The Graveyard of Utopia:
Soviet Urbanism and the Fate of
the International Avant-Garde

Comrades!

The twin fires of war and revolution have devastated both our souls and our cities. The palaces of yesterday's grandeur stand as burnt-out skeletons. The ruined cities await new builders[…]

To you who accept the legacy of Russia, to you who will (I believe!) tomorrow become masters of the whole world, I address the question: with what fantastic structures will you cover the fires of yesterday?

— Vladimir Maiakovskii, "An Open Letter to the Workers"[1]

Utopia transforms itself into actuality. The fairy tale becomes a reality. The contours of socialism will become overgrown with iron flesh, filled with electric blood, and begin to dwell full of life. The speed of socialist building outstrips the most audacious daring. In this lies the distinctive character and essence of the epoch.

— I. Chernia, "The Cities of Socialism"[2]

Between 1928 and 1937, the world witnessed the convergence of some of the premier representatives of European architectural modernism in Moscow, Leningrad, and other cities throughout the Soviet Union. Never before had there been such a concentration of visionary architectural talent in one place, devoting its energy to a single cause. Both at home and abroad, the most brilliant avant-garde minds of a generation gathered in Russia to put forth their proposals for the construction of a radically new society. Never before had the stakes seemed so high. For it was out of the blueprints for this new society that a potentially *international* architecture and urbanism could finally be born, the likes of which might then alter the face of the entire globe. And from this new built environment, it was believed, would emerge the outlines of the New Man, as both the outcome of the new social order and the archetype of an emancipated humanity. With such apparently broad and sweeping implications, it is therefore little wonder that its prospective

---

[1] Maiakovskii, Vladimir. "Otkrytoe pis'mo rabochim." From *Gazeta futuristov*. March 15th, 1918.

[2] Chernia, I. "Goroda sotsializma." From *Revoliutsia i kultura*, № 1. January 1930. Pg. 16.

realization might have then attracted the leading lights of modernist architecture, both within the Soviet Union and without. By that same account, it is hardly surprising that the architectural aspect of engineering a postcapitalist society would prove such a captivating subject of discussion to such extra-architectural discourses as politics, sociology, and economics.

The bulk of the major individual foreign architects and urbanists who contributed to the Soviet cause came from Germany. Such luminaries as Walter Gropius,[3] Ludwig Hilberseimer, and Peter Behrens each contributed to Soviet design competitions. Former Expressionists — now turned modernists — like Bruno Taut, his brother Max, Arthur Korn, Hans Poelzig, and Erich Mendelsohn all joined the greater project of socialist construction in the USSR.[4] Major architects also arrived from other parts throughout Western Europe, eager to participate in the Soviet experiment. Foremost among them, hailing from Switzerland, was the French-Swiss archmodernist Le Corbusier, whose writings on architecture and urbanism had already become influential in Russia since at least the mid-1920s. From France additionally appeared figures like André Lurçat and Auguste Perret,[5] lending their talents to the Soviet cause. The preeminent Belgian modernist Victor Bourgeois actively supported its architectural enterprise as well.

Besides the major individual figures attached to this effort, there existed several noteworthy aggregations of international architects and urbanists, under the heading of "brigades." The German socialist Ernst May, mastermind of the highly-successful *Neue Frankfurt* settlement, traveled to Russia along with a number of his lesser-known countrymen, including Eugen Kaufmann, Wilhelm Derlam, Ferdinand Kramer,[6] Walter

---

[3] Gropius' participation in the Soviet project was much more limited than the others mentioned here. He submitted an entry in 1932 for the Palace of the Soviets competition, and would later go on a three-day lecture tour in Leningrad in 1933, but otherwise he was less interested in prospects of building in the USSR than his compatriots. Jaeggi, Annemarie. "Relations between the Bauhaus and the Russian Avant-garde as Documented in the Collection of the Bauhaus Archive Berlin." From *Heritage at Risk, Special Edition: The Soviet Heritage and European Modernism*. (Hendrik Verlag. Berlin, Germany: 2006). Pg. 155.

[4] Borngräber, Christian. "Foreign Architects in the USSR." *Architectural Association Quarterly*. (Volume 11, № 1. London, England: 1979). Pgs. 51-53.

[5] See his submission to *Sovetskaia arkhitektura*. (Volume 2, № 2/3. Moscow: May 1932).

[6] A well-known architect, and also a friend and associate of the Marxist social theorist Theodor Adorno.

Kratz, and Walter Schwagenscheidt. The Austrians Margarete Schütte-Lihotzky (designer of the famous "Frankfurt Kitchen"), her husband Wilhelm Schütte, and Anton Brenner also accompanied May in his journeys.[7] Together with the Hungarian Bauhaus student Alfréd Forbát,[8] the German-Swiss builder Hans Schmidt, and the Bauhaus and De Stijl veteran Mart Stam, originally from Holland, these architects comprised the famous "May's Brigade" of city planning. Many other German architects and city-planners, still less well-known, belonged to May's group as well: Hans Burkart, Max Frühauf, Wilhelm Hauss, Werner Hebebrand, Karl Lehmann, Hans Leistikow, Albert Löcher, Ulrich Wolf, Erich Mauthner, Hans Schmidt, and Walter Schulz, to list a few.[9]

Hannes Meyer, another Swiss German, also departed for Moscow, after being suddenly dismissed from his position as director of the Bauhaus on grounds of his leftist political sympathies.[10] He took with him seven of his best students from Dessau, who were themselves of quite varied backgrounds: Tibor Weiner and Béla Scheffler, both Hungarian nationals; Arieh Sharon, of Polish-Jewish extraction; Antonín Urban, a Czech architect; and finally Konrad Püschel, Philip Tolziner, René Mensch, and Klaus Meumann, all German citizens.[11] These members together comprised the so-called "Red

---

[7] Teige, Karel. *The Minimum Dwelling.* Translated by Eric Dluhosch. (The MIT Press. Cambridge, MA: 2004). Pg. 214. Originally published in 1932 in Czech as *Nejmenší byt* by Václav Petr, Prague.

[8] Leśnikowski, Wojciech. "Functionalism in Czechoslovakian, Hungarian, and Polish Architecture from the European Perspective." From *East European Modernism: Architecture in Czechoslovakia, Hungary, & Poland between the Wars*. (Thames and Hudson, Ltd. London, England: 1996). Pg. 25.

[9] Names recalled by Margarete Schütte-Lihotzky in an interview with Christian Borngräber in 1978. Borngräber, "Foreign Architects in the USSR." Pg. 61.

[10] "You [Oberbürgermeister Fritz Hesse] referred me to the investigation of Bauhaus affairs which the Anhalt Government was demanding as a result of the false report from the town authorities — and called for my immediate resignation. The reason: it was alleged I was bringing politics into the Bauhaus. A Marxist (you said) could never be the Director of the Bauhaus. Immediate cause of dismissal: a voluntary contribution as a private person to the International Workers' Aid Fund for helping the distressed families of the miners on strike in the Mansfeld coalfield. It was no use reiterating that I had never belonged to any political party." Meyer, Hannes. "My Dismissal from the Bauhaus: An Open Letter to Oberbürgermeister Hesse, Dessau." From *Buildings, Projects, and Writings*. Translated by D.Q. Stephenson. (Arthur Niggli Ltd. New York, NY: 1965). Pgs. 103-105. Originally published in German in 1930.

[11] Mordvinov, Arkadii. "Baukhauz k vystavke v Moskve." From *Sovetskaia arkhitektura*. (Volume 1, №

Brigade." A number of other German architects associated with Kurt Meyer's (unrelated to Hannes) urban and suburban group were also shown in attendance at the international building conference in Moscow in 1932: Magnus Egerstedt, Josef Neufeld, Walter Vermeulen, E. Kletschoff, Julius Neumann, Johan Niegemann, Hans-Georg Grasshoff, Peer Bücking, and Steffen Ahrends.[12]

The newly formed constellation of Eastern Europe that emerged out of the postwar dissolution of the Russian and Austro-Hungarian empires was also represented in force by some of its leading modernists. From Czechoslovakia, the great Constructivist poet and architectural critic Karel Teige[13] lent his incisive observations to the Soviet Union's various attempts at regional and municipal planning. Two of Teige's close compatriots in the Czech avant-garde, the functionalist architects Jiří Kroha[14] and Jaromír Krejcar,[15] were already active in the Soviet Union at that time. Besides Wiener, Scheffler, and Forbát, who were associated with May's and Meyer's groups in Moscow, the Hungarian modernists Laszlo Péri, Imre Perényi,[16] and Stefan Sebök[17] each worked independently for the Soviet state. Finally, the Polish avant-gardists Edgar Norwerth[18] and Leonard Tomaszewski[19] also collaborated with various organs of the government of the USSR during the execution of its second five-year plan.

1/2. Moscow: March 1931). Pg. 10.

[12] "An den internationalen Kongress für neues Bauen. Generalsekretariat." *Das Neue Stadt*. (Volume 8. № 6/7. Berlin, Germany: 1932). Pg. 146.

[13] Leśnikowski, Wojciech. "Functionalism in Czechoslovakian, Hungarian, and Polish Architecture from the European Perspective." From *East European Modernism: Architecture in Czechoslovakia, Hungary, & Poland between the Wars*. (Thames and Hudson, Ltd. London, England: 1996). Pg. 20.

[14] *Ibid.*, pg. 21.

[15] *Ibid.*, pg. 21.

[16] Bonta, János. "Functionalism in Hungarian Architecture." From *East European Modernism: Architecture in Czechoslovakia, Hungary, & Poland between the Wars*. (Thames and Hudson, Ltd. London, England: 1996). Pg. 171.

[17] Jaeggi, "Relations between the Bauhaus and the Russian Avant-garde as Documented in the Collection of the Bauhaus Archive Berlin." Pg. 156.

[18] Leśnikowski, "Functionalism in Czechoslovakian, Hungarian, and Polish Architecture from the European Perspective." Pg. 31.

[19] *Ibid.*, pg. 32.

A number of American architects contributed to the Soviet effort as well. Albert Kahn, the celebrated builder of Detroit — along with his brother, Moritz Kahn — helped design over five hundred factories in the Soviet Union as part of its push toward industrialization.[20] Thomas Lamb, the well-established constructor of many of America's first cinemas, and Percival Goodman, an urban theorist who would later build many famous American synagogues, also offered their abilities to the Soviet state.[21] The pioneering American architect Frank Lloyd Wright, though he would not officially visit Russia until 1937, nevertheless spoke openly about the greatness of the Soviet project during the early 1930s. By the early 1930s, Wright was disillusioned with the capitalist socioeconomic system: "The capitalistic system is a gambling game. It is hard to cure gamblers of gambling and everybody high and low in this country prefers the gambler's chance at a great fortune to the slower growth of a more personal fortune." By contrast, he exclaimed the virtues of the Soviet project: "I view the USSR as a heroic endeavor to establish more genuine human values in a social state than any existing before. Its heroism and devotion move me deeply and with great hope."[22]

Despite the great influx of foreign modernists seen during this period, however, the influence of the new architectural avant-garde was hardly alien to the Soviet Union. On the contrary, it had begun to establish itself there as early as 1921 — if one discounts the renowned monument proposed by Tatlin for the Third International in 1918.[23] That year

---

[20] Borngräber, "Foreign Architects in the USSR." Pg. 51.

[21] See Lamb's submission for the Palace of the Soviets, pg. 77, as well as Goodman's submission (Project № 169), pg. 80. *Sovetskaia arkhitektura*. (Volume 2, № 2/3. Moscow: May 1932).

[22] Wright, Frank Lloyd. "First Answers to Questions by *Pravda*." From *Collected Writings, Volume II: 1931-1939*. (Rizzoli International Publications, Inc. New York, NY: 1993). Pgs. 141-142. Published originally in 1933.

