Spirit and Space: Architecture and Expressions of German Identity in *Metropolis* and the Weissenhofsiedlung

Stacy Schwartz

Conflicting views of industry in Weimar Germany are reflected in the widely-known buildings of the architects at the 1927 Weissenhofsiedlung exhibition in Stuttgart and Fritz Lang's Expressionist masterpiece of the same year, the film *Metropolis*.[1] Both works deal with issues of modernity—particularly the dual nature of industrialization as both catalyst for socio-economic growth in the country and, conversely, a potential destructive force against German identity following its recent devastating military defeat. It is well known that both the experimental housing at Weissenhof and the cityscape of *Metropolis* raise questions concerning the quality of contemporary German life and promote utopian (or dystopian) social ideals, specifically as expressions of the contradictory German attraction to, and rejection of, American-style capitalism epitomized in Manhattan, New York. Less examined with these two events is the dialogue concerning interactions between modern architecture and the individual, as well as the personal and collective manipulation of lived experience through the application of cinematographic principles to building. Relating "new" architecture to the new medium of cinema, the architects of the Siedlung saw modernism as a means to re-introduce space as a tool for German energy, security, and comfort, while Lang's *Metropolis* posed a German society in which humans become pawns in a technological fortress.

The Weissenhofsiedlung exhibition, which opened on July 23,1927 (Figure 1), was born of the Deutscher Werkbund, a group of craftsmen and architects opposed to the current state of technical advancement in mass-produced consumer goods. The pre-war Werkbund was clearly nationalistic in outlook. Deeply concerned by the eclecticism and shoddy craftsmanship characterizing current trends in design, its group members, particularly co-founder Hermann Muthesius, claimed that setting design standards for modern production would not only create a better quality of objects aesthetically, but would also stand as a representation of Germany as a harmonious country worthy of respect on the world stage.[2] The work of Peter Behrens and others exemplifies the simplification of traditional forms to fit a unifying theme, linking the utilitarian object and government goals for industry aesthetically and, ultimately, in a social context.[3]

However, the aims of the Werkbund dramatically changed due to the political, economic and psychological effects of the First World War. The onset of conflict in 1914 saw the emergence of images of death, destruction, and psychological trauma caused by the power of mechanical weapons. These and the real devastation and disruption of German life prompted a retraction of earlier desires for industrial progress in fear of losing the "German spirit."[4] Conservative desire for traditional German forms of design was embodied in the Heimatstil (Figure 2), a style that promoted archaic vernacular forms of "homeland" defined by inviting and individualistic homes and furnishings.[5] Such forms countered the impoverished and unhealthy living conditions of the lower classes crammed into tenement apartment buildings in the city. The tenements themselves were considered by disheartened German citizens to be not only stifling to the human spirit but also a manifestation of the failure of the capitalist Weimar Republic imposed on Germany by foreign nations as part of its defeat.

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1 The Weissenhofsiedlung exhibition opened after the release of *Metropolis* on March 13, 1927.

2 Christian F. Otto and Richard Pommer, *Weissenhof 1927 and the Modern Movement in Architecture* (Chicago: University of Chicago Press, 1991), 5-6.

3 Behren's well-known work for the Allgemeine Elektrizitäts Gesellschaft (AEG) is an especially notable grouping of projects associated with the pre-War Werkbund. Behrens, who would later show in the Weissenhofsiedlung as a highly respected architect, was quoted in the *Berlin Morgenpost* in 1912: "To characterize, to create a type, surely is the most important moment of…architectural creation. And there is nothing as imposing as the realization of a character…throughout a city….A city must be graspable as a closed architectural image." See Francesco Passanti, "The Skyscrapers of the Ville Contemporaine," *Assemblage*, no. 4 (Oct. 1987): 55.

4 Karin Kirsch, a well-respected authority on the Weissenhofsiedlung, gives a thorough explanation of the political climate in Germany preceding the exhibition. See Kirsch, *The Weissenhofsiedlung: Experimental Housing Built for the Deutscher Werkbund, Stuttgart, 1927* (New York: Rizzoli, 1989).

