan for a long-term military engagement was not in place and neither was one for its tactical beginning. In fact, mobilization was so rapid and so chaotic that, according to State Secretary of Alimentation Hans Loewenfeld-Russ, it changed the physiognomy of city within only a few days.¹² 'Although thousands are still in the streets', Loewenfeld-Russ wrote on August 1, 1914, 'it is quiet, as if everybody spoke silently' (Loewenfeld-Russ and Ackerl 1986: 12). All available cars, wagons, and horses had been sent to the front and the trucks of private companies and factories carried military items exclusively. Early in August, the municipal rail service was discontinued for civilian use, as was the national railway system (13). Soon reports on deficits began to proliferate. Sugar and flour were limited, and then gasoline (14). 'We lack coal, raw materials, train wagons, workers, currency – and that only a few weeks after the outbreak of the war! In my opinion this is however not a real shortage, but only a hold-up caused by mobilization which absorbs everything', Loewenfeld-Russ wrote in the middle of August (20).

He was right. Scarcity in Austria was not predominantly caused by an actual lack of resources but by a dysfunctional distribution system. Yet throughout the war, the gaps in this system could not be filled, and in Vienna, this meant dramatic shortages, which were most severely felt when it came to foodstuffs. Over the course of the next

four years, the municipality, the federal state, and the empire established countless decrees, programs, and institutions to combat food shortages. In addition, war rationing cards for basic staples were issued by Loewenfeld-Russ's office; only a few months into the war, in April of 1915, those foodstuffs included flour and bread, and later in the year, sugar, milk, coffee, and lard. In 1916, rationing cards for potatoes and marmalade were given out, and cards for meat followed in 1918 (Healy 2004: 43–44). Yet nationalist rhetoric would not allow poor distribution to be blamed. At fault was the enemy, the British, who sought to starve the civilian population. In a rubric entitled 'Küchengespräch im Salon' (Kitchen Conversation in the Parlor) one Viennese argued, on June 20, 1915, in *Neue Freie Presse* (New Free Press), that to keep cooking was a task of a higher order. It was women's response to defy the hunger war being waged upon the population. 'Our domestic stove is not only threatened by the violence of weapons', the same Viennese stated, 'it is threatened by cooling down, since there is no purpose in heating it for empty pots and pans' (17).¹³

Amongst immediate solutions to keep pots and pans at least half full were subsidies to build and maintain allotment garden colonies in the city, which allowed people to plant their own vegetables in the urban environment. A few allotment garden clubs in Vienna had already existed before the outbreak of the war (less than 2,000 plots altogether), but, largely operated by members of the Viennese bourgeoisie, they were predominantly driven by concerns for health in the metropolis and maintaining a balanced, nutritious diet. The war shifted these concerns to counting calories with charts and statistics in order to survive.

The food crisis also dramatically increased the size, extent, and number of allotment garden colonies in the city. In addition, the tasks of handling subsidies, leases, and insurances brought about a change in the administrative structure of allotment gardeners' representation and led to the creation of an overarching cooperative organization. A loose group of allotment gardens had existed since 1914, but in the summer of 1916, thirteen allotment garden clubs founded the *Verband der Schrebergärtenvereine* (Association of Allotment Gardens), which actively promoted the lease of new properties and the planned distribution of garden plots in consultation with the city.¹⁴ Membership rose accordingly, changing the class composition of the allotment garden, which had formerly consisted of homogenous groups of the well-to-do and now welcomed people from all strata of society.

A special factor in driving these changes was the *Kriegsgemüsegarten* (war produce garden), which provided minimal alleviation of hunger. It was smaller and cheaper than the allotment garden and did not include a hut. Throughout the war, war produce gardens grew steadily in number, because they were the most direct response to the problem of food shortage. By 1918, 10,000 war produce gardens supplemented an estimated 6,000 parcels of allotment gardens in Vienna (in 1920 there were 25,000 parcels combined) (Wohatschek et al. 2001: 21–22). But this was still not enough. The Viennese population was starving.

In this condition of scarcity, magazines and newspapers were full of strategies and devices for surviving the war with limited resources. In fact, 'endurance' and 'willingness to sacrifice' were commonly heard expressions at the 'home front' in Vienna, and getting by with less was advertised as a necessary civilian contribution to the war. For allotment gardeners and war produce gardeners, who were in many cases a little better off than the average citizen, this meant testing productive techniques and making use of available materials in the garden and around their sheds.

Discussions on horticulture, harvesting and food conservation to advance everyday life in the garden had long been at the heart of allotment gardeners' national and international meetings, but local responses to immediate pressures were increasingly important as the war progressed. As early as June of 1915, under the headline 'Kriegsernährung' (Wartime Alimentation), allotment gardeners had published novel cooking techniques and strategies for living through the state of emergency in their new monthly periodical *Mitteilungen des Vereins 'Schrebergärten'* (Notices of the Club 'Allotment Garden').¹⁵ The topics had been presented in lectures at a recent general assembly. In addition to a report on the canning and pickling of produce, living with scarce resources was best captured in a lecture on the proper use of the *Kochkiste* (hay box). With some initial heat, this device made it possible for food in a pot to cook itself over time through insulation.¹⁶

In February of 1916, an article entitled 'Der Kochbeutel' (The Cooking Pouch), in the nationalist newspaper *Reichspost*, also stressed the advantages of using hay boxes and their more flexible, portable equivalents, cooking pouches. They were crucial for those who had no time to dedicate themselves to food preparations, such as petty bourgeois housewives who, since the outbreak of World War I, increasingly had to get by without the help of a maid.¹⁷ The use of a hay box, the article said, was also expected to be of even greater advantage for Vienna's poorest, the *Bettgeher*, who, due to grave housing shortages, shared tenement apartments with other people and were forced to sleep in beds in shifts. Since many of the *Bettgeher* did not even own proper stoves on which to cook their meager meals and instead utilized simple spirit burners, the hay box enabled them to save fuel, which had become a most 'precious liquid'.¹⁸

Such problems concerned allotment gardeners as well, who had to carry water and fuel from shops and wells to their gardens. The construction of the hay box as well was consistent with common practices in the allotment garden where bee-keeping devices, barns, and even garden huts, which were used as temporary dwellings, were constructed through self-help with simple discarded objects. Adding a hay box to a 'kitchen' in a shed, which usually consisted of simple countertops and basic spirit burners, meant great technological improvements.¹⁹ Between 1910 and 1920, numerous construction manuals for the efficient assembly of the hay box appeared. Some of them were included in cookbooks that explained the advan-

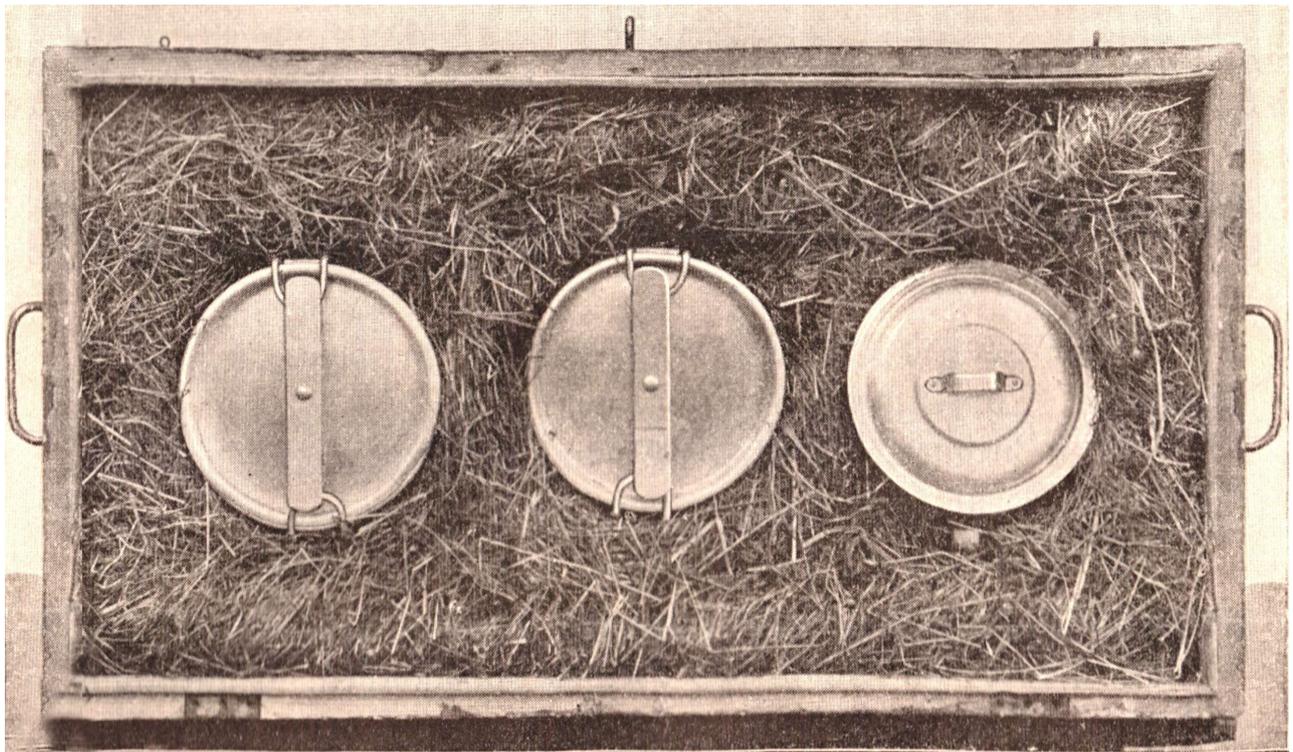


Figure 3: Hay Box, ca. 1914, *Cookbook for the Hay Box with a Commentary and Tips for Healthy Living*, Ida Schuppli and Betty Hinterer, Vienna, Leipzig: Deuticke, 1914, p. 6

tages of using the hay box to prepare food. Most popular was a series of cookbooks by Ida Schuppli and Betty Hinterer: *Grabnerhof-Cookbook: With Special Consideration for the Hay Box for the Use of Housewives of the Middle Class* (1913); *Cookbook for the Hay Box with a Commentary and Tips for Healthy Living* (1914); *The Canning of Fruit with Little Sugar in Addition to Instructions for the Drying of Fruit and Vegetables* (1916); and, finally, *The Little Cookbook for Times of Scarcity* (1918).²⁰ Ida Bock's *The Hay Box: Self-Building, Treatment and Recipes*, which appeared in 1918, extended the collection of recipes to building and maintaining the hay box.²¹

The authors of the cookbooks themselves argued that even in times of austerity the core stock of the Austrian cuisine could be maintained, and, through simple ingredients, dishes of vegetables and meats, even cakes, could be enjoyed with the help of the hay box. One recipe in *Grabnerhof-Cookbook*, for example, described how a cake could be prepared solely with nuts, pole beans, eggs, baking powder, and a little jam. If there were no nuts available, the cake could be baked with grated apricot stones, the cookbook suggested. Whereas cookbooks from the pre-war Austro-Hungarian Empire published sophisticated and time-consuming recipes that required countless ingredients for meats and cakes, the wartime recipes for the hay box, reduced to the absolute minimum, were a reminder that an era had come to an end. In fact, cookbooks were life advisors, which sought to ensure the supply of meals with the most ordinary foodstuffs. Written by women for women who faced wartime scarcities everyday, they addressed realities head-on. A brochure produced by economists and others experts on

wartime nourishment, on the other hand, avoided these realities, and instead promoted the meals prepared with the hay box as 'tasty, easy to digest and therefore more healthy' (Joachim 1915: 48). Such a claim was clearly an extenuation, given the horrific conditions of the starving population.