[23] There is a common misunderstanding regarding the status of Tatlin's famous Monument to the Third International. Tatlin's tower is quite frequently even cited as the *originary* example of Constructivist architecture. While his Monument was quite influential, it is important to remember that Tatlin was an architect neither by training nor profession. This is a point that Lissitzky stressed repeatedly: "Tatlin created his tower...[though] he had no schooling in engineering, no knowledge of technical mechanics or of iron constructions." Lissitzky, El. "Architecture in the USSR." *El Lissitzky: Life, Letters, Texts*. Translated by Sophie Lissitzky-Kuppers. (Thames & Hudson Press. London: 1980). Pg. 372. Originally published in German in *Die Kunstblatt*, № 2. February 1925.

witnessed the appointment of the architects Nikolai Ladovskii, Nikolai Dokuchaev, and the sculptor Boris Efimov to the faculty of VKhUTEMAS, the well-known Moscow technical school often compared to the Bauhaus in Germany.[24] Along with Vladimir Krinskii, Konstantin Mel'nikov, and the international modernist El Lissitzky, Ladovskii and Dokuchaev went on to constitute the avant-garde group ASNOVA (the Association of New Architects) in 1923, though it would only publish the declaration of its existence in 1926. Ladovskii's brightest pupil and laboratory assistant Georgii Krutikov would join the group upon graduating the academy in 1928. Opposed to ASNOVA, the equally-stalwart modernist OSA (Society of Modern Architects) formed the Constructivist school of architectural thought in 1925, led by such outstanding designers as Leonid, Aleksandr, and Viktor Vesnin and their chief theorist Moisei Ginzburg. Il'ia Golosov officially became a member in 1926, followed by two of their exemplary students, Ivan Leonidov and Nikolai Krasil'nikov, in 1927 and 1928 respectively. Though divergent in terms of their fundamental principles, both OSA and ASNOVA were united in their opposition to atavistic architecture and their mutual commitment to modernity.

The overwhelming gravity that the debates over Soviet urbanism held for the avant-garde, their seemingly high stakes, is difficult to emphasize enough. Just as the USSR was first embarking upon its five-year plans, the nations of the West were facing the threefold crisis of global capitalism, of parliamentary democracy,[25] and of the European sciences[26] in general. At no prior point had the future of the worldwide socioeconomic

---

And again: "[Tatlin] accomplished [the Monument] without having any special knowledge of construction." Lissitzky, El. *The Reconstruction of Architecture in the Soviet Union*. From *Russia: An Architecture for World Revolution*, translated by Eric Dluhosch. (MIT Press. Cambridge, MA: 1984). Pg. 29. Originally published in 1930 as *Rußland, Die Rekonstruktion der Architektur in der Sowjetunion*.

Tatlin never developed a theory of architecture. Nor did he even advance any other major architectural proposals throughout the rest of his career. Indeed, the Monument is something of an anomaly with respect to his corpus as a whole.

[24] "In 1921 a group of young professors (Ladovskii, Dokuchaev, Efimov) succeeded in constituting an autonomous department in the faculty of architecture at the academy (VKhUTEMAS) in Moscow." Lissitzky, "Architecture in the USSR." Pg. 372.

[25] Schmitt, Carl. *The Crisis of Parliamentary Democracy*. Translated by Ellen Kennedy. (The MIT Press. Cambridge, MA: 2000). Originally published in 1928.

[26] Husserl, Edmund. *The Crisis of the European Sciences and Transcendental Phenomenology*. Translated

system of capital seemed so uncertain — never had its basis been so shaken. On nearly every front — economic, political, and epistemological — it faced defeat. Italy, Germany, and finally Spain fell beneath the rising tide of Fascism. Everywhere it seemed that Europe was entering into the darkness of Spenglerian decline.

But by that same score, in a positive sense there had never been a planning project as ambitious as the Soviet centralized economy. It represented a moment of unprecedented opportunity for international modernists to build on the highest possible scale, the chance to realize their visions at the level of *totality*.[27] For with the huge projected budgets set aside for new construction toward the end of the 1920s, the modernists saw an opening to implement their theories not just locally, but on a regional, national, and — should the flames of revolution fan to Europe — a potentially international scale. This mere fact alone should hint at the reason so many members of the architectural avant-garde, who so long dreamed of achieving an "international style"[28] without boundaries, would be

---

by David Carr. (Northwestern University Press. Chicago, IL: 1980). Originally published in 1932.

[27] In the sense of a unified, homogeneous whole.

[28] This is intended not only as a reference to the eponymous book by the two Americans, Henry-Russell Hitchcock and Philip Johnson, but to the countless articles and texts by figures such as Le Corbusier, Gropius, Hilberseimer, and Ginzburg from 1923 on, which make statements like the following:

"[T]he architect, the artist, without mastering the sovereign possibilities of technology, remains clouded in academic aestheticism, becomes tired and convention-bound; the design of accommodations and of cities escapes him. This formalistic development, mirrored in the 'isms' that have rapidly succeeded one another in the past few decades, seems to have reached its end. A new essential sense-of-building is unfolding simultaneously in all the cultured countries. Our realization grows of a living form-will [*Gestaltungswille*], taking root in the totality of society [*in der Gesamheit der Gesellschaft*] and its life, investing all realms of man's formative activity with a unified goal — beginning and ending in building." Gropius, Walter. *Internationale Architektur*. (Bauhausbücher, № 1. Munich, Germany: 1925). Pg. 6.

"If one takes a cursory glance at everything that is now taking place in the architectural life of all countries, the first impression will be this: *the world is split into two halves. In one of them, eclecticism still reigns —* having lost any point of departure, having exhausted itself through and through — *perfectly symbolizing the deteriorating culture of old Europe. In the other [half] young, healthy shoots push themselves through —* landmarks, the beginnings of a new life start to emerge, from which it is not difficult to extend the single, unified thread of an international front of modern architecture. Despite all the differences and peculiarities of different countries and peoples, this front really exists. The results of the revolutionary pursuits of the modern architectural avant-gardes of all nations intersect with one another closely in their main lines of

attracted to the Soviet cause. That the number of international representatives of the avant-garde swelled to such an unparalleled degree should come as no surprise, either, given the prospect of imminently realizing their most utopian dreams. In the midst of the collapse of the old order, as heralded by world war, pestilence (Spanish influenza), revolution, and a nearly universal depression, it appeared as if the modernists were being granted their deepest wish — *of erecting a new society upon the ashes of that which had preceded it*. "Our world, like a charnel-house, lays strewn with the detritus of dead epochs," Le Corbusier had thundered in 1925.[29] In the wake of global instability, crash, and catastrophe, the Soviet five-year plan seemed to offer to him and his fellow avant-gardists the chance to wipe the slate clean.

---

development. They are forging a new international language of architecture, intelligible and familiar, despite the boundary posts and barriers." Ginzburg, Moisei. "Mezhdunarodnoi front sovremennoi arkhitektury." *Sovremennaia arkhitektura*. (Volume 1, № 2. Moscow, Russia: March 1926). Pg. 41.

"Manifestations of this movement, with certain nuances conditioned by national characteristics, can be found in America as well as in almost every European country: in Germany and Holland, in Austria and Czechoslovakia, in Italy, France, and Russia…There can be no better evidence for the living relevance of the ideas that support this movement. A movement so elemental and so widespread internationally, which has arisen spontaneously in various places with similar goals, may hardly be considered a transitory and thus frivolous artistic fashion." Behrendt, Walter Curt. *The Victory of the New Building Style*. Translated by Harry Francis Mallgrave. (Getty Research Institute. Los Angeles, CA: 2000). Pg. 100. Originally published in 1928.

"The new architecture…is based not on problems of style, but on problems of construction…So the surprising agreement in the external appearance of this new international architecture is also evident. It is not a fashionable matter of form, as is often assumed, but the elementary expression of a new conviction of construction. Although often differentiated by local and national particularities and by the person of the designer, in general the product is made subject to the same conditions. Therefore the uniformity of their appearance, their spiritual connectedness across all borders." Hilberseimer, Ludwig. *Internationale Neue Baukunst.* (Julius Hoffmann. Stuttgart, Germany: 1929). Pg. 1.

"The principles of the [international] style that appeared already plainly by 1922 in the projects and the executed buildings of the leaders, still control today an ever increasing group of architects throughout the world." Hitchcock, Henry-Russell and Johnson, Philip. *The International Style: Architecture since 1922*. (W.W. Norton & Company, Inc. New York, NY: 1995). Pg. 49. Originally published in 1932.

[29] Le Corbusier. *The City of To-morrow and its Planning*. Translated by Frederick Etchells. (Dover Publications, Inc. Mineola, NY: 1987). Pg. 244. Originally published as *Urbanisme* in 1925.

It is therefore little wonder that the tenor of the debates over Soviet urbanism should have been cast in such stark terms. The fate of the entire avant-garde, if not society itself, hung in the balance. Whichever principles won out might ultimately determine the entire course of future building for the USSR, and perhaps the world (pending the outcome of the seemingly terminal crisis in the West). Modernist architects, who had up to that point been mainly concerned with the design of individual structures, and only here and there touched on the greater problem of urbanism, now scrambled to articulate their theoretical stances on the issue of "socialist settlement." As a number of rival positions emerged, they came into heated conflict with one another. Whole books were written and articles published in popular Soviet journals defending one theory and attacking all that opposed it. And so the disputes did not merely take on the character of modernism combating its old traditionalist rival, but that of a radically fractured unity of the modernist movement itself. The fresh lines of division being carved within the architectural avant-garde did not owe so much to national peculiarities as it did to the *radicality* of the question now being posed before it: *that of the fundamental restructuring of human habitation*. For the issues at hand were not simply the reorganization of already-existing cities, but also the construction of entirely new settlements from the ground up. The intransigent tone that the debates subsequently assumed is thus more a testament to the urgency and sincerity of the modernist theories of the city being put forth than it is to some sort of arbitrary disagreement over matters of trivial importance.

This point is especially important to stress, moreover, in light of some interpretations that have recently dismissed these crucial differences in the avant-garde's architectural visions of utopia as a *quantité négligible*. Not long ago, the argument was advanced that these theoretical disputes amounted to little more than quibbling pettiness on the part of the members of the avant-garde. According to this version of events, the modernists merely dressed up their personal animosities, jealousies, and professional rivalries in high-sounding rhetoric and thereby ruined any chance for productive collaboration with one another. Moreover, it asserts that it was this very disunity that led to the modernists' eventual defeat at the hands of the Stalinists. Weakened by the years of petty bickering, this argument maintains, the two main groups representing the architectural avant-garde (OSA and ASNOVA) were easily undercut by the fledgling, proto-Stalinist organization

VOPRA, working in cahoots with the party leadership. Had the members of the avant-garde been willing to set aside their differences, this outlook would have it, they might have prevailed against the combined strength of their opponents.[30]

Of course, this account almost completely overlooks the international dimension of the debates, choosing instead to narrowly focus on the faculty politics taking place within the walls of the VKhUTEMAS school of design. While this was doubtless an important stage of the debate, it can scarcely be considered the decisive grounds on which the war over Soviet architecture was waged. It is symptomatic that such an interpretation would leap suddenly from the middle part of the 1920s to the final defeat of the architectural avant-garde in the 1937, ignoring practically everything that transpired in between. As a result, it is able to treat the problem as a merely internal affair, concerning only Soviet architects. This then allows the importance of the tensions within the VKhUTEMAS leadership throughout the early- to mid-1920s to be grossly overstated.[31] Even if the field of inquiry is thus limited, however, the polemics can by no means be reduced to mere cynicism. Such bitterness and resentment could just as easily be an outcome of (rather than a ground for) heated argumentation.

But this notion — that the real differences within the modernists' debates over Soviet architecture and urbanism were largely exaggerated — is swiftly dispelled once one takes note of the extra-architectural interest surrounding their potential results. For architects

---

[30] Hudson, Hugh. *Blueprints and Blood*. (Princeton University Press. Princeton, NJ: 1995). Pgs. 82-83.

[31] Catherine Cooke, one of the great Anglophone authorities on Soviet architecture (tragically killed in a car crash in 2004), pointed this out in her initial review of Hudson's book. Hudson marks the date of the final deathblow to the avant-garde, somewhat melodramatically, as occurring in 1937, which he considers to have been symbolized by the murder of the former-Left Oppositionist and architectural disurbanist Mikhail Okhitovich, which he uncovered as having taken place during the purges. Cooke, though "grateful" for this "archival nugget," warned that outside of specialists, "others may be mystified as to the significance of the man [Okhitovich] or the weight of the issues he raised, for there is no context here of the eighteen-month public, professional and political debate of which his ideas were a part." This oversight is no coincidence, however. For if Hudson had examined Okhitovich's ideas on city planning he would have been forced to discuss the broader international discourse surrounding Soviet urbanism. As it happens, the 1937 selected by Hudson as the last gasp of the avant-garde in Russia is correct; but because it was when all foreign architects were expelled. Cooke, Catherine. "Review of *Blueprints and Blood: The Stalinization of Soviet Architecture, 1917-1937* by Hugh D. Hudson." *Russian Review*. (Vol. 54, № 1: Jan., 1995). Pg. 135.

were hardly the only ones worried about the form that new Soviet settlements would take. The ideological influence of architecture on society was not lost on non-architects within the Soviet hierarchy. Many thinkers, scattered across a wide range of vocations, were therefore drawn into the discourse on socialist city planning. Quite a few economists participated in the discussion. Besides Leonid Sabsovich, a writer for the state journal *Planned Economy* and a major figure in the debates, economists like Stanislav Strumilin (one of *Planned Economy*'s editors) and Leonid Puzis weighed in on the material aspects of the various schemas of town planning. Professional sociologist Mikhail Okhitovich joined OSA in 1928, and went on to become one of its major spokesmen. The celebrated journalist and author Vladimir Giliarovskii reported on some considerations of nervo-psychological health in the socialist city.[32] Even more telling of the perceived centrality of the problem of Soviet urbanism to the five-year plan is the number of high-ranking party members and government officials who wrote on the matter. The Commissar of Enlightenment Anatolii Lunacharskii, Lenin's widow Nadezhda Krupskaia, the old guard Bolshevik Grigorii Zinov'ev, and the doctor and Commissar of Health Nikolai Semashko all devoted lengthy articles to the consideration of different proposed solutions to the issue of urban planning. So clearly, the detailed differences between the various Soviet urban projects concerned more than solely the architects.