5 In Stuttgart in the 1920s the Stuttgart School of Architecture, which practiced traditional Heimatstil architecture, rivaled the Neues Bauen

The Weissenhof experiment was created amidst this love/hate relationship with standardized production and capitalist modernity. After World War I the burden was on German cities to deal with housing shortages brought on by inflation, the collapse of private patronage, and the disappearance altogether of imperial sponsorship and construction. By the early 1920s extreme shortages and inflation caused a rise in the prices of building materials, forcing architects and builders to engage new, less expensive elements such as concrete plates, metal, and glass.[6] When inflation finally stabilized in 1924, the government meted out funding for city and regional public housing to support experimentation in materials and processes. In contrast to the still-powerful German conservatives who attempted to direct these new building projects away from the simplification of industrial construction, sixteen avant-garde architects including Ludwig Mies van der Rohe, the architectural overseer at Weissenhof, advocated the creation of architecture from the fundamental elements of space, line, structure, plane, and materials. Mies stated, "We do not recognize form but only problems of building."[7]

The typical form of architecture at the Siedlung would not be wholly determined by mathematical formulae, rational thought, or the purely functional suitability often attributed to manufactured housing and goods. Rather, the buildings were in accordance with Muthesius' idea of "standardization" presented not so much physically, but in the organizational and spiritually equalizing sense akin to Peter Behrens.[8] Although the design of each of the architects active at Weissenhof could vary slightly, overall the living spaces shown at the Siedlung were based on a unified plan of combinations of interchangeable units. This applied equally to single-family, condominium-style and apartment complex living arrangements, with variations among homes expressed in terms of floor plan and proportion rather than exterior form and decoration.

Great importance was placed on the health and well-being of the modern denizen in the various architectural plans, which were generally divided into the areas of living, service and sleeping and outfitted with terraces, balconies, and roof gardens. Smaller rooms within the units were adaptable by the use of curtains, sliding and folding wall panels, and partitions (Figure 3). This not only allowed for greater amounts of natural light and air circulation in keeping with demands for reform in Wohnungshygiene, but gave the resident the power to create and move through their surroundings as they wished. Similarly, the interior furnishings were Bauhaus designs of metal and glass, such as Marcel Breuer's chairs, and placed sparsely throughout the spaces in keeping with the desire to limit superfluous décor.[9] The adaptability of rooms and furniture, and thus, greater freedom of movement equaled a modern way of living.

This concept of flow and adaptability in modern architecture also included the active fourth element of time. Central to this idea was the view of architecture as a filmic medium and space as a stage set, a vehicle for creating the cinematic narrative of modern life.[10] Cinematic architecture would be grounded not by form, but *action*, the piecing together of a continuous sensory experience. How better to do so than through entertainment's most technologically advanced and visually stimulating medium? Befitting the mastery of machine by modern man, the conductor of this architectural opus is the human brain—the space an accessory of human life rather than a dictator. Historian Beatriz Colomina writes of the inhabitant's eyes as a "tool of recording,"[11] of the physical elements of a building "birthed" in front of one's eyes as one moved through the space. It is architecture that functions without conformity and one that can be continually re-cast according to the desires of the inhabitant.[12]

Like a film camera advancing through a movie set, the house would unfold before the viewer in a series of cells, the mind connecting each view to form a moving picture of the house. With the human eye as camera, the brain could capture space as a series of images, "directing" the course of its architectural experiences and, on a larger scale, hu-

("New Building"—modern avant-garde) in popularity. Derived from the "chaste and simplified forms of nineteenth century rural German architecture," the Stuttgart school was considered to be representative of the "restoration of German regional and pre-industrial values." See Otto and Pommer, *Weissenhof 1927*, 8.

6 Ibid., 65.

7 Ibid., 11.

8 Ibid., 61-62.

9 Wilhelm Lotz, editor of the Werkbund periodical *Die Form* remarked that Siedlung furniture "must be made so that it takes away nothing from the space, and the space can flow through and is not restrained in its movement." See ibid., 129.

10 Many modern architects of the 1920s were designing film sets, suggesting a connection to the home as a stage, including Robert Mallet-Stevens (Man Ray's "Les Mystères du château du Dé," 1928), Ludwig Meiner, and of course, Fritz Lang. This includes a number of the architects exhibiting at Weissenhof, specifically Hans Poelzig and Bruno Taut ("Der Weitbaumeister"). Dietrich Neumann, ed. *Film Architecture: Set Designs from Metropolis to Blade Runner* (Munich: Prestel Verlag, 1999), 183-200.