Similarly to cookbooks, construction manuals illustrated in detail and with urgency how hay boxes could be constructed from simple wooden boxes, rumped newspapers, kindling, or sawdust for insulation, which every allotment gardener would have found at home or in the community (**Figure 3**). The crucial feature of the hay box, which was advertised in the allotment gardeners' periodical, was the modest requirements of resources for the production and consumption of a meal. Not only was the hay box easy to build with leftover materials and easy to use with a limited food supply, but it also encouraged long-lasting savings in petrol and firewood, and even dishes and utensils (Joachim 1915: 48).²² Allotment gardeners were not legally permitted to inhabit their sheds year round, though as the war progressed many did so anyway, maintaining their provisional domestic architecture while altering it with clever technological tricks and kinks. The hay box thus embodied not only the spirit of common wartime endurance, but that of the allotment garden as well.

For all of these reasons, *Mitteilungen's* editors concluded, it was incomprehensible why so few members of the allotment garden communities had attended the lecture on the hay box and the pickling and canning of produce at the general assembly. The absence of women, whom the recent lecture had specifically targeted, was bemoaned,

and, in closing, the text recommended that ‘especially in these hard times’, members of the allotment gardens ‘pay much more attention to such talks and to the hay box in particular, since a good housewife can never learn enough’.²³ Entrenched in a rhetoric of austerity, *Mitteilungen* and the conservative *Reichspost* also argued that in culinary and domestic matters, as in so many other fields, war had acted as a true inventor. It had tested the hay box in the battlefield, where it provided sustenance for wounded soldiers.²⁴ Now it was up to women to test war’s advancements on the home front, and to bring it into the domestic realm.

In reality, of course, scarcity was war-induced, and what was propagated as a virtue – living with minimal resources – had become an absolute necessity as people struggled to survive. As resources in the city dwindled, life in the garden grew harsher as well. Already in July of 1915, *Mitteilungen* reported that food shortages in the Austro-Hungarian armies were so severe that the Provisions Division requested eight hundred rabbits from allotment gardeners to feed their troops.²⁵ Only a month later, in August, *Mitteilungen* promoted rabbits, in a section entitled ‘Einige Worte über Stallungen’ (Some Words on Barns), as ‘their children’s best friends’. While showing designs for housing these animals, and capitalizing on children’s interest in caring for them, the advertising took a grim twist because the good maintenance of animals became maximization of business for war, and the former beloved pet, once a member of the family, a commodity. ‘Therefore we, who do not fight in the battlefield, want to maintain a place among the soldiers as well, by breeding as many rabbits and chickens as possible and by taking any possibility of success away from the hunger-war being waged [by the British]’, one allotment gardener declared in *Mitteilungen*, mirroring the general Viennese call for ‘cooking to endure’.²⁶ The rhetoric of austerity expanded from produce and dairy products to include the bodies of animals.

But despite all battle cries on the home front, despite laws, decrees, and philanthropic programs, nothing helped. Towards the end of World War I, exhausted and deprived of proper nourishment, the population was depleted and the lack of bodies at the actual front grew severe. In Vienna, food shortages were still critical. They forced people into the municipal parks where they informally started to plant produce and raise livestock to sustain the elderly and the children. When these spaces reached capacity, people moved to the outskirts and began squatting on fallow land. This was how 40,000 Viennese became ‘settlers’.

‘Live-in Kitchen’ and ‘Cooking-Niche’ in Austrian Settlements, 1918–1925.

The aftermath of World War I was characterized by drastic political change. On November 11, 1918, the Habsburg monarchy, which had existed for more than six hundred years, finally collapsed, and Austria was proclaimed a republic. In May 1919, all women and men in Austria were given the right to vote, and in the election for the city parliament in Vienna the Social-Democrat, Jakob Reumann,

won the mayoral election with an absolute majority of 54.2 percent. In 1920, Vienna gained independence from rural Lower Austria and became its own federal state. With this independence, for the first time the city was able to enforce its own tax jurisdiction. This resulted in the creation of a high luxury and housing tax that specifically targeted the bourgeoisie. Between 1920 and 1934 these taxes enabled progressive social, educational, and health reforms and the vast construction of large communal dwellings called *Höfe* (approximately 60,000 apartments for roughly 200,000 people) as well as public infrastructure such as parks and public baths. Combined, these undertakings formed the core of what came to be known as ‘Red Vienna’.

Yet in the months following the end of the war, despite all efforts, food and housing shortages were still severe. In the winters of 1918–19 and 1919–20, the Viennese population was starving again (Loewenfeld-Russ and Ackerl 1986: vii). The construction of tenements had almost come to a complete halt during the war, and with thousands returning from the front, housing was at a historic low as well. Thus, in the young Republic, immediate solutions to remedy food and housing shortages were sought that drew on individual initiative, because the municipality was unable to act instantaneously and the expansive Social-Democratic programs took time to implement.

Throughout the years of World War I allotment gardeners had been increasingly self-reliant, planting produce and breeding small animals, and their thorough organization had been successful in maintaining relative order in the city. Even in times of tumult, allotment gardeners’ association – controlled on the club, district, municipal and national levels – had negotiated contracts with the city, advertised open plots, and planned new colonies, from systems of circulation and infrastructure down to clubhouses and sometimes even individual huts. Squatting settlers, in contrast, who had obtained their properties illegally and relied completely on their own resources, building with makeshift materials, were an annoyance to the owners of large estates. A form of representation largely based on self-help, but in accordance with the municipality, was therefore seen as a model to coordinate permanent housing for settlers as well while continuing to plant produce.

Unofficial squatter settlements had sprung up all around the city’s periphery and lacked concentration. Originating in various economic and social backgrounds, settler communities consisted of returning soldiers, workers, widows, impoverished bureaucrats, and even former aristocrats. This diversity was therefore an obstacle in organizing settlers, compounded by the dispersal of their groups, especially when organizers aspired to create a common consciousness among members. While allotment gardeners had made a point of excluding questions of religion and class from daily business in the gardens, settlers’ growing associations lent themselves to organization along the lines of cooperation heavily theorized by Austro-Marxists at the time. This was also welcomed by the elected Social-Democratic government, which in the

immediate aftermath of the war encouraged cooperative forms of self-governance. Over the next five years, 100,000 people who lived in shacks formed 230 settlement clubs with 40,000 official members (Blau 1999: 90). In 1921, together with allotment gardeners, they united under the umbrella organization *Österreichischer Verband für Siedlungs- und Kleingartenwesen* (Austrian Settlement and Allotment Garden Association). The left-wing economist Otto Neurath became the association's secretary.

In this function Neurath was interested in translating the mechanisms of a war economy into peacetime, allotting limited materials methodically. He also sought to foster cooperation which had grown in informal settlements among members. Between 1919 and 1921, Neurath and Hans Kampffmeyer, who had been active in the German Garden City movement, structured the organization of the Austrian Settlement and Allotment Garden Association accordingly and planned events and rallies for financial support by the municipality. Although the elected Social-Democratic government was sympathetic to settlers' needs from the beginning and made arrangements for initial support, tangible economic and political commitments resulted from a demonstration in April 1921, when settlers voiced their concerns to the city. On banners they wrote, 'What you give to the settlement, you will save in unemployment support', and 'Give us land, wood and stone and we will make bread from it!' (Neurath 1923: 15).²⁷

The latter demand, for food, was still a major concern of the municipality, which had been unable to supply produce and dairy products for the Viennese population, since the loss of the crownlands. The architect Adolf Loos, who had been active in the settlement movement as early as 1918, recognized this problem as having potential for providing a way out of settlers' predicament. In support of the rally, on April 3, 1921, he wrote an article in *Neue Freie Presse* entitled 'Der Tag der Siedler' (The Day of the Settlers), arguing that settlers could enable substantial distribution of produce within the city and for the general population. With nationalistic and nostalgic sentiment, Loos lamented the fact that the Austro-Hungarian Empire's famous cuisine was impossible to maintain in the First Republic.