Another historiographical point that must be made is that what appears to have been "Stalinist" from the outset could not have been recognized as such at the time. The emergent features of what came to be known as Stalinism — its bureaucratic deformities, thuggery, and cultural philistinism — had not yet fully crystallized by the early 1930s. While it is true that these qualities may have been prefigured to some extent by the failure of the German and Hungarian revolutions after the war, the USSR's consequent isolation, and the cascading effects of the political involutions that followed — none of this could be seen as yet. The betrayed commitment to international revolution, the disastrous (if inevitable) program of "Socialism in One Country," did not bear their fruits until much later. The residual hope remaining from the original promise of the revolution echoed into the next two decades, before the brutal realities of Stalin's regime eventually set in.

---

[32] Giliarovskii, Vladimir. "Problema sotsialisticheskogo goroda i nervno-psikhologicheskoe zhdorov'e." *Planovoe khoziaistvo*. (Volume 6, № 3. Moscow, Soviet Union: March 1930). Pgs. 111-116.

In 1930, there was no "Stalinist" architecture to speak of. Even the eclectic designs of the academicians did not fully anticipate what was to come. The contours of what would later be called "Stalinist" architecture — that grotesque hybrid-creation of monumentalist gigantism and neoclassical arches, façades, and colonnades — only became clear after a long and painful process of struggle and disillusionment. Toward the beginning of the decade, a number of possibilities seemed yet to be decided upon, and so the utopian dream of revolution continued to live on.[33]

Whatever latent realm of possibility may have still seemed to exist at the moment the Soviet Union initiated its planning program, however, its actual results admit of no such uncertainties. The defeat of modernist architecture was resounding and unambiguous. And while it would survive and even flourish in the West following the Second World

---

[33] Stites, Richard. *Revolutionary Dreams: Utopian Vision and Experimental Life in the Russian Revolution.* (Oxford University Press. New York, NY: 1991).

Since Stites already touched on utopian vision in Soviet town planning during the 1920s in chapter nine of this book (pgs. 190-208), it may be wondered why it demands another treatment. First, while Stites' book offers an excellent framework of analysis for this period (one which I am partially adopting), there are many glaring factual errors in his account. One is quite understandable; he provides Mikhail Okhitovich's date of birth and death as "1896-1937," which is true, but then adds that he "died of natural causes." Pg. 194. Hudson, whose best insights are purely factual, revealed after his visits to the archives in 1992-94 that Okhitovich was actually a victim of the purges. Stites' other mistakes make less sense. For example, on page 197, he describes Moisei Ginzburg the "main spokesman" for "the principle of 'rationalism' in architecture." Ginzburg was one of the foremost leaders of the Constructivists in OSA, whose theories opposed those of the Rationalists in ASNOVA, led by Ladovskii. On the following page, he lists urban proposals which he attributes to Ladovskii and Varentsov as belonging to OSA, when the former had actually been the president and the latter the secretary of ASNOVA.

Beyond this, however, the reason this subject warrants another study is that even though Stites provides an admirable assessment of the utopian dimension of early Soviet town planning, he leaves out much of the complexity and richness of this topic. First of all, he only looks at the Urbanist and Disurbanist parties in the debate, with one offhand reference to Miliutin's alternative idea of a "linear city." He does not once mention ARU, the urban planning group Ladovskii founded in 1929 after parting ways with ASNOVA. Nor does he consider some of the international teams of architects who participated in the utopian project of the early Soviet Union. Finally, because his interests are different from my own, he does not look into the relationship between utopian modernism and its totalizing tendencies as evidenced by the Soviet case. This is doubly important, since I intend to retroactively ground the obstinacy of the debates by it.

War, the avant-garde left something of its substance behind in Russia. Its external form remained — with its revolutionary use of concrete, glass, and other materials, its austere lines and structural severity — but it had been deprived of its inner core, and now stood devoid of content. For architectural modernism had hitherto expressed an inseparable duality, and *deduced its role as both a reflection of contemporary society and an effort to transform it*. These two aspects, its attempt to create a universal formal language that corresponded to modern realities and its sociohistorical mission to fundamentally *reshape* those very realities, were inextricably bound up with one another. When the architectural avant-garde ultimately failed to realize itself by achieving this mission, it became cynical; its moment of opportunity missed, it chose instead to abandon the task of helping remake society. Cast out of the Soviet Union, the modernists let go of their visions of utopia and made their peace with the prevailing order in the West. They pursued traditional avenues like public contracts and individual commissions to accomplish each of their proposals. No longer did they dream of building a new society, but focused on limited projects of reform rather than calling for an all-out revolution. Emptied of its foundational content, however, modernism gradually gave way to post-modernism as architecture became even further untethered from its basis. Reduced to a set of organizational forms, modernist design grew increasingly susceptible to criticisms of its apparently "dull" and "lifeless" qualities. Modernism's capitulation to the realities of bourgeois society doomed it to obsolescence. The modern itself had become passé.

    Framed in this way, this paper will assert that the outcome of the debates over Soviet urbanism in the 1930s sealed the fate of the international avant-garde. All of its prior commitments to general social change were reneged. Modernism's longstanding duty to solve the problem of "the minimum dwelling,"[34] which for Marxists was closely tied into Engels' work on *The Housing Question*,[35] was relinquished after only the first few CIAM

---

[34] The problem of the *Existenzminimum* was pursued by members of CIAM such as Walter Gropius and Karel Teige throughout its early years.

    See Teige, *The Minimum Dwelling*, and Gropius, Walter. "Sociological Premises for the Minimum Dwelling of Urban Industrial Populations." Translated by Roger Banham. *The Scope of Total Architecture*. (MacMillan Publishing Company. New York, NY: 1980). Originally published in1929.

[35] Engels, Friedrich. *The Housing Question*. Translated by C.P. Dutt. *Marx and Engels Collected Works, Volume 47: Friedrich Engels, 1873-1876*. (International Publishers. New York, NY: 1995).

conventions (1929-1931). Its resolution to put an end to wasteful (even criminal[36]) ornamentation and make all building more functional was scaled back to a mere stylistic choice, rather than a general social practice. Likewise, modernism's call for a uniform, standardized, and industrialized architecture of the home was replaced by a tendency to custom-design each individual dwelling — usually the wealthier ones — as its spare, geometric style became chic among the upper classes. The mass-production of housing, serialized with interchangeable parts, was instead taken up by companies building in a more traditional style, hoping to turn a cheap profit housing students or the poor. Those bleak modernist housing complexes that *were* created all too often became places to merely stuff away the impoverished classes, cramped and out of sight. (That such places would become areas of high concentration for drug use and petty crime is only fitting). Finally, the quest for a universal architectural language was abandoned. This language was adopted exclusively by those particular architects who identified themselves with the modernist movement, and even then it was pursued on only a piecemeal basis.

The Soviet Union alone had presented the modernists with the conditions necessary to realize their original vision. Only it possessed the centralized state-planning organs that could implement building on such a vast scale.[37] Only it promised to overcome the clash of personal interests entailed by the "sacred cow" of private property.[38] And only it had

---

[36] Loos, Adolph. *Ornament and Crime: Selected Essays*. Translated by Michael Mitchell. (Ariadne Press. New York, NY: 1997).

[37] Le Corbusier, in a letter to Lunacharskii in July 1932, wrote that the Soviet Union was the "only one possessing the institutions that permit the realization of modernist programs." Le Corbusier. "Letter to Anatolii Lunacharskii, May 13th, 1932." Translated by Michael Wolfe and Michael Vogel. Taken from S. Frederick Starr's publication of the original French letter in his article "Le Corbusier and the USSR: New Documentation." *Cahiers du Monde russe et soviétique*. (Vol. 21, № 2: April-June, 1980). Pg. 218.

[38] This point was mentioned by a number of thinkers as relevant to the Soviet Union's advantage over its counterparts in the West, where private property still reigned: "Only a new organization of society can facilitate the creation of new architectural forms — forms essential by today's standards. A standardized type of apartment and the implementation of collective housing can take place only in a socialist society, a society unencumbered by private property or by the social and economic unit of the bourgeois family." Teige, Karel. *Modern Architecture in Czechoslovakia.* Translated by Irena Murray and David Britt. *Modern Architecture in Czechoslovakia and other writings*. (Getty Research Institute. Los Angeles, CA: 2000). Pg. 108. Originally published as *Moderní architektura v Československu* in Prague, 1929.

the sheer expanse of land necessary to approximate the spatial infinity required by the modernists' international imagination.[39] The defeat of architectural modernism in Russia left the country a virtual graveyard of the utopian visions of unbuilt worlds that had once been built upon it. It is only after one grasps the magnitude of the avant-garde's sense of loss in this theater of world history that all the subsequent developments of modernist

"The nonexistence of private land ownership with its accompanying conflict of private interests creates the conditions for unimpeded city and regional planning for densely populated areas, based solely on community welfare and the modification of these plans as the need arises and at any given moment of time. In the same way, state control of the economy in general, and the concentration of all large construction enterprises under central control in particular, allow a planned effort directed at the industrialization of construction, standardization, and the systematic establishment of building standards." Ginzburg, Moisei. "Contemporary Architecture in Russia." Translated by Eric Dluhosch. *Russia: An Architecture for World Revolution*. Pg. 156. Originally published in *Die Baugilde* in October 1928.

"The German city planner would be surprised to no end if he could watch his Russian colleague at work. What! No twenty regulations, laws, and restrictions obstructing rational planning in a spiderweb of private property lines? Really free land? And no twenty-four hour municipal authorities who must be consulted each time the planner wishes to establish a building line? No jurisdictions, and no hangovers, and what has been planned can really be built? …Only by freeing the best creative energies of the city planner from the shackles of private property restrictions can their full flowering in their entire social, technical, and artistic dimension be assured. In our country, city planning is what the word says: mere city *planning*. In Russia city planning is in fact city *building*." Wagner, Martin. "Russia Builds Cities." Translated by Eric Dluhosch. *Russia: An Architecture for World Revolution*. Pg. 208. Originally published in *Tagebuch*, July 25th, 1931 (Berlin, vol. XXX).

"The key to the solution of [the housing] problem lies in the question of private property in particular, and of the production and social situation in general. Within the framework of the prevailing system, all questions of social policy, whether they concern workers' rights or housing demands, are only by-products of the class struggle; any occasional successes result only in a partial alleviation of the evils of greed and usury. Because they never touch the root cause of the problem or change anything in the basic constitution of the system, they remain a palliative and a superficial treatment of symptoms, never leading to a real cure. Since the housing question, as an inseparable part of the housing crisis, is inextricably linked to the current economic system, it cannot be eliminated unless this system is eliminated and a new one established." Teige, *The Minimum Dwelling*. Pg. 60.

[39] In a journal entry dated July 14th, 1927, Erich Mendelsohn recorded that "[t]he endless space of Russia makes dream and aspiration — idea and action — impenetrable in the negative sense, infinite in the positive." Mendelsohn, Erich. *Erich Mendelsohn: Journals and Notebooks*. (Triangle Architectural Publishing. New York, NY: 1992). Pg. 90.

architecture in the twentieth century become intelligible. For here it becomes clear how an architect like Mies van der Rohe, who early in his career designed the Monument to the communist heroes Karl Liebkneckt and Rosa Luxemburg in 1926, would later be the man responsible for one of the swankiest monuments to high-Fordist capitalism, the Seagram's Building of 1958. And here one can see how Le Corbusier, embittered by the Soviet experience, would briefly flirt with Vichy fascism during the war before going on to co-design the United Nations Building in New York.