11 Colomina offers a compelling and thorough analysis of Le Corbusier's writings in relation to new media and mass production, particularly the transformation of architectural theory by the photographic mind. See Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, MA: MIT Press, 1994), 330.

12 "*The reading of a work*, which is really what the word *architecture* means, goes beyond immediate physical sensations. It reveals the dazzling clarity and inexhaustible fertility of the intention behind the work. And as the creative act is reconstituted step by step in the observer's mind, his admiration is substantiated." Jacques Guiton, ed. and Margaret Guiton, trans., *The Ideas of Le Corbusier: On Architecture and Planning* (New York: George Braziller, Inc., 1981), 86.

man beings directing their own lives. This perhaps accounts for the truncated nature of rooms at Weissenhof, especially in homes such as Hans Scharoun's, appearing as a series of spaces laid atop each other to be visually navigated (Figure 4).[13] These rooms were less about standardized spaces than intellectually flexible spaces for the expression of modern life. Although aesthetically the rooms, and even houses, at Weissenhof were meant to coordinate in terms of color, adaptability and design, they were meant to be a product of both space and time—constantly changing according to the play of light and shadow on the features of the room, as well as any movement of people or objects within it.[14]

For Le Corbusier, a close friend of Mies van der Rohe and a creative authority at the Siedlung, the house itself was the camera channeling the motions of everyday life inside and outside of the dwelling place.[15] Equating windows with a camera lens, Le Corbusier proposed that windows allow viewers on both sides of the glass to watch the events on the other.[16] Life, he claimed, was like a film in its constant motion and change, with images defining space in bits and pieces. Horizontal band windows especially were featured in his designs, which to Le Corbusier allowed the eye to focus only on specific horizontal slices of space, like a TV or movie screen (Figure 5). Each room and its windows is an expanse of time, each window showing a slightly different view of an ongoing scene. For Le Corbusier the idea of windows as cameras and architecture as images applied to the modern city as an entity. The boundaries between public and private, indoor and outdoor were blurred by the technologies that defined the space of the modern city—railroads, film, automobiles, and planes among them—each allowing people to see things previously left only to the imagination. The seemingly limitless freedom of movement given by these modern technologies was compared to the continuous, machine-like churning of the city orchestrated by its inhabitants.

The comfort, contentment and contained visual experience offered by modern industrial architecture in the eyes of the Siedlung architects found its opposition in Fritz Lang's *Metropolis*. The film, which opened on January 10, 1927, presented a "dystopian image of the city of the future…,"[17] a situation in which the characteristics of everyday life are exceedingly lacking. *Metropolis*, set in the year 2026, is a juxtaposition of machinelike modernity and emotional humanity. The citizens of *Metropolis* have been broken into two groups: the planners and thinkers who run the city; and the workers and laborers who toil beneath the skyscrapers in an underground world overshadowed by tall buildings, surrounded by the machinery that sustains it.

The architecture of the city, designed by Erich Kettelhut, is a hodgepodge of period styles ranging from the Gothic cathedral to the Art Deco "New Tower of Babel" looming like an alien form over the rest of the city (Figure 6). In turn, the lower city in which the workers reside is formally based on the International Style, with windows rhythmically piercing the smooth walls of the buildings (Figure 7). Yet the use of technology here inspires the viewer not to ponder the wonders of modernity, but to fear them. The sheer scale of the cold, white, prison-like buildings with their strict geometric shaping, the overwhelming byways of the cityscape buzzing with automobiles, and the minuteness of the people are elements that have been manipulated to position the audience with the workers, crushed beneath the weight of the architecture. The use of lighting effects in the film in many ways creates the building forms, even gives them life. A number of architects of the period lauded film's unique ability to "construct" its own architecture in light, shade, scale, and movement. These elements had emotional bearing in film, even had the power to connect the construction medium with the human spirit in a positive or negative manner.[18] In *Metropolis*, for instance, the street-level view of the underground city is made ominous through sharp angles of shadow dancing on the surface of the buildings and the intensely bright light beaming through the openings. The emotional oppression of the workers, burdened by the mass-produced architectonic form of the buildings, contrasts with the freedom of the horizontal span and bright natural light of the Siedlung buildings with their flat roofs and garden terraces.