A nation's nourishment is determined by the foodstuffs that the cultivated land supplies. Only today do we become aware that [the Austrian] cuisine was possible, because an amalgamation of states [*Staatengebilde*] called Austro-Hungarian monarchy endured for centuries. Nature had equipped the non-German countries in a wasteful manner; wide plains, black soil, blazing sun. Everything that once nourished us, we have lost. (Loos, 1921: 10)

But Loos had a solution to the problem and it involved adaptation; 'all things that have belonged to the iron stock of Viennese cuisine for centuries must be replaced by local foodstuffs'.²⁸ The settlement, Loos claimed, was the solution; it would not only save the people, it would also save the state.²⁹

On the same day, the Vienna city council passed legislation that had long been favored by the Social-Democrats to provide an extensive building fund to the settlements. Mayor Jakob Reumann personally spoke to settlers in front of the town hall, assuring them of his full support. He granted the construction of additional settlements, quick expropriation proceedings, distribution of necessary building materials through the cooperatively owned *Gemeinwirtschaftliche Siedlungs- und Baustoffanstalt*, or GESIBA (Cooperative Settlement and Building Material Association), and a supply of machines and tools. In addition, the legislation envisioned the creation of certain municipal entities, including the city's *Bodenstelle*, which administered the redistribution of land and the expropriation of owners of large estates on whose land the settlers had squatted. Furthermore, a building bureau was established and a *Warentreuhand*, an office that designed, fabricated, and sold furniture to club members at reduced prices. Margarete Lihotzky, at that time a recent architecture graduate, worked for the *Warentreuhand* and for the *Siedlungsamt* (settlement office) where Max Ermers was director and Adolf Loos chief architect.³⁰ Loos designed schematic master plans for modern settlements with row house typologies and long strips of back gardens (approximately 7 x 40 m). Many prominent architects such as Lihotzky, Josef Frank, Franz Schuster, Karl Schartelmüller, and others contributed to the architectural design of individual settlements. Thus, settlements were a strategy to remedy shortages of both food and housing.

In constructing homes, settlers were not only inhabitants but builders. In the tradition of self-reliance, they created their own homes by contributing 2,000 to 3,000 hours of labor to the construction of each new community. Once a settlement was completed, each family obtained a share of the communal infrastructure and was granted a house according to its size. To avoid costly alternatives in the construction process, settlers capitalized on readily available materials and simple building techniques, privileging more labor-intensive practices – for example, firing brick with material excavated from foundations. Throughout construction, settlers also maintained their individual gardens, which provided food not only for them but for the city as well; in 1923, settlers and allotment gardeners covered Vienna's entire demand for produce (Neurath 1923: 9).

To restore national pride and prosperity, the municipality exhibited settlers' and allotment gardeners' achievements to the Viennese public. While settlers and allotment gardeners had showcased their homes and products for years at local housing exhibitions and produce fairs, in 1923 their promotional efforts culminated in the large Viennese 'Kleingarten- Siedlungs- und Wohnbauausstellung' (Small Garden, Settlement and Housing Exposition). The exhibition featured hundreds of exhibits of produce, dairy products, small animals and flowers in the arcades of Vienna's town hall. According to *Österreichische Städtezeitung* (Austrian City Newspaper), which covered the preparations for the exhibition in the 'Die Vorbereitung der Kleingarten- Siedlungs- und Wohnbauausstellung' in early September, the highlights of the exposition were



Figure 4: Core-House Type 7, Fully Completed, Fifth Building Phase, 'Small Garden, Settlement and Housing Exposition,' Vienna, 1923. Photographer: Joseph Perscheid, Vienna. Source: Schütte-Lihotzky Inheritance, University of Applied Arts Vienna, Collection and Archive, PRNR 34/13 FW.

two small garden huts, three settlement houses, and a larger country home called Burgenlandtype, which was located on the town hall's main square.³¹ Burgenlandtype featured a garden with a fully operating irrigation system (Ermers 1923: 24). All buildings were planned by the settlement office and had standardized windows, doors, and staircases. With the exception of one small hut and the Burgenlandtype, Margarete Lihotzky had designed them personally (Schütte-Lihotzky, Noever, and Allmayer-Beck 1996: 27).

Her three exhibited settlement homes, titled core-houses 'Type 4', 'Type 7', and 'Type 52', however, had a specific feature. As types, they all adhered to a similar modular construction system that could be expanded over time and built outward from a small 'core'. The process of enlargement worked like this: In the first phase, a minimal *Siedlerhütte* (settler hut) was constructed, which consisted of a *Wohnküche* (live-in kitchen) and a small bedroom on the second floor; in the second phase a stable was added; in the third, the bedroom on top was enlarged; in phase four, two rooms were added; and in the fifth stage a *Koch-nische* (cooking-niche) and *Spülküche* (scullery) extended the house to the garden. Thus, houses could grow over time whenever the settler family was able to afford adding on to the central core. This expandable core model represented a novel degree of adaptability and flexibility

in settlement designs. Because Type 7 was exhibited as fully furnished, with the *Warentreuhand's Typen-Möbel* (type furniture) such as standardized chairs and tables, of all the core-houses this one attracted special attention (**Figure 4**). The main feature of the interior design, however, were the two kitchens inside core-house Type 7.

The heart of the undeveloped core-house Type 7, built on 45 m² and on two floors, was the live-in kitchen (**Figure 5**). Its walls were made of hollow brick that could be fired on site or made with waste products, such as coke.³² While the formal language of the live-in kitchen was folkloristic, its main elements were articulated in brick and wood, which were readily available at the settlers' cooperative construction supplier GESIBA. The kitchen had running water from a sink located on the left of the room's main feature, the stove complex. Beneath the faucet was a watering pot as well, since running water would not have existed in the adjacent garden in a settlement. The stove complex consisted of a *Sparherd*, an energy-saving cooker, fueled by firewood. It had two separate doors, one for firewood and one, below, for its ashes. In a cavity right under the stove, firewood could be stored. Above was a cooker hood made out of wood and cloth that contained condensation. The most important cooking utensils could be stored above the main cooking block and below the cooker hood. Next to the stove was a 'cooling counter'



Figure 5: Live-In Kitchen, First Stage of Construction, Core-House Type 7, Shown at 'Small Garden, Settlement and Housing Exposition,' Vienna, 1923. Photographer: Joseph Perscheid, Vienna. Source: Schütte-Lihotzky Inheritance, University of Applied Arts Vienna, Collection and Archive, PRNR 34/19/FW.

where pots could be placed to chill. Next to the cooling counter was a hay box. There pots could be placed if they had to be kept warm. Hay box, cooling counter and stove made up the three-part stove complex that enabled the cooking of food, saving costly materials.

The living area of the kitchen also offered comforts. A bench could be converted into a bed at night and furniture could easily be shifted when more space was needed. With a tiny adjacent bedroom and an extra bed for a small child in the master bedroom upstairs, core-house Type 7, even at its most rudimentary stage, could accommodate a family of six or seven people if necessary. This was a true maximization of space. And yet behind the curtain of the live-in kitchen lay the future: a larger house with a new kitchen, with a cooking-niche and a fully prefabricated scullery (**Figure 6**).

The cooking-niche had fourteen fixed elements. They were rationally organized and stood in direct relationship to one another. In addition to the stove, the cooling counter and the hay box, which remained in the live-in kitchen, the niche had a laundry stove, a preparation table, a washing trough, a box for collecting kitchen wastes for the animals or compost, a dish draining board, a drawer for special utensils, a sink, another hay box with additional drawers, a water conduit with swivel tap, ten running metres of shelves for kitchen equipments, and even a tub. All elements were

poured in one concrete block. The floor was cast in concrete as well. Cleaning was easy (Lihotzky 1922: 2). Through an outlet in the floor the water could be drained when washing up or taking a messy bath. There were no longer any furniture feet that would make sweeping laborious. Kitchen furniture was in effect eliminated (2).

There were little tricks as well. The dish draining board could be put in an inclined position so that dishes would dry more quickly. When completely folded out, it could function as a small table for food preparation. Similarly the laundry stove, could also be converted into counter space, when its kettle was covered with a plane wooden lid. On the bottom, the laundry stove had an outlet that dispensed hot water to fill a bucket for the tub. The tub in the kitchen was not ideal, but it was assumed that the funds and the space for a separate bathtub and an oven to heat it were not available to the settler. A collective bathhouse was anticipated. If it were built, the space of the tub could be utilized as a cooling device or additional cupboard space (Lihotzky 1922: 1).³³ But first, the tub, shaped in proportion to the human body, allowed the occupant to save 120 litres of water compared to a regular tub. In addition to water, it saved heat energy, hence time and labor. If laundry was done in the tub, a washing trough decreased the depth of the tub. To hang the laundry it was just one additional step to the outside and to the garden.



Figure 6: Cooking-Niche and Scullery, Fifth Stage of Construction, Completed Core-House Type 7, Shown at ‘Small Garden, Settlement and Housing Exposition,’ Vienna, 1923. Photographer: Joseph Perscheid, Vienna. Source: Schütte-Lihotzky Inheritance, University of Applied Arts Vienna, Collection and Archive, PRNR 28/5/FW.

As early as 1922, Lihotzky registered the cooking and washing niche with Vienna’s Kammer für Handel, Gewerbe und Industrie (Chamber for Trade, Business and Industry), and it stood in a long line of devices she developed over the years (KHGIW, 1922: 1). While a kitchen she designed for workers’ housing in France early in 1920 was formally and aesthetically traditional, Lihotzky began to rationalize the layout of the kitchen in a design for a row house with three floors in Austria later the same year. She also invented simple architectural features that made up for technologies that were lacking, such as a ‘natural refrigerator’, a container for eggs that had a direct exposure to the cold outside. In 1921, she further developed an almost-completed cooking-niche for Loos’s model settlement at Heuberg. However, the cooking-niche exhibited in core-house Type 7 represented a yet unprecedented comprehensive solution to the multiple tasks of preparing food and washing dishes, laundry, and even bathing children.

Already in 1922 its design caught professional attention at a smaller settlement exhibition where the cooking-niche and the scullery were showcased. The chief of Austria’s Siedlungs- Wohnungs- und Baugilde (Settlement, Housing, and Construction Guild), George Karau, praised

the design for its spatial rationality and the alleviations it would bring to women cleaning the kitchen. ‘This very attractive space’, he wrote, ‘will serve to prepare meals for large families and corresponds, through the considerate selection of advancements, to the novel cooking habits of the housewife’ (Karau 1922: 1).³⁴ Hans Kampffmeyer, then an adviser to the Viennese municipality and a representative of the settlement office, praised the economic and aesthetic solution, and the chief architect of the Federal Settlement- Housing- and Construction Guild, the highest organized building entity in Austria, even awarded Lihotzky with the bronze medal of the city of Vienna for the design of the cooking-niche. A letter by Irene Witte, who was the head of Berlin’s Untersuchungs- und Forschungsinstitut für Arbeitswissenschaft und Psycho-technik (Study and Research Institute for Labor Science and Psycho-Technology), and the German translator of Christine Frederick’s *The New Housekeeping; Efficiency Studies in Home Management*, may have meant the greatest recognition, since Lihotzky had studied these works closely (Frederick 1916; Frederick and Witte, 1922).³⁵ Witte wrote to Lihotzky:

I have worked through your plans meticulously and regard them as a critical step in the direction of practical household rationalization. The single laws that the science of home management has given us, such as time and motion efficiency [*Ersparnis*] and material economy [...], are adhered to in best manner in your cooking-niche and the scullery facility. I hope that your plans can be extensively used and realized, because they would be able to alleviate somewhat the housing shortage we are facing almost everywhere in the world today. (Witte 1923: 1)³⁶

A year later, at the housing exhibition of 1923, Lihotzky’s professional success also gained public acknowledgment. More than a quarter million people came to see the new kitchen at the exhibition. The relaunched periodical *Siedler und Kleingärtner* (Settler and Small Gardener) — a continuation of the allotment gardeners’ publication *Mitteilungen* — featured the rubric ‘Core-Houses’ throughout the May and June of 1923. Plans and axonometric projections were published, core-house kitchens were shown in three large, detailed sketches, and advertisements illustrated core-house architecture and its financing scheme (**Figure 7**).