A Structural Overview of the Proceeding Work

The following study will be divided into two major sections. These will then be followed by a brief conclusion surveying their results and drawing out any further implications. Both sections are intimately related to one another. Along the way, a number of figures appearing in the one will recur in the other. Reference will be had throughout to some of the claims previously established or in anticipation of those yet to be made. The principle underlying this division is not simply one of organizational clarity, however; the objects under investigation in each section demand separate treatment, as they vary in terms of size, scope, and generality. Moreover, the historical forces and valences operative in the second section require prior exposition in the first.

To be a bit clearer, the first section will seek to analyze the historical *phenomenon* of the avant-garde, and to relate it to the societal conditions out of which it emerged. It will begin by examining the broadest features of the nineteenth-century European society in which architectural modernism first took shape, and then proceed to detail the specific dynamics that led to its appearance. This will necessarily involve, however, a description of modernism's immediate predecessor in the field of architecture: academic eclecticism, or traditionalism. As the discursive backdrop against which the avant-garde would later define itself, an understanding of the origins and peculiarities of traditionalism is crucial to any interpretation of the modernist movement. From there, we can relate modernism in architecture to its disciplinary context, as well as to concurrent developments in the realm of abstract art and industrial technology. Both of these would exercise a distinct influence over the avant-garde as it first began to appear in prewar Europe. Modernism's connection with socialist political tendencies and the larger "ideology of planning" that fomented during this time will also be spelled out.[40] Finally, the focus will shift from an overview of the international avant-garde in general to a survey of Soviet modernism in particular. The internal divisions of the Soviet avant-garde will serve to expose some of

---

[40] The great Italian architectural historian and Marxist Manfredo Tafuri in particular has analyzed the way in which "architectural ideology became *the ideology of the plan*," which was then "put into crisis and supplanted when, after the crisis of 1929, with the…launching in Russia of the First Five-Year Plan." Tafuri, Manfredo. *Architecture and Utopia: Design and Capitalist Development*. Translated by Barbara Luigia La Penta. (MIT Press. Cambridge, Massachusetts: 1976). Pgs. 48-49.

the principal tensions and contradictions that existed as part of architectural modernism's fundamental reality and concept.

Section two will take up the major forces and agents introduced in section one as belonging to the avant-garde phenomenon and highlight a defining *moment* in its history: namely, the debates over Soviet urbanism in the late 1920s and early 1930s. The USSR, as the stage of this historical drama, will need to be adequately contextualized. The paper will thus discuss it in terms of its overall place within the prevailing socioeconomic order of world capitalist intercourse, its political exigencies, and its program of revolutionary planning. Within this context, the convergence of domestic and international groups and individuals around the question of urbanism and regional reorganization will be shown in all its complexity and variety. It will demonstrate the sheer range of modernist theories of urban-planning by taking a look at the most original and provocative proposals. The precise relationship of these architectural schemes to the greater Soviet project of the "revolutionization of everyday life" will be elucidated as well.[41] Tracing the shifting course of the debates, the different political and practical obstacles facing the avant-garde will be brought into sharper relief. The state intervention into these affairs and the slow turn toward a more rigidly prescribed and conservative architectural doctrine will also be documented. Parallel developments taking place across the arts, literature, theater, and cinema during the cultural revolution will be noted as well. This section will close with a dissection of the various defeats of the international avant-garde in Russia and the final deathblow it was dealt, remarking on some of its immediate consequences.

Finally, the conclusion will consider the aftermath of the debates on Soviet urbanism and the ultimate effect it had on the international avant-garde. Remembering the way in which architectural modernism first emerged, and how the movement was constituted, the questions will be posed: How was the historical trajectory of the avant-garde affected by its encounter with the Soviet enterprise? To what extent was it irrevocably altered? To what extent did it come out unscathed? The impact of modernism's failed romance with

---

[41] This common notion, filed under the general rubric of *reorganizatsiia byta* and other similar slogans, was perhaps best examined by the Hungarian philosopher René Fülöp-Miller in 1927. Fülöp-Miller, René. *The Mind and Face of Bolshevism*. (Chiswick Press. London, England: 1927). See especially chapter ten, on "The Revolutionizing of Everyday Life." Pgs. 185-222.

revolutionary socialism in the USSR will be assessed according to the subsequent path of architectural development in the West. The fate of the international avant-garde after its failure to realize itself in Soviet urbanism — the loss of its utopian element — can then be gauged with respect to the fate of society in general after the Stalinist betrayal of Marxist cosmopolitanism. The degree to which Stalinism would later absorb aspects of modernist art and architecture (in a sort of perverse sublation), as contended by authors like Groys and Paperny, will also be evaluated here.[42]

---

[42] "Under Stalin the dream of the avant-garde was in fact fulfilled and the life of society was organized in monolithic artistic forms, though of course not those that the avant-garde had favored." Groys, Boris. *The Total Art of Stalinism: Avant-Garde, Aesthetic Dictatorship, and Beyond*. Translated by Charles Rougle. (Princeton University Press. New York, NY: 1992). Pg. 9.

Despite the correctness of his interpretation, Groys' celebration of Stalinist aesthetic "radicalism" often borders on the perverse: "In actual fact…the Stalinist ideologists were far more radical than the cultural revolutionaries [avant-gardists], who had received a very bourgeois upbringing and who were in fact Westernizers aspiring to make Russia a kind of better America. The radicalism of Stalinism is most apparent in the fact that it was prepared to exploit the previous forms of life and culture, whereas even the avant-garde detractors of the past knew and respected the heritage to such a degree that they would rather destroy than utilize or profane it." *Ibid.*, pg. 42.

"Viewed from the perspective of the avant-garde's theoretical self-interpretation…Stalinist culture both radicalizes and formally overcomes the avant-garde; it is, so to speak, a laying bare of the avant-garde device [Shklovskii] and not merely a negation of it." Pg. 44.

"Le Corbusier and other members of the CIAM wrote a letter to Stalin lobbying him to intervene in order to 'stop this sensational challenge to the public from being executed.' Stalin, as it turned out, was the last person they should have asked. As architectural historian Dmitrii Khmel'nitskii recently discovered, the whole design belonged to Stalin himself. None of the official authors, says Khmel'nitskii, — Iofan, Shchuko or Gel'freikh — was capable of such 'clear spatial idea, vigor, strength, dynamism, and at the same time such powerful barbarism, such neophyte courage in dealing with form, function and surface.'

If we are to believe Khmel'nitskii, then Stalin appears to have been a greater modernist than Le Corbusier, Wright, Ginzburg or Vesnin. His barbarian creation did not imitate any known style of the past, his Palace was to surpass the Empire State Building by a few feet, he did not collaborate, he worked incognito (just like Roark on the housing project), he disregarded community life and was not interested in people. Moreover, his structure was supposed to be age-resistant: 'Centuries will not leave their mark on it,' wrote the official historian of the Palace Nikolai Atarov. 'We will build it so that it will stand *without aging*, forever.'" Paperny, Vladimir. "Modernism and Destruction in Architecture." *Art Margins*. (2006).

The Dialectic of Modernism and Traditionalism: the Development of the International Avant-garde in Architecture

Modernist architecture is incomprehensible without reference to its opposite: eclecticism, or traditionalist architecture. Each, however, is equally a product of modernity. Though traditionalism lacks modernism's seemingly inherent connection to its namesake, the former was no less a result of modern society than the latter, and even arrived at an earlier point in history. Both emerged out of an internal dynamic operating at the heart of capitalist modernity, one that conditioned the very spatiotemporal fabric of social life. Traditionalism owed to one of the elements constituting this dynamic, while modernism owed to the other. While each of these elements existed from the moment of capitalism's inception in Western Europe, it would not be until the social formation reached a higher stage of maturity that they would recognizably rise to the surface. Only after the effects generated by one of the sides of this underlying process made themselves sufficiently felt did architecture begin to reflect its objective characteristics.

Eclecticism in architecture first appeared toward the beginning of nineteenth century. It would achieve increasing hegemony over the domain of constructive practice as the disciplines of art and architectural history began to firmly establish themselves within the academies. As theorists surveyed the field of European architecture, they discerned a range of distinct historical "styles." These they believed to correspond to the civilizations that produced them, as the expression of their age. Identifying the dominant features of these styles, they compiled an ever more exhaustive dataset, detailing the fine points and minute variations that occurred within them. With a progressive degree of refinement, these classificatory systems proceeded to plot each style along the historical continuum, assigning them precise dates and periodicities. Their specific attributes, as well as the different techniques employed to create them, were also elaborated.

Viewing the mass of historical information collected before their eyes, nineteenth-century architects now saw what appeared to be a vast inventory of styles, forms, and techniques. Starting from this broad basis in the architectural traditions of the past, contemporary practitioners could now borrow and mix various stylistic elements from

each to achieve a new aesthetic effect. So not only would builders seek to reproduce structures belonging to one particular period in its purity, but would freely juxtapose features from a number of different traditions. For these architects viewed themselves as the inheritors of the entire history that had preceded them. The classical, the Gothic, the Romanesque — these were simply distinct modes of building that could be mastered and combined by the builders of the present. And so the latter half of the nineteenth century witnessed an intense proliferation of hybrid and heterogeneous forms, a heightened sense of the importance of ornamentation, and increasing historicism in the building arts.

Modernism understood itself not only as a polemical response to the eclecticism and historicism of its day, but as also arising out of positive advances that had taken place within modern society. Indeed, while the architectural avant-garde would spend much of its time decrying the academies ("those hothouses where they fabricate blue hydrangeas and green chrysanthemums, where they cultivate unclean orchids"[43]), it would never fail to mention its indebtedness to the achievements of the "machine age." The progress of industrial technologies, the invention of new building materials — these would help form the bedrock of modernist architectural theory. The avant-garde would fiercely advocate the standardization of parts, the utilization of glass and ferroconcrete, and the overall industrialization of the building process. Only by emulating these aspects of modernity could they create an architecture adequate to their age.

But at the same time, the modernists were just as strongly influenced by concurrent developments in modern abstract painting. The painters' stress on repeating geometric patterns and formal simplicity was also taken up by the architects. This abstract spatiality in avant-garde thought was mirrored in its temporal dimension: while no doubt aware of the historical succession of styles, modernism considered itself to be their negation. Most modernists had deep respect for the building practices of the past. They simply believed that their own work rendered these past practices obsolete. For the modernists, they felt

---

[43] Le Corbusier. *Toward an Architecture*. Translated by John Goodman. (The Getty Research Library. Los Angeles, CA: 2006). Pg. 95. Originally published as *Vers un architecture* in 1923.

Compare with Ginzburg's similarly-phrased denouncement of traditionalist buildings as "*the anemic fruits of faux-classical eclecticism [nurtured] in…academic greenhouses*." Ginzburg, "The International Front of Modern Architecture." Pg. 42.

that the technical and social revolutions of their time had landed them at a sort of Year Zero, whereafter the procession of human experience could be more uniformly organized, rationalized, and homogenized. The ideal of industrial efficiency was captured by the Taylorist system of scientific time-management, for which the architectural avant-garde sought to provide spatial expression.[44] The optimization of floor layouts, thoroughfares, and household conveniences was thus one of its primary concerns.

Though these preliminary sketches of modernism and traditionalism in architecture must be regarded as provisional, they nevertheless point to some of the principal features that remain to be explained by the ensuing study. The difficulty will consist primarily in showing how a single social formation, capitalism, could give birth to these two opposite tendencies within architectural thought. This twofold development, as mentioned earlier, must be seen as emerging out of the dynamic of late nineteenth-century capitalism, which had by that point extended to encompass the whole of Europe. The dynamic responsible for both architectural modernism and traditionalism can be termed, for the purposes of the present essay, "the spatiotemporal dialectic of capitalism."[45] For it was this unique spatiotemporal dialectic of the capitalist mode of production — along with the massive social and technological forces it unleashed — that would form the basis for the major architectural ideologies that arose during this period. Although the complete excogitation of this concept requires more space than the present inquiry can allow, some of its most pertinent points can still be summarized here in an abbreviated form.

(One terminological caveat should be mentioned before moving on, however. For the purposes of this paper, the notions of "modernity" and "globality" will be seen as bearing an intrinsic relationship to capitalism. Modernity, this study will maintain, is merely the *temporal* register of capitalism, while globality is its *spatial* register. In accordance with this assertion, modernization and globalization are both aspects of capitalization.)