Instead of manipulating modern technology to serve human needs, the architecture in the film forces humanity to conform in order to function. Lang's moving figures in *Metropolis* merge with the architecture in their rigid forma-

[13] Karin Kirsch writes of Hans Scharoun, "Scharoun's work is not primarily or exclusively directed toward the artistic, aesthetic, formal conception of his buildings. His primary conception is that they must become organs for the human beings whom they serve." See Kirsch, *Weissenhofsiedlung,* 194.

[14] Art historian Elie Faure explained that "by means of the cinema, time becomes a veritable instrument of space, unrolling under our eyes its successive volumes ceaselessly returned to us in dimensions that allow us to grasp their extent in surface and depth." Anthony Vidler, "The Explosion of Space: Architecture and the Filmic Imaginary," *Assemblage* 21 (August 1993): 46.

[15] Though no English-language materials (to my knowledge) have been written connecting theoretical discussions of cinematic architecture with the Weissenhofsiedlung, a number of the architects who exhibited there were also part of the film world and active in the dialogue concerning film and modern architecture. Additionally, many of the exhibition architects had personal or business relationships prior to the 1927 show, and therefore likely shared their ideas. This is particularly important to keep in mind with regards to Le Corbusier, with whom Mies van der Rohe had a friendly relationship and who had seen Le Corbusier's *Ville Contemporaine* design plans. Mart Stam and Hans Poelzig had also worked together in Berlin and were aware of the works of Mies and Le Corbusier through the publication *ABC*. See Kirsch, *Weissenhofsiedlung,* 168.

[16] Colomina, *Privacy and Publicity,* 306-12.

[17] Dietrich Neumann, introduction to *Film Architecture* (see note 10), 8.

[18] Vidler, "Explosion of Space," 47.

tions and identical movements as if the architecture had swallowed humanity, making it a part of the technology (Figure 8). The jilted, uniform movements of the workers through the space, which is devoid of all but necessary framework and machinery, represent the "soulless efficiency" much of the German public feared would follow American-style capitalism and mass industrialism. The world of *Metropolis* is built not upon people, but buildings: architecture takes on a life of its own, no longer in need of people to awaken it. Joh Frederson may oversee the city from his Tower of Babel, but he, too, is enslaved by the need for a consistently running Machine.

Such a fearful view of technology-inspired architecture can also be viewed in terms of cinematic space, a relationship between the "eye" of the camera and the actor. When the viewer examines architecture as presented in a film, the confines of filmic space cause an audience to struggle with the positioning of architecture and actor. The audience sees only a progression of images that form a disjunctive flow.[19] The limited space of a stage set requires the camera's "eye" to determine a space's boundaries through camera angles in conjunction with light, shade, and color.[20] The camera functions as an intermediary between audience and actor and, in a negative context, a non-human force manipulating the space around the performer. Walter Benjamin, in his "The Work of Art in the Age of Mechanical Reproduction" of 1937, writes of the distance between audience and actor as caused by the camera: the actors (who could represent real persons) are rendered inconsequential because it is the *camera* that creates and controls their surroundings, their actions within the film.[21] In opposition to the positive experience of unfolding the "cells" of a space with one's own eye advocated by architects like Le Corbusier, *Metropolis* represents a negative encounter with architecture in which an outside entity constructs the boundaries of daily life for humanity.

The film concludes symbolically with the destruction of the Machine and the forging of mutual respect for "planner" and "worker." A sort of utopian solution to the problem of bonding mass culture and spirituality, Lang's message is tinged with determination to replace exploitative materialism with the German soul in harmony with the usefulness of technology.[22] The utopian conclusion to *Metropolis* was an appeal to Weimar traditionalists, for whom modernity was viewed as harkening the disenchantment of the world, the abandonment of the old country for democracy, mass production, and capitalism. In short, the imposed Weimar Republic commercialization of culture signaled a renunciation of religious values, a sacrifice of the creative, individualistic German soul for the standardization of the daily lifestyle. This feeling of a gap between modernity and humanity is epitomized in a line from the film: "Between the head and the hands—the heart." The "heart," then, would be the spiritual essence of Germany, the bridge across the gap. This gap exists in the film even within the realm of architecture—the remnants of old Germany, including the old small church where the scientist Rotwang resides, have been dwarfed by stifling skyscrapers. The archaic form of the church would have been immediately recognizable as part of the Heimatstil.