The response to the exhibition from the Austrian press was positive, and in most articles Lihotzky’s core-houses were featured prominently. ‘For weeks we have been awaiting the opening of the exhibition to see what a core-house looks like’, said an article in the workers’ newspaper *Arbeiterzeitung* on September 2 ‘Die Gartenstadt im Rathaus’ (The Garden-City at the Town Hall).³⁷ Then it specifically mentioned core-house Type 7: ‘The house is equipped with very beautiful furniture and built-in closets’ (7). The newspaper *Österreichische Städtezeitung* wrote that ‘[in the closets] preserving jars and stocks of all kinds

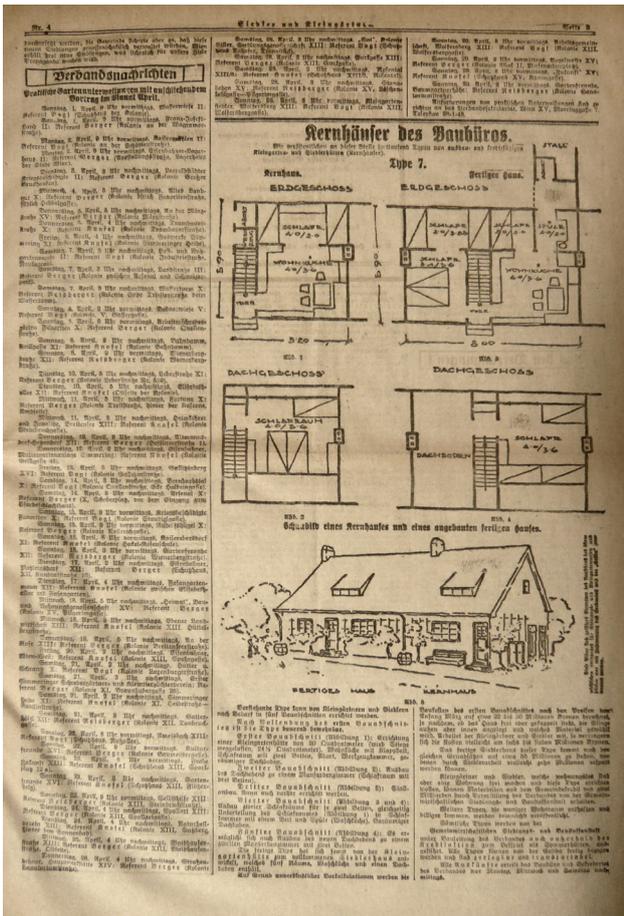


Figure 7: Core-House Type 7, Floor Plans in First and Fifth (Completed) Building Phase. The Lower Illustration shows 1 ½ Core-Houses Type 7, On the Left a Core-House and on the Right the Completed House in Building Phase Five. Source: *Kleingärtner und Siedler*, April 1923, p. 4, Schütte-Lihotzky Inheritance, University of Applied Arts Vienna, Collection and Archive, Txt 18.

find a safe and orderly shelter' ('Preparations', 132).³⁸ The independent *Internationaler Donau Lloyd* exclaimed in an article called 'Gesiba-Häuser (Gesiba-Houses), 'For the poorest a home in the garden!' and 'From the will of the people a new lifestyle, a new culture of living!' (26).³⁹

The connection between the design of core-houses and the Viennese problems of scarcity and general dwelling conditions was most clearly drawn in the British newspaper *The Manchester Guardian*, which was one of the few foreign voices that covered the exhibition. 'The [live-in] kitchen is the largest and most important room', the reporter Francesca Wilson wrote, adding, 'for heating is a problem to the poverty stricken Austrian, and the kitchen, where firing is essential, makes the most convenient sitting-room' (Wilson 1923: 6). All the rough work, she stated, was relegated to the cooking-niche and scullery, which was 'amazingly convenient' to work in (6). 'The great advantage the Austrian Garden City movement has over similar movements in other countries', she wrote, 'is that the houses are being built by the people themselves for themselves, and not by contractors, whose first object is money. That is the reason why the convenience and

comfort of the settlers is the first consideration, inside the house as well as outside' (6).

In July of 1923 Otto Neurath had similarly attested, in *Österreichische Städtezeitung*, that core-houses embodied the possibility of alleviating housing shortages even in the state of emergency through large-scale cooperative organization. In 'Kernhausaktion der Gemeinde Wien' (Core-house campaign of the Viennese Municipality) he wrote, 'In these severe times of crisis [core-houses] allow for the construction of small dwellings to continue according to plan. A series of construction cooperatives, whose building projects could not be continued, have already begun the construction of core-houses instead' (8).⁴⁰ He even argued that, integrated into large overarching organizations, the individual community of settlers was now able to leave behind its petty bourgeois heritage and become part of the workers movement. The production of core-houses, managed by the Austrian Settlement and Allotment Garden Association and GESIBA, was an example of what could be achieved by communal economy and cooperation, and the building of settlements facilitated the process of creating a common conscious.

The director of the settlements office, Max Ermers, on the other hand, saw in core-houses, and their cooking-niches in particular, another potential more closely constructed along capitalist lines. In 1924, he wrote,⁴¹ 'A piece of America finds its way into Vienna. [...] On the other side of the ocean it is self-evident to translate the economic results of the Taylor-research [...] to the domestic economy and its necessary precondition, the construction of homes' (Ermers 1924: 4). Household technology in the prefabricated kitchen, he argued, which saved time, even enabled settlers to reserve hours for activities in the garden (4).

Nonetheless, the core-houses did not become a commercial success. While Schütte-Lihotzky had paid great attention to saving time, labor and materials, and the live-in kitchen embodied the spirit of flexibility, the fully prefabricated cooking-niche was not only formally alien to the settlers' environment – a novelty that may have contributed to the hype among professionals – but it was also conceived and produced by wholly different means. Although GESIBA advertised that it could prefabricate core-houses and their kitchens, having to pay for them in cash was difficult for settlers. Accustomed to paying for houses by putting in their own labor time and using appliances that allowed them maximum flexibility, settlers simply could not be persuaded to make such a large, static purchase. In fact, Loos had often insisted that it was 'completely wrong to have an architect design furniture for the settler'. 'The family could always grow', he argued (Loos 1926: 197).⁴² Lihotzky herself added another reason why the prefabricated kitchen in particular was unsuitable for settlers: 'Although this form of living had succeeded in many other countries, our housewives could not become acquainted with preparing food in a space separate space from that of the stove. All tasks, even washing dishes, would eventually be completed in the living room. The cooking-niche became a waste space' (Uhlig 1981: 28).⁴³

In the end, fewer than two hundred core-houses were sold (Kampffmeyer, 1926: 35). Prefabrication did not yet pay off. This was about to change.

The Kitchen of the 'New Frankfurt', 1926–1930

Settlements in Frankfurt were different from those in Vienna. Although Frankfurt was also faced with grave housing shortages that were aggravated in Germany by postwar migration from the occupied Alsace territories, the city's large building program began in the middle of the 1920s at a time of economic boom. In extent the building program put forward in Frankfurt was similar to the large communal housing projects undertaken in Vienna, but, unlike in Vienna, the dominant typology in Frankfurt became settlements.⁴⁴ When the progressive mayor, Ludwig Landmann, who had been calling for the foundation of a settlement office since 1917, was elected in 1924, he immediately began to assemble a team of nationally and internationally acclaimed architects to tackle the housing problem on a large scale (Schütte-Lihotzky, Noever, and Allmayer-Beck 1996: 71). In 1925, Ernst May became chief of Frankfurt's *Hochbauamt* (central building authority), conducting a comprehensive city development plan that proposed a series of *Trabantenstädte*, relatively autonomous satellite cities outside the main centre. From 1926 to 1930, with a team of forty employees, May designed and administered approximately 10,000 apartment units as garden cities or 'settlements'. Most of them conformed to a row house typology with flower gardens.

To implement projects on such a scale, May and his employees developed prefabricated and standardized elements of an unprecedented character. Compared to Vienna, where prefabrication had only meant the use of standardized wooden beams, doors, and windows, in Frankfurt prefabrication incorporated reinforced concrete beams, walls, and even entire dwelling units. They were lifted and shifted with cranes and other modern construction equipment, and assembled by salaried workers. Mounting procedures were standardized as well (20). When she joined May's team in 1926, Lihotzky's tasks in Frankfurt involved the standardization of many components for buildings and apartments as well. But her first assignment was to perfect the kitchen.⁴⁵

Kitchens for 'the New Frankfurt' home consisted of a fixed set of seventeen items that were strikingly similar to the list of Vienna: stove, cooling counter, hay box, fold-out ironing board, food cupboard, swivel chair, table, waste bin, dish draining board, sink, food stock drawers, pot cupboard, broom cabinet, radiator, fold-out cooling counter, glazed dish cupboard, and plate frame. The first three items, the stove, the cooling counter and the hay box, were again grouped together as stove complex and located on the opposite side of the long main working space, the wet complex. The arrangement was directly copied from Vienna's core-house live-in kitchen: The cooling counter even had the same two drawers. Because the Frankfurt Kitchen operated with gas, the former stove's firewood and ash drawers were now converted into an oven and an additional space for storage below. The third element, the hay box, was rotated, with its shorter side



Figure 8: Frankfurt Kitchen, Stove Complex with Hay Box (On the Far Right), Frankfurt, 1927. Photographer: H. Collischonn, Frankfurt. Source: Schütte-Lihotzky Inheritance, University of Applied Arts Vienna, Collection and Archive, PRNR 50/15/FW.

now facing the cook (**Figure 8**). A crucial element of the main working block and wet complex was the sink, with its draining board for dishes. The workspace was arranged perpendicularly with two main parts adjoining in a ninety-degree angle, which Schütte-Lihotzky had already conceived in drawings in Vienna. Her space-saving tricks of additional fold-out work spaces also functioned in Frankfurt in 1926, as they had in Austria in 1922.