---

[44] "Modernism in architecture is supposed to be based on the worldview and techniques that stem from an engineering model, one that includes scientific management as a key component. Accordingly, modernism emerged to the extent that engineering influenced the education, training, and professionalization of architects." Guillén, Mauro F. *The Taylorized Beauty of the Mechanical: Scientific Management and the Rise of Modernist Architecture.* (Princeton University Press. Princeton, NJ: 2008). Pgs. 33-35.

[45] For a more detailed exposition of this dynamic underlying modern society, please see the longer paper I devoted to the subject. Wolfe, Ross. "The Spatiotemporal Dialectic of Capitalism." 2011.

The Spatiotemporal Dialectic of Capitalism

Capitalism does odd things to time. On the one hand, it standardized the measurement of time to obey the artificial pulse of the mechanical clock. This standardization was at the same time part of a larger project of *rationalization* that took place under the auspices of capitalism as it spread throughout Europe in the eighteenth and nineteenth centuries. For the first time in history, society was synchronized according to a single regime of time; its movement was as clockwork. This new temporal order replaced the traditional system of timekeeping, based as it was on the arbitrariness of convention and the natural cycles of the changing seasons and daylight. This sort of time, abstracted from all events that might take place under its watch, can be referred to as *Newtonian* time — pure, uniform, untainted by the messiness of historical change.

On the other hand, however, capitalism after a certain point seems to have generated a new sense of historical consciousness separate from the abstract, Newtonian time with which it coincides. This was brought about by an aspect inherent to the composition of capital itself, located specifically in its value-dimension. For once capital began to revolutionize the basis of the production of what Marx termed "relative surplus-value," a series of accelerating social and technological innovations began to send shockwaves throughout the rest of society. This was correspondingly experienced as a sequence of convulsive social transformations, continuously uprooting the time-honored organic social relations that preceded the rise of capitalism. As capitalist production developed further into the early nineteenth century, this dynamic became increasingly pronounced. Since these successive transformations could now be seen as occurring within the space of a single generation, a new consciousness of time arose around the notion of progressive "phases," "stages," or "epochs" of history. Opposed to both the mode of abstract time manifested by capitalism as well as the kind of historical temporality that preceded it, this can be referred to as *historical* time as it exists under capitalism.

Beginning with the former of these temporalities, some background is useful. Before the advent of capitalism, the workday was regulated by the organic rhythms of sunup and sundown, by the rooster's crow and the dim fade into twilight. Time was measured, not by the mechanical regularity of the clock, but by much more arbitrary and conventional standards. For example, in seventeenth-century Chile, "the cooking-time of an egg could

be judged by an Ave Maria said aloud."[46] Even at the level of months and days, the calendar was less important than the events that occupied it. Planting-time, harvest-time, and the celebration of religious and secular holidays — these were the patterns by which precapitalist societies understood the passage of time. "In terms of the human organism itself," observed Lewis Mumford, "mechanical time is [physiologically] foreign: while human life has regularities of its own, the beat of the pulse, the breathing of the lungs, these change from hour to hour with mood and action."[47] The digital precision of time-measurement, to which we have become so accustomed today, would have been an utterly alien concept to a person born prior to the rise of capitalism.

The mechanical calculation of time can be traced to the fourteenth century, when public clocks were mounted in cities and large commercial towns. Their impact on society at this point was still limited, however; the clocks' accuracy was often dubious. Some improvements were made in the seventeenth century with the introduction of the pendulum in the grandfather clock by Christiaan Huygens in 1656, which allowed for the isochronous measurement of time. Still, their circulation throughout society remained minimal.[48] The broader dissemination of chronometric devices took place in the first half of the eighteenth century, and only then it was the typically the gentry who would own a pocket-watch, as a symbol of their status. But it was the industrial revolution that first made the exact measurement of time socially universal. As Mumford explained, "[t]he popularization of time-keeping, which followed the production of the cheap standardized watch, first in Geneva, was essential to a well-articulated system of transportation and production."[49] The British Marxist E.P. Thompson verified Mumford's claim when he later wrote: "Indeed, a general diffusion of clocks and watches is occurring (as one would expect) at the exact moment when the industrial revolution demanded a greater synchronization of labour."[50]

---

[46] Thompson, E.P. "Time, Work-Discipline, and Industrial Capitalism." *Past & Present* 38. (1967). Pg. 58.

[47] Mumford, Lewis. *Technics and Civilization*. (University of Chicago Press. Chicago, IL: 2010). Pg. 15.

[48] Thompson, "Time, Work-Discipline, and Industrial Capitalism." Pgs. 63-65.

[49] Mumford, *Technics and Civilization*. Pg. 17.

[50] Thompson, "Time, Work-Discipline, and Industrial Capitalism." Pg. 69.

And why was the precise measurement of time so vital to a society founded on the exchange of commodities? Why did the workday have to be so artificially broken down into abstract units of time? For exactly the reason Marx explained when he wrote that

> A use-value, or useful article…has value only because abstract human labour is objectified [*vergegenständlicht*] or materialized in it. How, then, is the magnitude of this value to be measured? By means of the quantity of the "value-forming substance," the labour, contained in the article. This quantity is measured *by its duration, and the labour-time is itself measured on the particular scale of hours, days, etc.* [my emphasis]

Of course, this duration is not determined by how long it takes this or that particular individual to complete the production of a commodity. "What exclusively determines the magnitude of the value of any article," Marx then continued, "is therefore the amount of labour socially necessary, or the labour-time socially necessary for its production."[51] Marx makes it clear that this time is *abstract*, in the sense that value is determined by the time necessary to produce a commodity through abstract, homogeneous human labor.[52]

Here it may be worthwhile to briefly reflect on the way capitalism transforms the temporal dimension of social experience. On the one hand, it *homogenizes* time into a set of quantitatively equivalent metric units — minutes, seconds, hours, days. These units are effectively interchangeable; one minute lasts exactly the same duration as any other minute, regardless of the time of day. Such time, abstracted from any concrete events or occurrences that may take place in that time, is essentially universal — devoid of any particulars or peculiarities.[53] It is Newtonian time: pure, repetitive, and scientific. It is unsullied by natural or historical accidence. As the Marxist theoretician Moishe Postone puts it,

> "Abstract time,"…by which I mean uniform, continuous, homogeneous, "empty" time, is independent of events. The conception of abstract time, which became increasingly dominant in Western Europe between the fourteenth and seventeenth centuries, was expressed most

---

[51] Marx, Karl. *Capital: A Critique of Political Economy*. Translated by Ben Fowkes. (Penguin Books. New York, NY: 1982). Pg. 129.

[52] *Ibid.*, pg. 150.

[53] "Before the rise and development of modern, capitalist society in Western Europe, dominant conceptions of time were of various forms of concrete time: time was not an autonomous category, independent of events, hence, it could be determined qualitatively, as good or bad, sacred or profane." Postone, Moishe. *Time, Labor, and Social Domination*. (Cambridge University Press. New York, NY: 1993). Pg. 201.

emphatically in Newton's formulation of "absolute, true and mathematical time [which] flows equably without relation to anything external."[54]

This time is, moreover, also *cyclical*. Of course, it cannot be claimed that nature has no cycles or rhythms of its own; but these natural cycles are organic and matters of quality. The artificial cycles of abstract time are mathematic and matters of quantity. Every day has twenty-four hours, and every hour sixty minutes. Each minute in turn has sixty seconds, and all these remain invariable quantities. Once one minute is over, another begins, and once an hour has passed another has started. Such is the nature of abstract, cyclical time.

All this is well and good conceptually, but when *historically* did this new sense of time-consciousness become normalized? At what point did the majority of society come to march to the tick of a synchronous clock? Our investigation thus far has suggested that it became increasingly prevalent and normative along with the contiguous spread of capitalism during the industrial revolution. But this brings us into a longstanding debate within the study of horology. To this point, it would seem that we have downplayed or dismissed the prior *invention* of the clock, such that our treatment of the subject has failed to acknowledge the *longue durée* of timekeeping itself. But there is often a great disconnect between the mere moment an innovation occurs and the generalization of its consequences to the rest of society. "Although abstract time arose socially in the late Middle Ages, it did not become generalized until much later," asserts Postone. "Not only did rural life continue to be governed by the rhythms of the seasons, but even in the towns, abstract time impinged directly upon only the lives of merchants and the relatively small number of wage earners."[55] Only later did this profoundly *ahistorical* mode of thinking about time arise historically, as part of the deep social transformations that were taking place at the time. The compulsion to *synchronize* the whole of society only took effect with the advent of capitalism. As Postone writes emphatically, "[t]he tyranny of time in capitalist society is a central dimension of the Marxian categorial analysis."[56]

---

[54] *Ibid.*, pg. 202.

[55] *Ibid.*, pg. 212.

[56] *Ibid.*, pg. 214.

By the middle part of the nineteenth century, this form of time-consciousness, or time-discipline, had spread to virtually all of the more mature capitalist nations in Europe and America. Over the course of the latter half of the century, this way of timekeeping exercised an ever-greater degree of control over the thinking and behavior of the citizens of these nations. Toward the beginning of the twentieth century, the practice of time-discipline would be apotheosized in its most systematic form by Frederick Winslow Taylor, who advocated a mode of scientific oversight and monitoring of all time-expenditure of employees. In his *Principles of Scientific Management*, he wrote that "[t]he enormous *saving of time* and therefore increase in the output which it is possible to effect through *eliminating unnecessary motions* and *substituting fast for slow and inefficient motions* for the men working in any of our trades can be fully realized only after one has personally seen the improvement which results from *a thorough motion and time study, made by a competent man*."[57] At this point, the exactitude of one's use of time was to be internalized and automated to the utmost degree, leading to an ideal of the standardization of all labor. The most thorough practitioners of Taylor's theory, the husband-and-wife tandem of Frank and Lillian Gilbreth, thus wrote: "Through motion study and fatigue study and the accompanying time study, we have come to know the capabilities of the worker, the demands of the work, the fatigue that the worker suffers at the work, and the amount and nature of the rest required to overcome the fatigue."[58]

Just as society under capitalism was manifesting this abstract form of time, however, it was simultaneously giving birth to a new form of concrete time, distinct from the sense of concrete time that existed before the preponderance of commodity exchange in society. This concrete sense of time was not that of habit, convention, or task-orientation. It was rather a newfound sense of historical time, understood as a linear chain of events, or as a succession of "stages" leading up to the present. Along with this newfound sense of concrete, historical time came a new *consciousness* of time, specific to capitalism. What lay behind this new historical consciousness?

---

[57] Taylor, Frederick Winslow. *The Principles of Scientific Management*. From *The Early Sociology of Management and Organizations, Volume 1: Scientific Management*. (Routledge, Taylor & Francis Group. New York, NY: 2005). Pg. 129. My emphases. Originally published in 1912.

[58] Gilbreth, Frank and Gilbreth, Lillian. *Applied Motion Study: A Collection of Papers on the Efficient Method to Industrial Preparedness*. (Sturgis & Walton Company. New York, NY: 1917). Pgs. 14-15.

For one, it was the increasing dynamism exhibited by the new form of society under which they were living, such that time-honored social institutions and traditional practices now underwent a visible series of sudden and spasmodic transformations. Longstanding social relations were often uprooted and replaced within the span of a single lifetime. As Marx and Engels famously recorded in the *Manifesto*, "[t]he continual transformation of production, the uninterrupted convulsion of all social conditions, a perpetual uncertainty and motion distinguish the epoch of the bourgeoisie from all earlier ones." This shift in the underlying socioeconomic basis of society entailed a corresponding shift in the ideological superstructure: "All the settled, age-old relations with their train of time-honoured preconceptions and viewpoints are dissolved; all newly formed ones become outmoded before they can ossify. Everything feudal and fixed goes up in smoke, everything sacred is profaned."[59]

Zygmunt Bauman thus rightly credited "[t]he considerable speeding up of social change" as a necessary condition for the creation of this historical consciousness. This speeding up, he added, "was duly reflected in the…novel sense of history as an endless chain of irreversible changes, with which the concept of progress — a development which brings change for the better — was not slow to join forces."[60] The notion of progressive historical development was aided, moreover, by the ongoing technical revolutions taking place in the field of production. This concept of a progression of stages was then conversely projected backward through time, in the interpretation of history. It is therefore no surprise that this period saw the emergence of thinkers like Giambattista Vico[61] and Georg Wilhelm Friedrich Hegel,[62] who looked to the past and

---

[59] Marx, Karl and Engels, Friedrich. *Manifesto of the Communist Party*. Translated by Terrell Carver. *Later Political Writings*. (Cambridge University Press. New York, NY: 1993). Pg. 4.