The fear of technology and its manifestations in architecture were at least partly related to the system of democracy and mass production in place in America. Germany was both afraid and in awe of American industrial modernity. The avant-garde saw American mass culture as a vehicle for the radical modernization of German life. Many others, however, feared the rampant capitalism that governed America's economy was exploitive in its "collective plan" of mass consumerism.[23] Significantly, Fritz Lang looked to contemporary New York City for inspiration in his set designs, captivated by the almost dangerous allure of the modern city (Figure 9). He described his impressions of the New York cityscape in 1924:

> The buildings seemed to be a vertical veil, shimmering, almost weightless, a luxurious cloth hung from the dark sky to dazzle, distract, and hypnotize. At night the city did not give the impression of being alive; it lived as illusions lived.[24]

In describing the city's architecture as a giant scrim, and its activities as illusions, Lang had already acknowledged his own fusion of lived and cinematic modernity (Figure 10).[25]

Many Germans, including the architects of Weissenhof, recognized the potential of machinery to upgrade the quality of the German lifestyle and expand the country's sphere of influence. The poverty and suffering of a majority of the bourgeois population was often seen as a result of the

19 Hugo Haring, "Building for Film," in *Film Architecture* (see note 10), 187-88. Originally published as "Filmmöglichkeiten," *Sozialistische Monatshefte* 59, no. 17 (July–December 1922): 741-43.

20 Walter Reimann, "Film Architecture—Today and Tomorrow?" in *Film Architecture* (see note 10), 193. Originally published as "Filmarchitektur—heute und morgen?" *Filmtechnik und Filmindustrie* no. 4 (1926): 64-65.

21 For Benjamin's full description of the relationship between film actor and camera, see Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in Roberta Garner, ed. *Social Theory: Continuity and Confrontation*, 2nd ed. (Ontario, Canada: Broadview Press, 2007), 269.

22 Timothy O. Benson et al., *Expressionist Utopias: Paradise, Metropolis, Architectural Fantasy* (Seattle: University of Washington Press, 1993), 161-62.

23 Ibid., 159.

24 Ibid., 164.

25 Interestingly, the inspiration Lang gleaned from visiting the metropolis of New York was not the *form* of the city's architecture, as some might think from the City of the Future in *Metropolis*. Rather, Lang was excited by the creation of surroundings with the light and shadow caused by neon lights and the illumination of car headlights as they whizzed by. Lang captured what he thought to be the "euphoric"

introduction of modern industry. The opposite was true in American film, a point made particularly clear in films like David Butler's *Just Imagine* of 1930. Here, contemporary architecture and the satisfaction of the citizens are presented in a positive light. Dietrich Neumann described the architecture in *Just Imagine* as:

> A series of skyscrapers placed far enough apart to let light into the deep canyons between them, with the different traffic levels well-ordered, the buildings brightly lit with electricity, thus providing images of a healthy, prosperous and enjoyable future.[26]

The relationship between technology and individuality for the people of Weimar Germany, then, was on both a personal and collective level a spectrum of satisfaction with control over their surroundings and their own lives. These sentiments are evoked in their extremes in the Weissenhofsiedlung and *Metropolis*, illustrating the complicated range of emotion regarding technology and its effect on contemporary German life. While the architects of the Siedlung saw film as the best medium through which to reconcile the essential German spirit with the trappings of a modern democratic society (particularly the home), Fritz Lang's *Metropolis* inverted this concept in the shaping of architecture by the film production process, enslaving humanity within its vast, factory-produced empire.

San Jose State University

speed of the technologically advanced city in a series of double-exposed photographs, with which night scenes of *Metropolis* share a sense of buzzing life. Wolfgang Jacobsen and Werner Sudendorf, ed., *Metropolis: Ein filmisches Laboratorium der modernen Architecktur (A Cinematic Laboratory for Modern Architecture)* (Stuttgart: Edition Axel Menges, 2000), 9.

[26] Neumann, *Film Architecture*, 112.

Figure 1. *View of Weissenhof*, 1932, photograph, Bildarchiv Preussischer Kulturbesitz / Art Resource, NY.