But there were some new elements in the Frankfurt Kitchen that had not existed before: the fold-out ironing board, the suspended dish rack and most notably the food stock drawers, which Schütte-Lihotzky had developed with the German aluminum company Harrer. The sink, faucets and pot cupboard were also made in cooperation with companies and could be serially manufactured (Schütte-Lihotzky, Noever, and Allmayer-Beck 1996: 20).⁴⁶

Importantly, Schütte-Lihotzky also responded to technological changes and reacted to them in the Frankfurt designs. She included a radiator and a gas stove, which meant no more cooking with firewood. Gone was the kettle, which had heated water in the cooking-niche, as well as the bathtub, which had been the most bulky element in Vienna's cooking-niche. A bathtub filled by hot water from the sink was now located in the adjacent room. These were not small changes; in fact, these amenities stood at the core of the designs for New Frankfurt. They were part of an extensive central municipal undertaking

to rationalize housing built into a smooth infrastructural system. This system included the production of architecture through factories planned by May and his team to distribute not only materials, but also everyday amenities such as electricity and central heating (Gantner 1931).

Nonetheless, the Frankfurt Kitchen was not a 'modern' kitchen from today's point of view. First, it still lacked a refrigerator. In the absence of a totally dry or cool space, a special drawer was coated with tannic acid to ensure the storage of flour in large quantities. The cooker hood, which did not operate electrically, also incorporated a creative solution to a yet unresolved problem of ventilation: the insertion of a little tube as a direct conduit to the outside. Finally, because electrical fly-traps were still too expensive, the Frankfurt Kitchen was painted in a special blue, which, according to studies, was a color that deterred flies (Schütte-Lihotzky and Noever 1992: 10).

In 1927, three versions of the Frankfurt Kitchen were shown at 'The New Dwelling and Its Interior Design', one of the city's largest exhibitions. One version was designed for a 'minimum dwelling', and two others for a household with one or two maids. Although the most luxurious version, for two maids, was never realized under the auspices of New Frankfurt, its conception indicated that these kitchens served an audience that could afford servants and was thus quite different from inhabitants in Viennese settlements, many of whom had been unemployed and poor. In addition, in the more prosperous years of Weimar Germany the considerations for scarce resources waned.

The public once again received Schütte-Lihotzky's kitchen favorably. Her designs were published in *Schleisisches Heim* and *Das Neue Frankfurt*, and newspapers and daily magazines in France and England also covered the Frankfurt Kitchen. In fact, when France's minister for housing learned of it, he wanted to commission 260,000 of its kind (Schütte-Lihotzky and Noever 1992: 6). That same year, the Frankfurt Kitchen began to travel; as a show piece inside a prefabricated 'slab building', it was constructed for one of the most famous exhibitions of modern architecture, the 1927 Weißenhof model 'settlement' at Stuttgart. Schütte-Lihotzky accompanied it and oversaw construction at the exhibition (78).

Commercially, the kitchen was a success as well. Serially produced and standardized, it came with many of New Frankfurt's apartments. However, Frankfurt's inhabitants and users in part resisted the Kitchen. Accustomed to working and living in the same space, they tried to fit their chairs and family dinner tables into the Frankfurt Kitchen, just as the Viennese had used the cooking-niche for storage and continued to utilize the living room for cooking (Hessler 2009: 176). But in Frankfurt, inhabitants were out of luck; the rationalized Kitchen no longer allowed space for such unforeseen activity (Schütte-Lihotzky and Noever 1992: 15).

'How can we translate to housework the principles of labor-saving, economical business management, whose implementation has led to unexpected increase and productivity?' Lihotzky had asked in 1925 (15). Along the lines of standardization, prefabrication and mechanization, the Frankfurt Kitchen, that 'laboratory for house-

work', was the answer to her question, and indeed it had perfected spatial tricks, to maximize the use of the home's centre. All of its elements had gone through countless iterations, making the Kitchen a masterpiece of flexibility. Yet an important variable — people — had been increasingly left out of the Frankfurt equation. Omitted from consideration were the whims, idiosyncrasies, and desires of people to always restructure, re-envision and reinvent their homes according to their own tastes and needs, even if only by adding small, new, and flexible technologies. When such needs were best served by simple wartime appliances (such as the hay-box), which were translated into the design of Vienna's live-in kitchen, Vienna's cooking-niche responded little to such strategies. In Frankfurt, however, which represented the perfection of the arrangement of adaptable household appliances, such flexibility had become an impossibility.

Conclusion

Manfredo Tafuri was right — funding for settlements was cut in Vienna in 1925 when the municipality introduced the communal dwelling, the *Höfe*, as its favored typology. According to politicians, settlements were unsuitable for the creation of mass housing. They were not dense enough and they required comparatively large amounts of space and infrastructure for accommodating only a modest amount of people. In contrast to Frankfurt, therefore, settlements officially failed in Vienna as a political model to combat housing shortages on a large scale.

Yet, from a theoretical point of view, settlements in Vienna provided a wholly new model of organizing and producing housing for the public. In fact, the settlement model found its way into the architecture of the *Höfe* as well. Clubhouses, co-operative supermarkets, and facilities for legal consultation, which were featured in almost every settlement club, were introduced to the Viennese dwellings, and communal entities such as laundries, libraries, and health advice on buildings were distributed throughout the entire city. By capitalizing on simple building procedures, settlements had also prefigured a central trope of the larger construction undertakings in Red Vienna, which would use scarcely any prefabrication and predominantly featured brick rather than reinforced concrete.

Settlements were, however, produced in a more radical manner than the *Höfe*. Made with waste materials, from components fabricated locally and manually on site, or provided with building elements by the cooperatively owned GESIBA, they stood in even greater contrast to New Frankfurt, where dwellings were produced in cooperation with the construction industry and where, despite partially left-wing agendas, architecture was manufactured along capitalist lines.

Asked to compare her work in Vienna and Frankfurt in an interview in 1980, Schütte-Lihotzky also stressed that production processes were quite different. She attributed the difference to the specific condition of scarcity during the war, which had partially been translated into peacetime. She said, 'Vienna began its housing policy as early as 1919–20, at a time of severe economic depression in which there did not exist a developed building industry in

the aftermath of the war. Frankfurt had begun it in 1926, at a time of booming business activity' (Uhlig 1981: 33).⁴⁷ She explained further:

In Vienna the goal was to provide, as quickly as possible, a humane roof over the heads of the poor. In Frankfurt, the task was to set an example for modern living with the most progressive means of contemporary technology, because a modern building industry had emerged there, including all necessary experiments. Building in Vienna was more primitive; therefore, solely live-in kitchens and cooking-niches and no bathrooms, but public baths in each block, central laundries, but no central heating. There were club libraries and meeting rooms to enable a social life, something which could not even be discussed in Frankfurt at all. The average inhabitant of the Frankfurt settlements wanted to be distinguished from the neighbor, wanted to lead an individualist life without discussing common problems, without the wish to build cultural and a better life for all together. (34)⁴⁸

Apart from a largely individualist way of life that distinguished the inhabitants of Frankfurt from the Viennese, according to Schütte-Lihotzky, economic backgrounds were also distinct. The Viennese housing subsidy, largely financed by extensive taxation, made all the difference (33). Tax revenues made it possible to finance dwellings for the poor with good amenities on a vast scale. The situation was much different in Frankfurt, where the tax burden was placed on the lower class, which the building program was supposed to target in the first place. 'A worker, even a trained one, could not afford [the apartments]' (33), said Schütte-Lihotzky:

Only from the factory foreman, the white-collar worker and the intellectual upwards were such rents manageable. [...] Thus a condition emerged in which the ones who carried the main part of the housing taxation did not even get to live in those apartments. For all of these reasons even the points of departure for the housing projects in the '20s of Vienna and Frankfurt were completely different. (33)⁴⁹

Thus, while Frankfurt's housing policies de facto excluded the people for whom affordable housing had been initially intended, the social organization of the production of architecture in Vienna ensured its success. As Schütte-Lihotzky explained, 'Housing in Vienna was first born out of a movement from below, which became the motor for a common social life for years to come. In Frankfurt, by contrast, it was an elite of progressive-liberal politicians' (34).⁵⁰

A new form of organizing the production of architecture had come into being through self-help and cooperation, as an immediate response to the postwar state of emergency. Settling was therefore not simply a working-

class response to the conditions of scarcity, but a process by which formerly petty bourgeois groups of people were united around joint interests, creating a common consciousness, as Neurath had envisioned. With its cooperative supermarkets, kindergartens, and building companies, and imbedded in large organizational complexes such as housing unions and multiple levels of representation, the settlement movement even surpassed counter-capitalist strategies of the nineteenth century constructed along class lines and moved into the realm of the early twentieth century.⁵¹ In an embryonic version, it created through cooperation, if only for a short historical moment of crisis, a society in constant negotiation, not defined solely by class, but reliant on common interests and communal goals.⁵² Tafuri, who focused on the communal dwellings, the *Höfe*, dismissed the radicalism of settlements because they had failed in practical politics in Vienna and because their construction was discontinued after the specific moment of crisis. Yet this discontinuation had less to do with either their actual feasibility or their failure, but more with a Social-Democratic government, which despite far-left views wanted to maintain full control over its vast building program.

Although I have suggested in this paper that there existed many parallels, continuities, and relationships between Vienna and Frankfurt, the two cities could not have been more different in terms of their building programs' production. Vienna became the embodiment of a 'slow' version of modern architecture achieved by local materials and through cooperation, while Frankfurt represented a core, high-tech modernism that perfected industrial production in the domestic realm on a large scale. In Schütte-Lihotzky's kitchens, in a rudimentary state, the worlds of Vienna and Frankfurt collided as well. But in times of prosperity, while Frankfurt characterized the century to come, Vienna fought a losing battle.