[60] "It was only [the] idea of perfectibility [made possible by the concept of progress] which paved the way for utopia." Bauman, Zygmunt. *Socialism: The Active Utopia*. (George Allen & Unwin Limited. London, England: 1976). Pgs. 18-19.

[61] Vico believed that history could trace the path of "every nation" successively prefigured in the "human mind": "Our Science…comes to describe…an ideal eternal history traversed in time by the history of every nation in its rise, progress, maturity, decline and fall…[T]he first indubitable principle…posited is that this world of nations has certainly been made by men, and its guise must therefore be found within the modifications of our own human mind." Vico, Giambattista. *The New Science*. Translated by Thomas

28

interpreted it as an unfolding of qualitatively distinct "stages" or "phases" — as modes of consciousness passing the torch of civilization from one society to the next.

But what was the actual dynamic in capitalism that necessitated this series of convulsive transformations? For it is easy to say that capitalism forced this state of chronic instability, but it is much harder to actually trace out the dialectical aspect of capitalism that compels its continuous flux. And so the specific origin of this dynamic must be discovered, as it is rooted in a dimension of capital itself.

A brief investigation into the constitution of capital will reveal that this dynamic is located in the *value-dimension* of capital. Value, when it appears in the form of capital, ceaselessly strives to augment itself through a process of *self-valorization*.[63] It here becomes clear that the Lukácsean simultaneous subject-object of history is not Labor as constituted by the proletarian class, but Capital as constituted by self-valorizing value, which assimilates the non-identical to itself through its own activity while remaining at all times identical with itself.[64] As Marx wrote, "[capital] is constantly changing from one form to another, without becoming lost in this movement; it thus becomes

---

Goddard Bergin and Max Harold Fisch. (Cornell University Press. Ithaca, NY: 1948). Pg. 93. §349. Originally published in 1744.

[62] For Hegel, history was the objective constitution of the "structured shapes" of "consciousness" or Spirit: "*consciousness*, as the middle term between universal Spirit and its individuality or sense-consciousness, has for [its] middle term the system of structured shapes assumed by consciousness as a self-systematizing whole of the life of Spirit — the system that we are considering here, and which has its objective existence as world-history." Hegel, G.W.F. *The Phenomenology of Spirit*. Translated by A.V. Miller. (Oxford University Press. New York, NY: 1977). Pg. 178. §295. Originally published in 1807.

Hegel would later refine this notion: "[The mind of a nation] is in time; and…has a *particular* principle on the lines of which it must run through the development of its consciousness and its actuality. It has, in short, a history of its own. But as a restricted mind its independence is something secondary; it passes into universal world-history, the events of which exhibit the dialectic of the several national minds — the judgment of the world." Hegel, G.W.F. *The Philosophy of Mind: Part Three of the Encyclopedia of the Philosophical Sciences*. Translated by William Wallace and A.V. Miller. (Oxford University Press. New York, NY: 1971). Pg. 277. §548. Originally published in 1830.

[63] "The circulation of money as capital is an end in itself, for the valorization of value takes place only within this constantly renewed movement. The movement of capital is therefore limitless." Marx, *Capital, Volume 1*. Pg. 253.

[64] Postone, *Time, Labor, and Social Domination*. Pgs. 75-77.

transformed into an automatic subject." Value is still the operative concept in its form as capital, however: "In truth,…value is here the subject of a process in which…it changes its own magnitude, throws off surplus-value from itself considered as original value, and thus valorizes itself independently. For the movement in the course of which it adds surplus-value to itself is its own movement, its valorization is therefore self-valorization." It thereby obtains an almost magical character: "By virtue of being value, it has acquired the occult ability to add value to itself."[65]

Capital achieves this valorization through the purchase of labor as a commodity. Productive labor thus enters the process of capitalist circulation as a socially mediating activity necessary for augmenting capital. "[C]apital has one sole driving force, the drive to valorize itself, to create surplus-value, to make its constant part, the means of production, absorb the greatest possible amount of surplus labor."[66] Labor, which alone possesses the ability to enhance the value originally invested in its purchase,[67] produces surplus-value for its temporary owner in either of the following ways: 1) by an absolute increase in the time spent laboring beyond the socially average time necessary to reproduce the value advanced;[68] or 2) by a relative decrease in the time required to produce an equivalent value below that same social average, since "the prolongation of the surplus labor must…originate in the curtailment of the necessary labor-time," assuming the length of the working day remains constant.[69] The latter of these methods can only be accomplished by an increase in the productivity of labor. This increase, in turn, is achieved by technical or organizational means, either by the introduction of new machine technologies or a more efficient division of labor.[70]

---

[65] Marx, *Capital, Volume 1*. Pg. 255.

[66] *Ibid.*, pg. 342.

[67] "[Labor is] a commodity whose use-value possesses the peculiar property of being a source of value." *Ibid.*, pg. 270.

[68] "The prolongation of the working day beyond the point at which the worker would have produced an exact equivalent for the value of his labor-power, and the appropriation of that surplus labor by capital — this is the process which constitutes the production of absolute surplus-value. It forms the general foundation for the capitalist system." *Ibid.*, pg. 645.

[69] *Ibid.*, pg. 431.

[70] "The technical and social conditions of the [labor] process and consequently the mode of production

Historically, capital at first relied on the production of absolute surplus-value through the extension of the working day in order to valorize itself, until labor negotiations and parliamentary legislation managed to secure a normal working day through the famous Factory Acts. These set a legal limit on the maximum number of hours a worker could be assigned in a day.[71] Thereafter, capitalist production was generally forced to make do with the generation of relative surplus-value, which it achieved by the successive institution of cooperative action between workers, the detail division of labor in manufacturing, and the implementation of heavy machinery in large-scale industry.[72]

At this point, our digression into the inner workings of capitalism reconnects with the investigation of the unprecedented *historical consciousness* linked to the inner dynamic of capital. For it is the category of value undergirding capitalist society that is the source of its dynamism; the dynamic character of value in the form of capital is built into its very concept. The dialectical tension which characterizes capital always exists *in potentia* as part of its logic, but begins to unfold more rapidly with the general stabilization of the workday and the increased stress placed upon the generation of relative surplus-value.[73] Since relative surplus-value demands that the technical and social basis of production be constantly revolutionized so that productivity can be increased, but at the same time the rate of surplus-value thereby gained begins to vanish as soon as these technical and organizational advances are generalized, there is an overall "speeding up" of the production process. These frequent, usually violent speed-ups give rise to what Postone has called the "treadmill effect" of capitalist production, involving a "dialectic of transformation and reconstitution."[74]

---

itself must be revolutionized before the productivity of labor can be increased." *Ibid.*, pg. 432.

"[T]he production of relative surplus-value completely revolutionizes the technical processes of labor and the groupings into which society is divided." *Ibid.*, pg. 645.

[71] *Ibid.*, pgs. 389-416.

[72] Chapters 13, 14, and 15 respectively. *Ibid.*, pgs. 439-640.

[73] "With the development of relative surplus value…the directional motion that characterizes capital as self-valorizing value becomes tied to ongoing changes in productivity. An immanent dynamic of capitalism emerges, a ceaseless expansion grounded in a determinate relationship between the growth of productivity and the growth of the value form of the surplus." Postone, *Time, Labor, and Social Domination.* Pg. 283.

[74] "The peculiarity of the dynamic — and this is crucial — is its *treadmill effect.* Increased productivity

This is how an historical consciousness in the modern sense first manifested itself in society. For it was only with the further elaboration of the dialectic immanent to relative surplus-value that the concept of history as an unfolding progression of stages even became available. Postone explains: "Considered temporally, this intrinsic dynamic of capital, with its treadmill pattern, entails an ongoing directional movement of time, a 'flow of history.' In other words, the mode of concrete time we are examining can be considered *historical time*, as constituted in capitalist society."[75] This mode of concrete time described by Postone serves to ground what the contemporary philosophers Reinhart Koselleck and Jürgen Habermas have called "modern time-consciousness," which would only begin to first show itself around 1800, but which in its understanding of itself rightly traced its origins to the fifteenth and sixteenth centuries.[76] This was made manifest in the qualitative recognition of itself as the *neue* rather than the *neueste Zeit*,[77] as reference to

---

increases the amount of value produced per unit of time — until this productivity becomes generalized; at that point the magnitude of value yielded in that time period, because of its abstract and general temporal determination, falls back to its previous level. This results in a new determination of the social labor hour and a new base level of productivity. What emerges, than, is a dialectic of transformation and reconstitution." *Ibid.*, pg. 289.

[75] *Ibid.*, pg. 293.

[76] "From the eighteenth century on, it was possible to formulate the postulate of acceleration, or for those left behind, the postulate of drawing level or overtaking. The fundamental experience of progress, embodied in a single concept around 1800, is rooted in the knowledge of noncontemporaneities which exist at a chronologically uniform time." Koselleck, Reinhart. "Neuzeit." Translated by Keith Tribe. *Futures Past: The Semantics of Historical Time*. (Columbia University Press. New York, NY: 2004). Pg. 238.

"Hegel used the concept of modernity first of all in historical contexts, as an epochal concept: The 'new age' is the 'modern age.' This corresponded to contemporary usage in English and French: 'modern times' or *temps moderns* denoted around 1800 and the three centuries preceding. The discovery of the 'new world,' the Renaissance, and the Reformation — these three monumental events around the year 1500 constituted the epochal threshold between modern times and the middle ages…[T]he secular concept of modernity expresses the conviction that the future has already begun: It is the epoch that lives for the future, that opens itself up to the novelty of the future. In this way, the caesura defined by the new beginning has been shifted into the past, precisely to the start of modern times. Only in the course of the eighteenth century did the epochal threshold around 1500 become conceptualized as the beginning." Habermas, Jürgen. *The Philosophical Discourse of Modernity: Twelve Lectures*. Translated by Frederick Lawrence. (The MIT Press. Cambridge, MA: 1990). Pg. 5.

[77] Koselleck, "Neuzeit." Pg. 235.

one's own historical age as *nostrum aevum* was recast as *nova aetas*, the new age, later captured be its conception of itself as modernity (*Moderne, modernité, Modernität*).[78]

Reviewing these two distinct senses of time that emerge out of capitalism, we may briefly state the characteristics that differentiate them and determine the extent to which they interact. Some differences between the two should be obvious. One is abstract and homogeneous, the other concrete and heterogeneous. The one is cyclical and repetitive, while the other is linear and unprecedented, irreversible, and unreplicable in its exact constitution. Abstract, Newtonian time is scientific, and can be measured mechanically, by the gears in a watch. Concrete, historical time, on the other hand, must be comprehended either organically (in precapitalist societies) or dialectically (under capitalism), as a dynamic sequence of forces and events.

But despite all their differences, it is not as if these two forces are divided by an unbridgeable chasm. Rather, they are intricately and dialectically intertwined. If anything, the two separate temporal elements combine to create the unique structure of capitalist development through history. While on the one hand society is being propelled forward through a series of irreversible transformations, on the other, the repetitious pattern of day-to-day, hour-to-hour routines of social production continue according to their usual cycles. And so it is proper, when speaking of the dialectical motion of capitalism, to describe it as following a *cyclolinear* path of production and circulation punctuated by periods of boom and crisis. The "historical" element of capitalist time allows the way in which capitalism manifests itself to change over time, such that distinct phases of capitalism can be identified (liberalism/monopolism/imperialism/Fordism/neo-liberalism or "flexible accumulation"). The homogeneous, "repetitive" element of time under capitalism allows it to remain capitalism throughout all of its various phases, founded on the same principle of the supervaluation of value.

There is a spatial duality inherent in capitalism analogous to the temporal dialectic that was just covered. For there are two distinct types of space engendered by capitalism — both an abstract, global, and empty space as well as a concrete, hierarchical space composed of concentrated and distributed masses. As with both the concrete and abstract components of capitalist temporality, these stem from the basic character of capital.

---

[78] Habermas, *The Philosophical Discourse of Modernity: Twelve Lectures*. Pg. 8.

The former of these, abstract space, as constituted under capitalism, can be referred to as "Cartesian" space, just as abstract time was called "Newtonian." And just as Newton considered the abstract time he described to be "empty" (i.e., devoid of real happenings or events), the abstract space that Descartes described was conceived as "empty" (i.e., devoid of real bodies). Or, in his own words, this sort of spatiality is "comprised in the idea of a space — not merely a space which is full of bodies, but even a space which is called 'empty.'"[79] This space unfolds temporally, as capitalism spreads throughout the world. It carries the traits of universality and homogeneity: it makes no difference what particular, heterogeneous forms of culture and society it encounters. The abstract space of capitalism absorbs them regardless and makes them more like itself. Nor does it honor any national or traditional boundaries; geographical barriers likewise mean nothing to it.