Figure 2. Riemerschmid, Richard, *Row houses at Hellerau*, 1910, photograph, Kunstbibliothek, Staatliche Museen zu Berlin, Berlin, Germany, Bildarchiv Preussischer Kulturbesitz / Art Resource, NY.

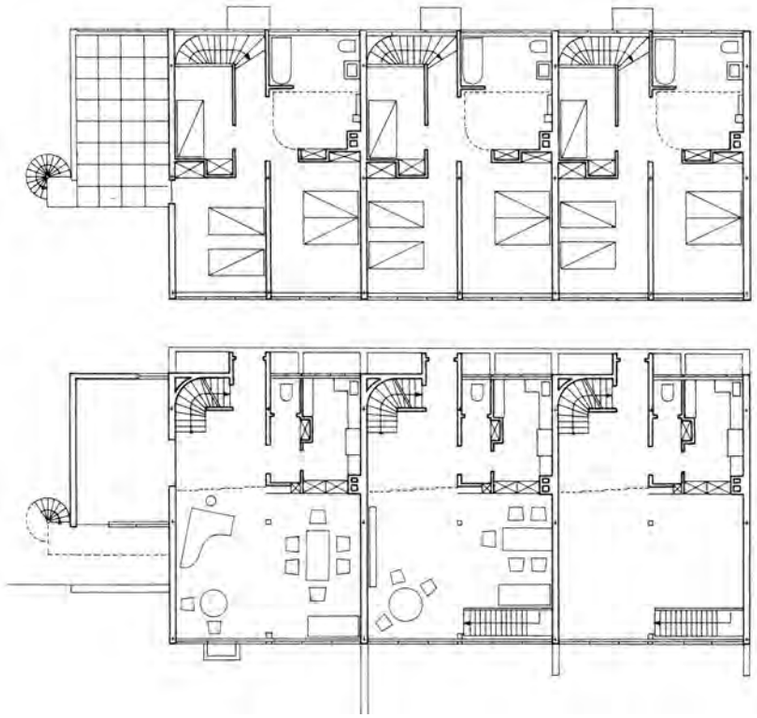

Figure 3. Houses 28, 29, 30. Architect: Mart Stam. Plans drawn from the architect's building code submissions (undated). Second Floor; First Floor (dotted lines indicate sliding panels). Courtesy of Dr. Karin Kirsch.

Figure 4. *House Scharoun*, photograph, Akademie der Künste, Baukunstarchiv.