In this essay, therefore, Vienna and Frankfurt were not places between which Lihotzky moved in 1925, but architectural paradigms that already encountered each other in 1923 – in the ambiguous zone between the simple live-in kitchen and the first prefabricated cooking-niche. Despite its manifold connecting vectors, this zone marked a great divide. On one side stood a modernism that encouraged messy participation, while the other drew on prefabrication. The former privileged the garden over the dwelling, small, flexible technologies over mass production, and, of course, cooperation over prefabrication. They were deeply related yet contrary worlds. The line between them ran along a curtain in core-house Type 7.

Notes

¹ The text read 'Wer hat so einen Unsinn hingeschrieben?' on the back of the archival document of 1923: Kernhaus Type 7, Archival Document, University of Applied Arts, Vienna PR NR 34/14 FW.

² Throughout this paper, Margarete Schütte-Lihotzky is referred to as Lihotzky when she was not yet married to Wilhelm Schütte. Lihotzky married Wilhelm Schütte in 1927. At the time of her early work in Vienna, she

was unmarried. I want to thank Mary McLeod who brought this issue to my attention and advised me on the matter.

³ The figure of 10.000 is used in many sources. See, for example, Schütte-Lihotzky and Noever (1992), p. 5.

⁴ 'Frankfurt Kitchen' is capitalized throughout this paper, as is the canonical work's short form of 'Kitchen', to avoid confusion with other kitchens and the general term kitchen.

⁵ The notion that the Frankfurt Kitchen was designed to aid the working class woman has been repeated time and again, most recently in Peter Noever and Renate Allmayer-Beck's *Soziale Architektur* (Schütte-Lihotzky, Noever, and Allmayer-Beck 1996).

Schütte-Lihotzky's legacy was discussed by Mary McLeod at the 2011 Annual Meeting of the Society of Architectural Historians, in a paper entitled 'Women in the First Histories of Modern Architecture'. McLeod's discussion stresses that women architects were indeed well represented in magazines and exhibitions at the time, but that they were omitted in extensive historiographies and anthologies of modern architecture.

⁶ These time periods correspond with the print-run of the allotment gardeners' and settlers' periodical in Austria and with the print-run of *Das Neue Frankfurt* under the editorship of Ernst May.

The German 'Siedlungen' in Frankfurt are translated as Garden Cities, to avoid confusion between them and Austrian settlements. Although the German example is more famous and is often translated as 'settlement', this paper retains the word 'settlement' for the Austrian 'Siedlungen', since they were actually based on the process of settling – seeking out land, occupying it (in many cases unlawfully), and obtaining it through legal procedures. In addition, in Germany, the word 'Gartenstadt' (garden city) was used interchangeably for 'Siedlung' by the Deutsche Gartenstadt Gesellschaft (German Garden City Movement).

⁷ Urban stresses the antithetical nature of the allotment garden movement and modern city planning in Berlin.

⁸ This relates in particular to Carlo Ginzburg's understanding of a micro-history, his notion of clues, and the Morellian method outlined in 'Clues: Roots of an Evidential Paradigm' (1989). Ginzburg argues that the Morellian method allowed the pinpointing of the distinctive characteristics of individual painters 'on the fringes', in details that were not taught in a specific school of art. These 'clues' served the trained art historian as evidence to distinguish one painter from the other. Trained by Heinrich Tessenow at the k.k. Kunstgewerbeschule (today the University of Applied Arts), Schütte-Lihotzky, with her famous time studies, embodied much of 'a modern school of art' that she became familiar with early on. In looking at each single element of her kitchens – whose inner workings have largely been overlooked – I seek to outline Schütte-Lihotzky's unique achievements in combating much larger historical conditions of scarcity and material shortage.

⁹ In the section 'Una polemica: Siedlung contro Hof', Tafuri dismisses an in-depth discussion of settlements, arguing that in realpolitik the *Höfe* typology won over the less dense settlement typology in 1923 and became the predominant housing typology in Red Vienna: 'Ma la concentrazione di masse notevoli di popolazione in complessi attrezzati, la cui parte costruita corrisponda a meno del 50% della superficie del lotto, risulta vincente, dal 1923 circa in poi, sulla base di argomentazioni relative alle economie di scala permesse dal superblocco, sia a livello edilizio che a livello urbanistico' (Tafuri et al. 1980: 26–27).

¹⁰ Tafuri writes, 'Come hanno osservato Bobek e Lichtenberger, la piccola borghesia e vasti ceti popolari, agendo al di fuori dell'iniziativa comunale, invadono in modo disorganizzato gli spazi periferici, con casette unifamiliari casualmente insediate, al di fuori di ogni struttura complessiva e di una adeguata struttura di servizi. "Vienna rossa" rivela così nuove aporie. Da un lato i monumenti proletari, gli Höfe, localizzati ai margini del nucleo urbano; dall'altro il proliferare incontrollato di Siedlungen realizzate dagli stessi ceti cui si indirizza la politica residenziale del comune. Tale dualismo corrisponde peraltro a un vivo dibattito cultural. La Siedlung contro lo Hof'.

¹¹ Tafuri asserted that the housing policies of Red Vienna failed to produce a typology that escaped bourgeois tropes and the logic of capital when read along Marxist lines.

¹² The Austro-Hungarian Empire's forty-eight-hour ultimatum to Serbia was delivered on July 23, 1914, at 6:00 p.m. It was published on July 24 in *Neue Freie Presse*, pp. 1–2.

¹³ The full passage reads, 'Unser häuslicher Herd ist nicht nur durch Waffengewalt bedroht. Er soll zum Erkalten kommen, dieweil es doch zwecklos wäre, ihn für leere Töpfe und Pfannen zu heizen. So stellen sich das unsere Feinde nämlich vor. Seitdem sie uns aushungern wollen, ist es geradezu Ehrensache geworden, durch ein klug geführtes Küchenregiment dazu beizutragen, dass diese menschenfreundliche Absicht eben nur Absicht bleibe. Das Kochen ist also eine höhere Aufgabe geworden'.

¹⁴ The association's full name was Verband der Schrebergärtenvereine aller im Reichsrat vertretenen Königreiche und Länder (Association of Allotment Gardens Clubs of all Kingdoms and Countries Represented in the Imperial Council).

¹⁵ The periodical was the official voice of the allotment gardens at Rosenthal and Mariabrunn, which were among the first formalized allotment garden clubs in Vienna. The text from page 1 reads: 'Bei der letzten Mitgliederversammlung in Flemich's Restaurant wurde über Einmachen und Einsieden von Gemüse und Obst, dann über die Kochkiste und Kochbeutel Vorträge gehalten'.

¹⁶ 'Kochkiste' literally translates to 'cooking box'. In English, standard translations for 'Kochkiste' are 'straw box', 'hay box', 'insulation cooker', 'retained-heat cooker', or 'fireless cooker'.