The concrete space of capitalism, on the other hand, describes the very real spatial disparities and inequalities that emerge out of the inner dynamic of capital. It accounts for the antithesis of town and country, the unevenness of capitalist development, and the huge urban agglomerations that resulted from the concentration of capital in different areas of the world. This more concrete form of spatiality could be called, moreover, the "topographical" space of capitalism. For even within the limits of a single municipality, this type of space can be witnessed in the various sectors that comprise the city: the dirty factories and centers of production, the clean, slick financial district, workers' housing, the more "upscale" estates of the urban elites, and the palliative parks and green spaces, which serve to interrupt the dense overcrowding of the city. Concrete space would also help locate the centers of state power — the government buildings, judicial courts, and jails. Finally, it would include the main conduits of capitalist intercourse, the highways and backstreets, the subway systems of major cities, the train stations, bus stations, and railroad networks.

The abstract dimension of capitalist spatiality is expressed by its global quality. For capitalism, from the moment of its appearance, was in *concept* a global phenomenon. This is so despite the fact that it *did* empirically emerge under historically determinate, localizable conditions. Circumstances would have it that these conditions first fermented

---

[79] Descartes, René. *Principles of Philosophy*. Translated by John Cottingham. From *The Philosophical Writings of Descartes, Volume 3*. (Cambridge University Press. New York, NY: 1985). Pg. 228.

in England between the fourteenth and seventeenth centuries.[80] But it could nevertheless be contended that no matter where it arose, once primitive accumulation had reached the point where capital was able to reproduce itself with a surplus such that it could be reinvested, the socioeconomic system and the relations it entailed were bound to spread and eventually wrap the globe. To the extent that capitalism could be imagined to have hypothetically emerged in a different part of the world (even on a different planet), the *logic* of capitalist reproduction would in any case eventually require its extension beyond any spatial boundaries that had previously contained it.

The necessity of precapitalist social formations is a matter of debate; it is unclear whether there are necessary "stages" a nation or region must go through before arriving at capitalism. However, there can be no doubt that capitalism possesses this totalizing and compulsively expansive character once it comes into its own. In this sense, it can be distinguished from all the socioeconomic forms that preceded it, since these different systems can be said to have existed in relative isolation from one another. Oppositely, "[with capitalism, w]e are dealing with a new sort of interdependence, one that emerged historically in a slow, spontaneous, and contingent way," explains Moishe Postone. "Once the social formation based upon this new form of interdependence became fully developed, however (which occurred when labor power itself became a commodity), it acquired a necessary and systematic character; it has increasingly undermined, incorporated, and superseded other social forms, while becoming global in scale."[81]

For all these reasons mentioned above, the claim that capitalism possesses an innate *globality* can be justified. Insofar as capitalism could have potentially emerged anywhere

---

[80] "We have seen how money is transformed into capital; how surplus-value is made through capital, and how more capital is made from surplus-value. But the accumulation of capital presupposes surplus-value; surplus-value presupposes capitalist production; capitalist production presupposes the availability of considerable masses of capital and labour-power in the hands of commodity producers. The whole movement, therefore, seems to turn around in a never-ending circle, which we can only get out of by assuming a primitive accumulation (the 'previous accumulation' of Adam Smith) which precedes capitalist accumulation; an accumulation which is not the result of the capitalist mode of production but its point of departure." Marx, *Capital, Volume 1*. Pgs. 873. The conditions by which primitive accumulation arose are described between pgs. 877-895.

[81] Postone, *Time, Labor, and Social Domination*. Pg. 148.

and at any time that the conditions necessary for its existence obtained, the space it inhabits can be said to be *abstract*. The fact that it would expand outwardly and swallow all other social forms that come into its orbit, irrespective of their specific, concrete, distinguishing features, also attests to its *abstractness*. Regardless of national, geographical, or artificial boundaries, capitalism is able to transgress every border. "Through rapid improvement in the instruments of production, through limitless ease of communication, the bourgeoisie drags all nations, even the most primitive ones, into civilisation," Marx and Engels wrote in the *Manifesto*. "Cut-price commodities are the heavy artillery with which it batters down all Chinese walls, with which it forces undeveloped societies to abandon even the most intense xenophobia. It forces all nations to adopt the bourgeois mode of production or go under; it forces them to introduce so-called civilisation amongst themselves, i.e. to become bourgeois. In a phrase, *[capitalism] creates a world in its own image.*"[82]

Indeed, quite early in their careers, Marx and Engels recognized the *international* character of the capitalist mode of production. What in 1848 was limited to only a few of the more developed nations in Europe and North America would within the course of a century reach the remotest parts of the globe. Marx and Engels noted that capitalism had this unifying effect on all the nations and cultures of the world, such that for the first time there was truly a *world* market. Through this, the two young authors contended, this new global interdependence revealed itself:

> Through the exploitation of the world market the bourgeoisie has made the production and consumption of all countries cosmopolitan. It has pulled the national basis of industry right out from under the reactionaries, to their consternation. Long-established national industries have been destroyed and are still being destroyed daily. They are being displaced by new industries — the introduction of which becomes a life-and-death question for all civilised nations — industries that no longer work up indigenous raw materials but use raw materials from the ends of the earth, industries whose products are consumed not only in the country of origin but in every part of the world. In place of the old needs satisfied by home production we have new ones which demand the products of the most distant lands and climes for their satisfaction. In place of the old local and national self-sufficiency and isolation we have a universal commerce, a universal dependence of nations on one another. As in the production of material things, so also with intellectual production. The intellectual creations of individual nations become common currency. National

---

[82] Marx and Engels, *Manifesto of the Communist Party*. Pg. 5. My emphasis.

partiality and narrowness become more and more impossible, and from the many national and local literatures a world literature arises.[83]

With the consolidation of the capitalist mode of production, no longer were there so many discrete, disconnected, and incomparable societies existing in relative isolation from each other. In their stead there arose a single, monolithic, and all-encompassing entity called Society. Only in the late-eighteenth and early-nineteenth centuries did authors first begin writing of "society" as such, rather than with reference to this or that particular society. And so also was it only with Comte, Marx, Spencer, Durkheim, and Weber — from the middle part of the nineteenth century to the beginning of the twentieth — that the discipline of "sociology" carved out its place amongst the division of the human sciences.

"Bourgeois society carried out the process of socializing society," wrote the Marxist theorist, Georg Lukács. "Capitalism destroyed both the spatio-temporal barriers between different lands and territories and also the legal partitions between the different 'estates'…Man becomes, in the true sense of the word, a social being. Society becomes *the* reality for man."[84] Society treats its members, its constituent parts, as belonging to "a general whole that is substantially homogeneous — a totality."[85] No longer do they appear as divided into qualitatively different estates in which membership was more or less determined by birth. Neither is society absolutely divided along national or regional lines, into fundamentally distinct *societies*. Instead, as Adorno noted, "'Society' in the stronger sense…represents a certain kind of intertwinement which leaves nothing out; one essential characteristic of such a society — even though it may be modified or negated — is that its individual elements are presented as relatively equal." Adorno then specified that "the concept of society…[is] an essentially bourgeois term, or a 'concept of the third estate.'"[86] Society, it would seem, is only as old as capitalism.

---

[83] *Ibid.*, pgs. 4-5.

[84] "In its universe there is a formal equality for all men." Lukács, Georg. "What is Orthodox Marxism?" From *History and Class Consciousness: Studies in Marxist Dialectics*. Translated by Rodney Livingstone. (The MIT Press. Cambridge, MA: 1972). Pg. 19.

[85] Postone, *Time, Labor, and Social Domination*. Pg. 72.

[86] Adorno, Theodor. *Introduction to Sociology*. Translated by Edmund Jephcott. (Stanford University Press. Stanford, CA: 2000). Pg. 30.

But what is it specifically about capitalism that compels its stretch outward, absorbing non-capitalist societies along the way? What is the root of its cosmopolitanism? It was the later Marx, in his groundbreaking *Grundrisse* for the critique of political economy, who would pinpoint the specific aspect of capitalism that lay behind its international movement. The lynchpin of capitalism's global spatiality was to be "located" in its drive to open up new markets, in the realm of circulation, to reach greater and greater distances by revolutionizing the means of transport and communication. "The more production comes to rest on exchange value, hence on exchange, the more important do the physical conditions of exchange — the means of communication and transport — become for the costs of circulation," observed Marx. *"Capital by its nature drives beyond every spatial barrier*. Thus the creation of the physical conditions of exchange — of the means of communication and transport — the annihilation of space by time — becomes an extraordinary necessity for it."[87]

As the critical geographer and Marxist scholar David Harvey has noted, the centrifugal movement of capitalism relies upon a general improvement of the means of transport and communication, such that the turnover time (production + circulation time) required for commodities to realize their value is consequently shortened. Proportionate to the shortening of this turnover time, moreover, is the widening of the *scope* of capital's potential reach. "The reduction in realization and circulation costs helps to create, therefore, fresh room for capital accumulation," writes David Harvey. "Put the other way around, capital accumulation is bound to be geographically expansionary and to be so by progressive reductions in the costs of communication and transportation."[88] The result of this continuous expansion is the creation of the "world market" Marx had talked about in the *Manifesto*. As Marx would later put it: "If the progress of capitalist production and the consequent development of the means of transport and communication shortens the circulation time for a given quantity of commodities, the same progress and the

---

[87] Marx, Karl. *Grundrisse: Introduction to the Critique of Political Economy*. Translated by Martin Nicolaus. (Random House, Inc. New York, NY: 1973). Pg. 524. My emphasis.

[88] Harvey, David. "The Geography of Capitalist Accumulation: a Reconstruction of the Marxian theory." From *Spaces of Capital: Towards a Critical Geography*. (Edinburgh University Press. Edinburgh, England: 2001). Pg. 244.

opportunity provided by the development of the means of transport and communication conversely introduces the necessity of working for ever more distant markets, in a word, for the world market."[89] And so it is by the creation of this global market that capitalism inevitably "conquers the world," imposing its logic onto the preexisting social structures with which it comes into contact. "Marx…argued," Harvey reminds us, "that the historic tendency of capitalism is to destroy and absorb non-capitalist modes of production at the same time as it uses them to create fresh room for capital accumulation."[90]

The space of capitalist imperialism thus seeks to consume everything that lies outside of its radius. It is a *homogenizing* space — it takes all that is different, heterogeneous, and external to it and makes them more like itself. The non-capitalist structures that capitalism brushes up against lose their identity to its all-encompassing logic. If the abstract temporal aspect of capital can be called "Newtonian," its abstract spatial component can be called Cartesian — almost an empty grid of length, breadth, and width. Considered in itself, it is thus a sort of vacuous *res extensa*, conceptually distinguishable from the objects that occupy it. In relation to the concrete objects it pulls into its fold, this space is wholly abstract, ethereal, and invisible. Yet it wraps them in its essence, imbuing them with its likeness. And so too does it encapsulate the social relations that are objectified in these products and their built environment. The space of capitalism leaves nothing untouched.

In his major work on the subject of spatiality, *The Production of Space*, the famous French Marxist Henri Lefebvre developed his own notion of "abstract space." From our description of the phenomenon above, it can be seen how his understanding of abstract space roughly coincides with the account given here. "Abstract space," wrote Lefebvre, "is not defined only by the disappearance of trees, or by the receding of nature; nor merely by the great empty spaces of the state and the military — plazas that resemble parade grounds; nor even by commercial centres packed tight with commodities, money and cars. It is not in fact defined on the basis of what is perceived."[91] In other words,

---

[89] Marx, *Capital: A Critique of Political Economy, Volume 2*. Translated by David Fernbach. (Penguin Books. New York, NY: 1992). Pg. 329.

[90] Harvey, "The Geography of Capitalist Accumulation: a Reconstruction of the Marxian theory." Pg. 251.