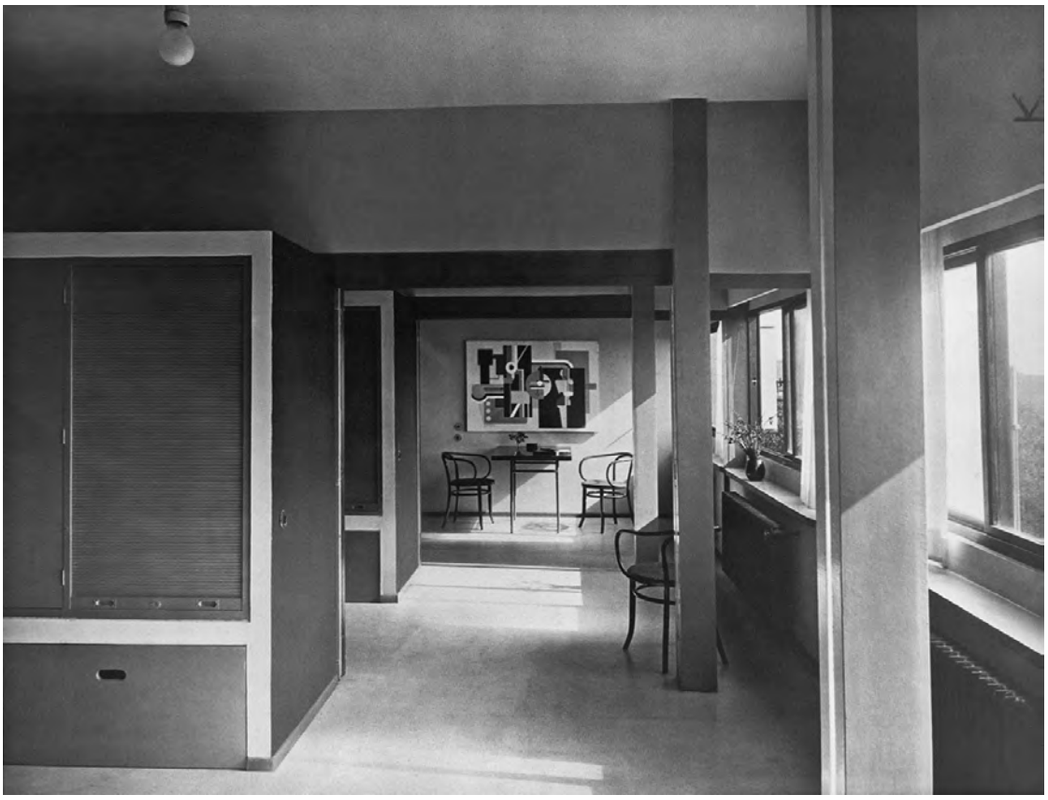

Figure 5. *Willi Baumeister's Composition with Red Rectangle of 1925-26 as displayed in Le Corbusier's House 14 at the Weissenhofsiedlung, 1927*, photograph, Künstmuseum, Stuttgart, Archiv Baumeister.

Figure 6. Fritz Lang, *Metropolis*, 1927. Film still of Upper City. Transit Film GmbH

Figure 7. Fritz Lang, *Metropolis*, 1927. Film still of Lower City. Transit Film GmbH

Figure 8. Fritz Lang, *Metropolis*, 1927. Film still of Workers in Tunnel. Transit Film GmbH

Figure 9. Erich Kettelhut, "*The Tower of Babel*," oil on cardboard, Stiftung Deutsche Kinemathek, Berlin.

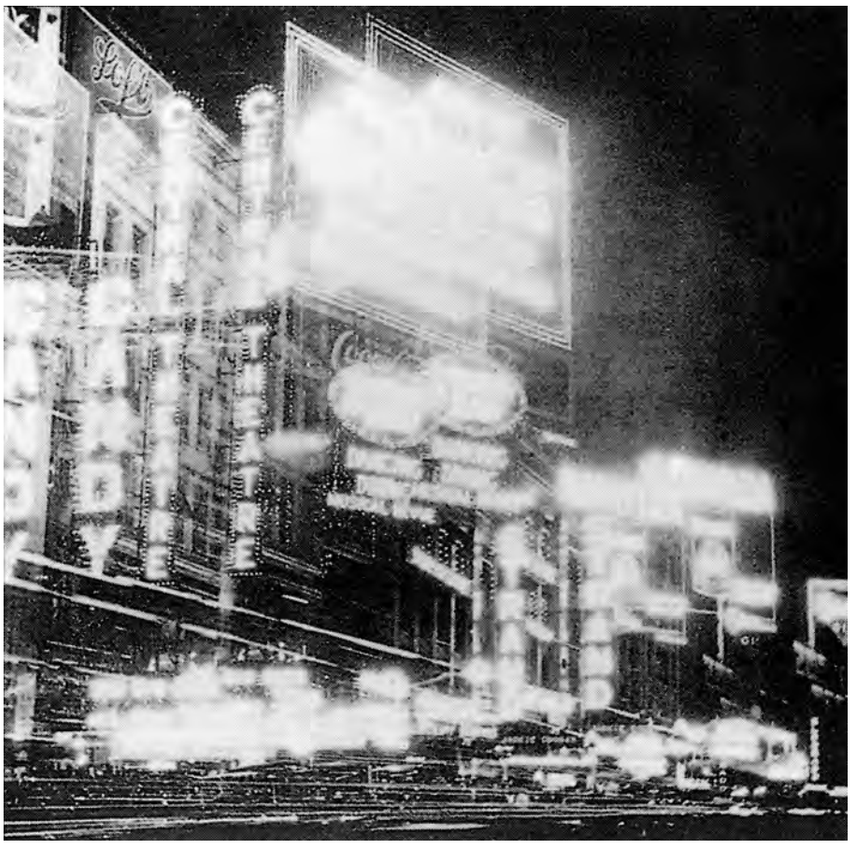

Figure 10. Fritz Lang, *Broadway, New York*, 1924, double-exposed photograph, Stiftung Deutsche Kinemathek, Berlin.