- ¹⁷ In 'Der Kochbeutel', the author writes, 'Zu empfehlen ist er [der Kochbeutel] ferner – gleich seiner Vorgängerin, der Kochkiste – überall dort, wo niemand Zeit hat, sich um die Zubereitung des Essens zu kümmern. Nutzen, erspart er doch der Hausfrau, die sich jetzt vielfach ohne Dienstmädels behelfen muss, viel Mühe und Arbeit' (7).
- ¹⁸ The author of 'Der Kochbeutel' again: 'Die Damen in den Arbeitskomitees der Frauenhilfsaktion zum Beispiel, die mit den Armen und Ärmsten ihrer Mitschwester zusammenkommen und in allen Lebenslagen Rat und Hilfe schaffen müssen, haben den Wert des Kochbeutels praktisch erprobt, besonders für diejenigen ihrer Schützlinge, die als sogenannte "Bettgeherinnen" keinen Kochherd zur Verfügung haben und sich im besten Falle auf einem kleinen Spiritusbrenner ihr armseliges Mahl bereiten können. Spiritus aber ist derzeit ein so teurer Artikel, daß mit jedem Tropfen gespart werden muß'. (7).
- ¹⁹ Many allotment garden colonies did not have elaborate irrigation and sewage systems well into the 1970s, and operated solely with wells.
- ²⁰ Titles translated into English by the author: *Grabnerhof-Kochbuch – Mit Besonderer Berücksichtigung der Kochkiste – Zum Gebrauche für Hausfrauen des Mittelstandes; Kochbuch für die Kochkiste. Auszug der in der Kochkiste zu Bereitenden Speisen Aus Dem Grabnerhof-Kochbuch, Nebst Bemerkungen und Ratschlägen über eine Gesunde Lebensweise; Das Einkochen Der Früchte Ohne Und Mit Wenig Zucker Nebst Einer Anleitung zum Dörren von Obst und Gemüse; and Kochbüchlein für Knappe Zeiten.*
- ²¹ *Die Kochkiste Selbstanfertigung, Behandlung, Rezepte.*
- ²² Joachim writes, '1. Die Kochkiste erspart Zeit. 2. Die Kochkiste erspart Brennstoff. 3. Die Kochkiste erspart Lebensmittel. Alle Lebensmittel, besonders die Mehlararten, quellen unter der Einwirkung der gleichmäßigen und anhaltenden Wärme besser auf und werden daher für den Magen besser vorbereitet. Da Übergaren, Einkochen, Zerkochen und Anbrennen in der Kiste ausgeschlossen ist, gehen dabei auch bedeutend weniger Nahrungsmittel verloren. 4. Die Kochkiste erspart Geschirr, welches nicht so lange der Herdhitze und dem Ruß ausgesetzt bleibt; es erfordert deshalb auch seine Reinigung weniger Zeit und Mühe'.
- ²³ See note 15. The editors wrote, 'Wir empfehlen solchen Vorträgen – speziell in diesen schweren Zeiten – und insbesondere der Kochkiste vielmehr Aufmerksamkeit zu schenken, da eine gute Hausfrau nie genug lernen kann' (1).
- ²⁴ See note 17. The anonymous authors wrote, 'Erst der Krieg erwies sich sogar auf diesem Gebiete als Lehrmeister und führte die langverkannte Kochkiste nicht nur in Haus und Vereinsküche, sondern auch draußen im Felde ein' (7).
- ²⁵ *Mitteilungen's* authors stressed that not only private clients were making requests for rabbits, but in fact, the Austro-Hungarian army as well: 'Beweis für die Wichtigkeit und Leichtigkeit der Kaninchenfleischproduktion sind die gegenwärtig enorm vielen Kaufanfragen nach Zuchttieren, welche nicht nur allein von privater Seite ergehen, sondern auch zum Beispiel von einer Kaninchen Großzüchterei [...] bei Budapest eine Kaufanfrage, nach hunderten von Tieren an alle Kaninchenzüchtervereine gerichtet wurde, weiters fragte die k.k. Verpflegungs-Abteilung, Feldpost 186, auch viele Vereine an, ob sie nicht 600 bis 800 Zuchttiere, bekommen können. Diese letztere Fall kann und jeden einzelnen sehr erfreulich berühren, da wir daraus ersehen, wie fürsorglich unsere Heeresverwaltung für unsere tapferen Kämpfer ist' (6).
- ²⁶ The anonymous author wrote about 'Kriegsernährung': 'Darum wollen auch wir, die wir nicht auf dem Schlachtfelde mitkämpfen, einen Platz in den Reihen der Kämpfer ausfüllen, indem wir möglichst viele Kaninchen und Hühner züchten und dadurch dem Gelingen des Aushungerungskrieges die Möglichkeit nehmen' (5).
- ²⁷ Otto Neurath described the scenes of Vienna's town hall as follows: 'Mit Wagen, Automobilen, und Musik rückten die Kleingärtner und Siedler an, die im Zuge charakteristische Tafeln mit ihren Forderungen trugen: "Was ihr den Siedlungen gebt, erspart ihr an Arbeitslosenunterstützung." "Gebt und Land, Holz und Stein, wir machen Brot daraus"'.
²⁸ Loos wrote, 'Wir müssen uns eine eigene nationale Küche schaffen. Die böhmischen Knödel, die mährische Buchteln, die italienischen Schnitzel (frittura), lauter Dinge, die jahrhundertlang zum eisernen Bestand der Wiener Küche gehörten, müssen durch heimische Nahrungsmittel ersetzt werden' (10).
- ²⁹ Loos' economic assessment had partial grounding in statistical reality, since the settlers' gardening activities indeed had yielded 1,000 wagons of produce in 1923, which, according to the Settlement and Allotment Garden Association's chairman, Adolf Müller, had to be imported in 1918.
- ³⁰ Loos became chief of the settlement office in 1921, but resigned prematurely from his tenure in 1924.
- ³¹ The editors of *Österreichische Städtezeitung* prepared a detailed description of the buildings showcased at the exhibition (131–135).
- ³² The usage of such waste materials was first brought to my attention in an interview with small gardeners in 2011.
- ³³ Lihotzky wrote the about the bathtub, 'Es soll hier nicht als besonderes Ideal hingestellt werden, dass sich die Badewanne in der Kochnische befindet. Es ist aber leider dem jetzigen Bau der Siedlungshäuser nicht anzunehmen, dass Raum und Geld für Badewanne und Badeofen vorahnden sind. Sollte dies der Fall sein oder sollte ein gemeinsames Badehaus errichtet werden wird die Wanne in der Küche natürlich überflüssig und der Platz der hierfür bestimmt ist kann für den Waschtrog, Ladeneinbau oder Kühlvorrichtungen Verwendung finden'.
- ³⁴ George Karau wrote in his assessment of the kitchen, 'Der äußerlich sehr ansprechende Raum genügt zur Zu-

- bereitung der Mahlzeiten auch einer vielköpfigen Familie und trägt unter vorsichtiger Auswahl der Neuerungen den Küchengebräuchen der Hausfrau Rechnung’.
- ³⁵ Witte’s Institute was called Untersuchungs- und Forschungsinstitut für Arbeitswissenschaft und Psychotechnik. The German version of the book was translated by Witte in 1922 and was titled *Die Rationelle Haushaltführung*. The original English version was *The New Housekeeping*.
- ³⁶ Witte wrote in her personal letter to Lihotzky, ‘Ich habe eingehend Ihre Pläne durchgearbeitet und betrachte sie als einen entscheidenden Schritt vorwärts in der Richtung der praktischen Rationalisierung des Haushalts. Die einzelnen Gesetze die die Arbeitswissenschaft uns stellt, wie Zeit- und Bewegungersparnis, Materialersparnis und zwangsläufigen Durchlauf der Arbeit sind gerade in Ihrer Kochnischen- und Spülkücheneinrichtung in bester Weise befolgt worden. Ich wünsche dass Ihre Pläne weitgehend verwendet und verwirklicht werden können, da sie gerade heute, wo wir fast in der ganzen Welt im Zeichen der Wohnungsnot stehen, in der Lage sind, dieser ein wenig [gegen] zu steuern’.
- ³⁷ The excitement about the new architecture was captured in the text: ‘Das Hauptinteresse der Ausstellungsbesucher wird sich natürlich den Siedlungshäusern zuwenden, die auf dem Rathausplatz entstanden sind. Die Kernhausaktion der Gemeinde Wien wird es vielen, die heute vielleicht nicht einmal eine eigene Wohnung besitzen, ermöglichen, zu einem Häußchen zu kommen. Seit Wochen erwarten sie mit Spannung die Eröffnung der Ausstellung, um zu sehen, wie ein Kernhaus aussieht’.
- ³⁸ See note 31. *Städtezeitung* published an interesting account on the economy of space and the need to preserve foodstuffs and store goods: ‘Man denke doch nur, dass alle toten Ecken wegfallen, dass aller Raum über den Kästen voll ausgenützt wird! Dort oben können im Sommer die Winterkleider, im Winter die Sommerkleider untergebracht werden, Einsiedegläser, Vorräte aller Art finden einen sicheren und geordneten Aufenthalt’.
- ³⁹ *Internationaler Donau Lloyd* wrote: ‘For the poorest a home in the garden’ was an official motto put forward by GESIBA, to promote settlements activity.
- ⁴⁰ Otto Neurath stressed the importance of cooperative entities in coordinating the building program: ‘Es besteht die Möglichkeit, durch den Verband und die Gemeinwirtschaftliche Siedlungs- und Baustoffanstalt, als Zentralstellen in dieser schweren Krisenzeit den Kleinwohnungsbau planmäßig weiterzuführen. Eine Reihe von Baugenossenschaften, deren große Bauprojekte nicht fortgeführt werden können, hat bereits die Errichtung von Kernhäusern begonnen’.
- ⁴¹ Max Ermers wrote this about an updated version of the cooking-niche, called ‘Wirtschaftsnische’, which was exhibited in 1924.
- ⁴² Loos insisted that the settler’s house had to remain adaptable: ‘[M]an kann nie sagen: ja, wir haben nur buben, oder: wir haben nur mädchen; es kann doch ein familienzuwachs stattfinden. Da muß sich das siedlerhaus für alle späteren möglichkeiten eignen’.
- ⁴³ In retrospect Schütte-Lihotzky attested that some people could not get used to the new ways of living: ‘Während sich diese Wohnform in anderen Ländern gut bewährt hat, konnten sich unsere Hausfrauen nicht daran gewöhnen, die Kocharbeiten in einem anderen Raum vorzunehmen als in demjenigen in dem der Herd stand. Alle Arbeiten, oft sogar das Geschirrspülen, wurden schließlich im Wohnraum gemacht und die Spülküche als Rumpelkammer verwendet’.
- ⁴⁴ Vienna did in fact conceive of such a comprehensive plan approximately at the same time, in the form of the housing policies of Red Vienna. A first bill for the construction of 25,000 apartments was passed in 1923. Red Vienna, however, capitalized on the large *Höfe* (courtyard) typologies and cut funding for the smaller and thus less dense settlement communities.
- ⁴⁵ A continuity in Schütte-Lihotzky’s kitchen designs not only existed in Vienna and Frankfurt, but it developed throughout many projects.
- ⁴⁶ The authors wrote, ‘Spüle, Wasserhahn, die Vorratschütten aus Aluminium, die Tropfschrankeinteilung und ähnliche aus der Industrie gefertigte Elemente konnten mit Firmen, [...] perfektioniert werden’.
- ⁴⁷ Schütte-Lihotzky: ‘Wien begann mit dem Wohnbau schon 1919–1920, in einer Zeit der größten wirtschaftlichen Depression, in der es, unmittelbar nach dem Kriege, noch keine hochentwickelte, moderne Bauindustrie gab. Frankfurt begann erst 1926, in einer Zeit der aufsteigenden Konjunktur’.
- ⁴⁸ Schütte-Lihotzky: ‘In Wien war es die Aufgabe, möglichst rasch den minderbemittelten ein menschenwürdiges Dach über dem Kopf zu schaffen. In Frankfurt war es die Aufgabe, ein Beispiel für zeitgemäßes Wohnen zu geben, mit den fortschrittlichsten technischen Mitteln der damaligen Technik; denn dort hatte sich inzwischen eine moderne Bauindustrie entwickelt, einschließlich aller dafür notwendigen Experimente. Deshalb baute man in Wien primitiver, deshalb nur Wohnküchen oder Kochnischen, deshalb keine Badezimmer, sondern allgemeine Badeanstalten im Großblock, deshalb Zentralwäschereien, deshalb keine Zentralheizung. Aber dafür Klubbibliotheken und Versammlungsräume in jedem Großblock, um ein gesellschaftliches Leben zu ermöglichen, etwas, worüber man in Frankfurt gar nicht diskutieren konnte. Der durchschnittliche Bewohner der Frankfurter Siedlungen wollte sich lieber vom anderen abgrenzen, wollte lieber ein individuelles Leben führen, ohne über allgemeine Probleme zu diskutieren, ohne den Wunsch, gemeinsam ein kulturelles und besseres Leben für alle aufzubauen’.
- ⁴⁹ Schütte-Lihotzky: ‘Das konnte eine Arbeiter, auch der gelernte, nicht bezahlen. Erst vom Werkmeister aufwärts, für Angestellte und Intellektuelle waren solche Mieten tragbar [...] So ergab sich der Zustand, dass diejenige, die den größten Teil der Hauszinssteuer auf-

brachten gar nicht in den Genuss der Wohnungen kamen. Aus all diesen Gründen war schon der Ausgangspunkt für den Wohnbau der zwanziger Jahre in Wien und Frankfurt völlig verschieden’.

- ⁵⁰ Schütte-Lihotzky: ‘Daran war erkennbar, dass der Wohnungsbau in Wien ursprünglich durch eine Bewegung von unten entstanden ist, die Treibkraft für ein gemeinsam-gesellschaftliches Leben auf Jahre hinaus geworden ist. In Frankfurt hingegen war es eine Elite fortschrittlich-liberaler Politiker’.
- ⁵¹ Arguably Neurath’s strategies to organize settlers’ endeavors moved away from organization along class lines as outlined by Karl Marx.
- ⁵² Neurath’s ideas on cooperation and community that focused on the creation of cultural institutions and an economy based on use-values could arguably be compared to Antonio Gramsci’s ideas on cultural hegemony.

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References

- Blau, E** 1999 *The Architecture of Red Vienna, 1919–1934*. Cambridge, Mass: MIT Press.
- Der Kochbeutel**, 1916 *Reichspost*, February 22, p. 7.
- Die ‘Gesiba’-Häuser**, 1923 *Internationaler Donau Lloyd*, September, pp. 26–28, 37.
- Die Gartenstadt im Rathaus**, 1923 *Arbeiterzeitung*, September 2, pp. 7–8.
- Die Überreichung der Note der österreichisch-ungarischen Regierung in Belgrad**, 1914 *Neue Freie Presse*, July 24, pp. 1–2.
- Die Vorbereitung der Kleingarten- Siedlungs- und Wohnbauausstellung**, 1923 *Österreichische Städtezeitung*, no. 9, September 1923, pp. 131–135.
- Ermers, M** 1923 *Führer durch die Wiener Kleingarten-, Siedlungs- u. Wohnbauausstellung 2. -9. September 1923 Rathaus*. Vienna: Elbemühl.
- Ermers, M** 1924 Bauvernunft und Hauswirtschaft, Amerikanisierung und Rationalisierung durch die Gemeinde: Ausstellung der Taylor-Wirtschaftsnische im Rathausof, *Der Tag*, September 5, p. 4.
- Frankfurter Typen**, 1930 *Das Neue Frankfurt*, no. 2/3, February/March, Frankfurt am Main: Englert und Schlosser, pp. 36–37.
- Frederick, C M** 1916 *The New Housekeeping; Efficiency Studies in Home Management*. Garden City: Doubleday, Page & Co.
- Frederick, C M** and **Witte, I** 1922 *Die Rationelle Haushaltführung: Betriebswissenschaftliche Studien*. Berlin: Verlag von Julius Springer.
- Gantner, J** (ed.) 1931 *Das Neue Frankfurt, Hygiene der Großstadt*. Frankfurt am Main: Englert und Schlosser.
- Ginzburg, C** 1989 *Clues: Roots of an Evidential Paradigm, Clues, Myths, and the Historical Method*. Baltimore: The Johns Hopkins University Press. pp. 96–125.
- Healy, M** 2004 *Vienna and the Fall of the Habsburg Empire: Total War and Everyday Life in World War I*. Cambridge: Cambridge University Press.
- Henderson, S R** 1996 *A Revolution in the Woman’s Sphere: Grete Lihotzky and the Frankfurt Kitchen, Architecture and Feminism*. New York: Princeton Architectural Press. pp. 221–253.
- Hessler, M** 2009 *The Frankfurt Kitchen: The Model of Modernity and the ‘Madness’ of Traditional Users, 1926–1933, Cold War Kitchen: Americanization, Technology, and European Users*. Cambridge: MIT Press. pp. 163–184.
- Hoffmann, R** 1987 *Nimm Hack’ und Spaten: Siedlung und Siedlerbewegung in Österreich, 1918–1938*. Vienna: Verlag für Gesellschaftskritik.
- Joachim, J** 1915 *Österreichs Volksernährung im Kriege unter Mitwirkung namhafter Fachleute*. Vienna: Manz.
- Kampffmeyer, H** 1926 *Siedlung und Kleingarten*. Vienna: J. Springer.
- Kramer, L** 1986 *Rationalisierung des Haushaltes und Frauenfrage, Ernst May und das Neue Frankfurt, 1925–1930*. Berlin: Ernst. pp. 74–88.
- Küchengespräch im Salon**, 1915 *Neue Freie Presse*, June 20, p. 17.
- Loewenfeld-Russ, H**, and **Ackerl, I** 1986 *Im Kampf gegen den Hunger: Aus den Erinnerungen des Staatssekretärs für Volksernährung, 1918–1920*. München: Oldenbourg.
- Loos, A** 1921 *Der Tag der Siedler*, *Neue Freie Presse*, April 3, p. 10.
- Loos, A** 1982 *Die Moderne Siedlung, Ein Vortrag (1926), Trotzdem, 1900–1930*. Vienna: G. Prachner. pp. 197–198.
- May, E** and **Wichert, F** (eds) 1930 *Das Neue Frankfurt, Fünf Jahre Neues Bauen in Frankfurt am Main*, no. 2/3. Frankfurt am Main: Englert und Schlosser.
- May, E** and **Wichert, F** (eds.) 1930 *Das Neue Frankfurt, Fünf Jahre Neues Bauen in Frankfurt am Main*, no. 4/5. Frankfurt am Main: Englert und Schlosser.
- May, E**, et al. (eds.) 2011 *Ernst May 1886–1970*. München: Prestel.
- McLeod, M** 2011 *Women in the First Histories of Modern Architecture*. In: *The Annual Meeting of the Society of Architectural Historians*, New Orleans, LA, on 14 April 2011.
- Neurath, O** 1923 *Kernhausaktion der Gemeinde Wien, Österreichische Städte Zeitung, Offizielles Organ des ‘Deutschösterreichischen Städtebundes’*, no. 7 Juli, pp. 1–8.
- Neurath, O** 1923 *Österreichs Kleingärtner- und Siedlerorganisation*, Vienna: Kommissionsverlag der Wiener Volksbuchhandlung.
- Novy, K**, and **Förster, W** 1991 *Einfach Bauen: Genossenschaftliche Selbsthilfe nach der Jahrhundertwende: Zur Rekonstruktion der Wiener Siedlerbewegung*. Vienna: Picus.

- Posch, W** 1980 Die Gartenstadtbewegung in Wien, Persönlichkeiten, Ziele, Erfolge und Mißerfolge, *Bauforum*, 77/78: 9–24.
- Schuppli, I, and Hinterer, B** 1913 *Grabnerhof-Kochbuch – Mit Besonderer Berücksichtigung der Kochkiste – Zum Gebrauche für Hausfrauen des Mittelstandes*. Vienna: Deuticke.
- Schuppli, I, and Hinterer, B** 1914 *Kochbuch für die Kochkiste. Auszug der in der Kochkiste zu Bereitenden Speisen Aus Dem Grabnerhof-Kochbuch, Nebst Bemerkungen und Ratschlägen über eine Gesunde Lebensweise*. Leipzig: F. Deuticke.
- Schuppli, I, and Hinterer, B** 1916 *Das Einkochen Der Früchte Ohne Und Mit Wenig Zucker Nebst Einer Anleitung zum Dörren von Obst und Gemüse*. Vienna; Leipzig: Deuticke.
- Schuppli, I, and Hinterer, B** 1918 *Kochbüchlein für Knappe Zeiten*. Vienna; Leipzig: Deuticke.
- Schütte-Lihotzky, M, and Noever, P** (eds.) 1992 *Die Frankfurter Küche von Margarete Schütte-Lihotzky*. Berlin: Ernst & Sohn.
- Schütte-Lihotzky, M, Noever, P, and Allmayer-Beck, R** (eds.) 1996 *Margarete Schütte-Lihotzky: Soziale Architektur: Zeitzeugin eines Jahrhunderts* Vienna: Böhlau.
- Tafari, M, Passeri, A, and Piva, P** 1980 *Vienna Rossa: La Politica Residenziale nella Vienna Socialista, 1919–1933*. Milano: Electra.
- Uhlig, G** 1981 Margarethe [sic] Schütte-Lihotzky zum 85. Geburtstag, Textcollagen aus und zu ihrem Werk *Der UmBau*, Dezember 5.
- Urban, F** 2013 The Hut on the Plot: Informal Architecture in Twentieth-Century Berlin, *Journal of the Society of Architectural Historians*, 72(2) June: pp. 221–249.
- Verein 'Schrebergärten'**, 1915 *Mitteilungen des Vereins 'Schrebergärten'*, June 6, pp. 3–6.
- Verein der Siedler Österreichs**, 1923 *Kleingärtner und Siedler*, 5/6 (May/June).
- Wilson, F** 1923 The Resurrection of Vienna, Houses on the Land Settlement, *The Manchester Guardian*, October 26, p. 6.
- Wohatschek, W, and Zentralverband der Kleingärtner, Siedler und Kleintierzüchter Österreichs** 2001 *Festschrift 1916–2001 / Zentralverband der Kleingärtner, Siedler und Kleintierzüchter Österreichs von einer Vision zum kleinen Paradies – eine Chronik*. Vienna: Zentralverb. der Kleingärtner, Siedler und Kleintierzüchter Österreichs.

Archival Documents

- PRNR 28–59 in the Archives of Margarete Schütte-Lihotzky at the University of Applied Arts, Vienna. Thereof specifically cited:
- Karau, G** 1922 Gutachten, Archival Document PR 28/11 TXT, University of Applied Arts, Collection and Archive, Vienna, p. 1.
- KHGIW**, 1922 Certificate 159798, Archival Document PR 28/8 TXT, University of Applied Arts, Collection and Archive, Vienna, p. 1.
- Lihotzky, M** 1922 Beschreibung der Kochnischen- und Spülkücheneinrichtung, Archival Document PR 28/6 TXT, University of Applied Arts, Collection and Archive, Vienna.
- Lihotzky, M** 1923 Kernhaus Type 7, Archival Document, PR NR 34/14 FW, back, University of Applied Arts, Collection and Archive, Vienna.
- Witte, I** 1923 Letter to Margarete Schütte-Lihotzky, Archival Document, University of Applied Arts, Vienna PR 28/10 TXT, p. 1.

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