[91] Lefebvre, Henri. *The Production of Space*. Translated by Donald Nicholson-Smith. (Blackwell

this abstract space cannot be identified by the concrete objects that inhabit it. As Lefebvre observed, the change undergone by society once engulfed by the abstract space of capital is more immediately noticeable in the altered *relations* of production rather than the actual products themselves. Lefebvre thus noted the manner in which "[t]he reproduction of the social relations of production within this [abstract] space inevitably obeys two tendencies: the dissolution of old relations on the one hand and the generation of new relations on the other."[92] Wherever the abstract space of capital enters new territories, it tends to create the *same* concrete contradictions that exist throughout the capitalist mode of production. "It is in [abstract] space that the world of commodities is deployed," wrote Lefebvre, "along with all that it entails: accumulation and growth, calculation, planning, programming. Which is to say that abstract space is that space where the tendency to homogenization exercises its pressure and its repression with the means at its disposal."[93]

Another strong tendency of abstract space was highlighted by Lefebvre is its *quantitative* (and indeed "geometric") character. In this, he parallels our own definition of abstract space as Cartesian. Like abstract time, this quantitative feature of abstract space gradually overtakes the qualitative spaces that exist before it. "Abstract space is measurable," wrote Lefebvre. "Not only is it quantifiable as geometrical space, but as social space, it is subject to quantitative manipulations: statistics, programming, projections — all are operationally effective here. The dominant tendency, therefore, is towards the disappearance of the qualitative, towards its assimilation subsequent upon such brutal or seductive treatment."[94] This space is eminently calculable, in its distances, its vortices, its contours.

The concrete dimension of spatiality under capitalism is less important to the present study, but a short overview of its features still may be given. Whatever the preexisting antagonisms of precapitalist societies may have been, once a new territory has been

---

Publishing. Cambridge, MA: 1991). Pg. 50. Lefebvre's notion of abstract space was slightly more bound up with Fordist bureaucratic structures than my own, but in general is largely identical.

[92] *Ibid.*, pg. 52.

[93] *Ibid.*, pg. 307.

[94] *Ibid.*, pg. 352.

enveloped by capitalism's ever-expanding abstract spatiality, it imposed its own pattern of contradictory relations upon it. The concrete institutions and forms of association that had been established prior to the spread of commodity-production to a region may have survived the sequence of violent upheavals that capitalism forced upon it, but their essence was forever changed. In some cases old contradictions vanished, only to see new contradictions arise. Whereas the abstract space of capital is conceptually empty, the people and objects that inhabit it are concretely embodied, and their contradictory and antagonistic relations to one another are concretely manifested.

Descending from the abstract globality of capitalism's spatiality to the highest levels of its concrete incarnation, we arrive at the modern nation-state. We find ourselves asking a question that Lefebvre posed at a pivotal moment in his *Production of Space*. "How and why," he asked, "is it that the advent of a world market, implying a degree of unity at the level of the planet, gives rise to a fractioning of space — to proliferating nation states, to regional differentiation and self-determination, as well as to multinational states and transnational corporation which, although they stem this strange tendency towards fission, also exploit it in order to reinforce their own autonomy? Towards what space and time will such interwoven contradictions lead us?"[95]

Indeed, one of the most concrete, yet contradictory, spatial novelties of the capitalist era was the invention of the nation-state. It would not be an exaggeration to claim that the modern nation-state was (and remains) the concrete political expression of the bourgeoisie. This new national consciousness, or *Volksgeist*,[96] came into conflict not only with aristocratic-monarchical structures that had preceded it, but also with more regional and linguistic identities that did not conform to the established geographical

---

[95] *Ibid.*, pg. 351.

[96] "The principles of *the spirits of nations* [*Volksgeister*] are in general of a limited nature because of that particularity in which they have their objective actuality and self-consciousness as *existent* individuals, and their deeds and destinies in their mutual relations are the manifest [*erscheinende*] dialectic of the finitude of these spirits. It is through this dialectic that the *universal* spirit, *the spirit of the world*, produces itself in its freedom from all limits, and it is this spirit which exercises its right — which is the highest right of all — over finite spirits in *world history* as *the world's court of judgement* [*Weltgericht*]." Hegel, Georg Wilhelm Friedrich. *The Philosophy of Right*. Translated by H.B. Nisbet. (Cambridge University Press. New York, NY: 1991). Pg. 371, §340.

boundaries of a given nation. At this point, in its unifying capacity, nationalism played an eminently *progressive* role in dissolving the feudal bonds of vassalage, and along with it the extended kingdoms and fiefdoms that had formed during the medieval era.

However, no sooner did the form of the nation-state attain ascendance over these antiquated social systems than it was superseded at the social and economic level by world capitalist intercourse. At this point, national structures were forced to negotiate the international character of commodity-production and universal trade while defending their own basis (and spatial borders) in terms of common populist bonds — whether ethnically or linguistically defined. Contradictions also arose between nations and the spatial distribution of capitalist development, with some parts of the world enjoying a high concentration of capital — with all the wealth and technological innovations brought with it — while others experienced a dearth. "Within [the] global framework, as might be expected," remarked Lefebvre, "the Leninist principle of uneven development applies in full force: some countries are still only in the earliest stages of the production of things (goods) in space, and only the most industrialized and urbanized ones can exploit to the full the new possibilities opened up by technology and knowledge."[97]

Some of the contradictory spaces that one finds under capitalism were not wholly *engendered* by capitalism. In fact, one of them predated capitalism by several centuries. The antithesis of town and country, for example, existed long before the abstract space of capitalism spread its net over both of these spaces, ever since feudal times. This antagonism remained prominent under capitalism, for example, but now in an exacerbated form. The town, formerly almost totally dependent on the countryside for food and provisions, now gained the upper hand. The countryside, in which most of the population had lived up to that point, now found itself subjugated to the rule of the town, with huge numbers of the dislodged peasantry moving to the cities to find work.

Nor did the character of the city itself remain the same. Once the seat of all *political* authority in medieval times, the *commercial* character of the city began to predominate over it in the era of mercantilism. This in turn was increasingly usurped by the *industrial* function of the city, as factory clusters became more prominent in the towns and the thin

---

[97] Lefebvre, *The Production of Space*. Pg. 65.

42

outline of blackened smokestacks rose to dominate the skyline.[98] Needless to say, these transitions were not accomplished according to any preestablished plan, and so new sites of construction were grafted upon the older neighborhoods and districts. The result was an intense agglomeration of contradictory structures existing alongside each other, the accumulated debris of past ages. The old beside the new, the antiquated beside the modern, the sleek utilitarian warehouses next to the most atavistic façades — in short, the most concrete anachronisms imaginable could be witnessed in close proximity to one another. The historical accretions of centuries of development piled upon one another, leaving the face of the city irrevocably transformed.

The concrete, contradictory space of capitalism can therefore be seen at work on two different levels: in the tension between the national and the international as well as the antithesis between town and country. These contradictions will remain important to our inquiry insofar as the avant-garde strove to eliminate them. Now that the abstract and concrete spatiotemporal elements of capitalism have been explained, however, we may finally proceed to their reflection within the domain of architecture. Despite the complex and theoretical character of this account thus far, this digression into the sociohistorical roots of the avant-garde phenomenon nevertheless provides crucial context — as well as a robust framework — for the interpretation that will follow.

A chart reviewing the various traits belonging to the spatial and temporal aspects of capitalism, along with their relationship to both the traditionalist and modernist forms of architecture, may be found on the following page. Though schematic in nature, these categorical clusters can nevertheless be held to be roughly applicable.

---

[98] "It was the rise of the mercantile city, which was grafted onto the political city but promoted its own ascendancy, that was primarily responsible. This was soon followed by the appearance of industrial capital and, consequently, the *industrial city*…We know that industry initially developed near the sources of energy (coal and water), raw materials (metals, textiles), and manpower reserves. Industry gradually made its way into the city in search of capital and capitalists, markets, and an abundant supply of low-cost labor. It could locate itself anywhere, therefore, but sooner or later made its way into existing cities or created new cities, although it was prepared to move elsewhere if there was an economic advantage in doing so. Just as the political city resisted the conquest — half-pacific, half-violent — of the merchants, exchange, and money, similarly the political and mercantile city defended itself from being taken over by a nascent industry, industrial capital, and capital itself." Lefebvre, Henri. *The Urban Revolution*. Pg. 13.

DIALECTICS OF CAPITALISM	
General	
Rational	Irrational
Systematic	Anarchic
Universal	Particular
Temporal	
Abstract	Concrete
Homogeneous	Heterogeneous
Cyclical	Linear
Scientific	Historical
Mechanical	Dialectical
Spatial	
Abstract	Concrete
Homogeneous	Heterogeneous
Global/International	Local/National
Decentralized/Dispersed	Centralized/Concentrated
Egalitarian	Hierarchical
Expansion	Contraction
Architectural	
Modernism	Traditionalism

FIGURE 1: The Spatiotemporal Dialectic of Capitalism and Architecture[99]

---

[99] As mentioned toward the end of the above subsection, the historical instances this study will examine as its objects cannot be thought to embody all of the categories associated with their type in its purity.

Ultimately, the signifiers "modernism" and "traditionalism" constitute contrasting *ideal types*, in the Weberian sense: "This conceptual pattern brings together certain relationships and events of historical life into a complex, which is conceived as an internally consistent system. Substantively, this construct in itself is like a *utopia* which has been arrived at by the analytical accentuation of certain elements of reality. Its relationship to the empirical data consists solely in the fact that where…relationships of the type referred to by the abstract construct are discovered or suspected to exist in reality to some extent, we can make the *characteristic* features of this relationship pragmatically *clear* and *understandable* by reference to an *ideal-type*. This procedure can be indispensable for heuristic as well as expository purposes." Weber, Max. "'Objectivity' in Social Science and Social Policy." Translated by Edward A. Shils and Henry A. Finch. *The Methodology of the Social Sciences*. (The Free Press. New York, NY: 1949). Pg. 90.

Traditionalist Architecture

Traditionalism in architecture, the broad outlines of which we described at the beginning of this section, can now be fleshed out in more detail. This may be done, moreover, with a view to the social forces from whence it sprang.[100] For it is not difficult to see how the historical consciousness engendered by capitalist modernity must have contributed to the nineteenth-century recognition of the distinct architectural epochs that preceded it. There had, of course, been some cognizance of the central features of classicism dating back to at least the Renaissance. It would not be until the end of the eighteenth century, however, that the history of architecture would present itself as a sequence of civilizational styles. Naturally, this followed from the more general conception of history as a succession of discrete stages, in which certain "nations" or peoples held sway. This could only appear as such under the aegis of that linear, punctuated temporality peculiar to modernity. The

---

[100] Let it not be thought, therefore, that this investigation of rival architectural ideologies emerging under capitalism is nothing more than a "history of ideas." By exposing the spatiotemporal dialectic of capitalism, which is materially produced by the economic forces of this social formation, we have grounded these superstructural forms of thought we are examining in a definite socioeconomic base. As Marx famously wrote: "In the social production of their lives men enter into relations that are specific, necessary, and independent of their will, relations of production which correspond to a specific stage of development of their material productive forces. The totality of these relations of production forms the economic structure of society, the real basis from which rises a legal and political superstructure, and to which correspond specific forms of social consciousness. The mode of production of material life conditions the social, political, and intellectual life-process generally. It is not the consciousness of men that specifies their being, but on the contrary their social being that specifies their consciousness…With the alteration of the economic foundation the whole colossal superstructure is more or less rapidly transformed. In examining such transformations one must always distinguish between the transformation in the economic conditions of production, to be established with the accuracy of physical science, and the legal, political, religious, artistic[, architectural,] or philosophical, in short ideological forms in which men become conscious of this conflict and fight it out." Pgs. 159-160.

By this same accord, however, let us not fall into the trap of crudely deducing every ideological aspect of architecture directly from some class or economic foundation. This is a mistake that is all-too-often made by vulgar Marxism. The relationship between base and superstructure is hardly a one-way street, and ideas that rise objectively into the heavens of thought often retroactively act on their material bases. Different superstructural elements (political, religious, artistic) often attain a sort of phantom independence, as well, and interact with one another without having to be rerouted back through economic channels.

famed chronicler of modern architecture in the twentieth century, Sigfried Giedion, would thus historiographically remark in his lectures of 1938 that "[i]n the arts, periods are differentiated by the 'styles' which became fixed and definite in each stage of development. And the study of the history of styles was the special work of nineteenth-century historians, a work most skillfully carried through."[101]

Presumably, these styles had always existed. They were simply lying inert, waiting to be discovered. Historians prior to the nineteenth century, it seemed, had just failed to see what had been standing before them the whole time, and therefore could not grasp the evolution of past architectural forms in all their richness, complexity, and variety. In fact, there were very few historians before this time to have even taken up the question of the history of architecture. Those who *had* investigated this issue at any length had evidently proved unable to properly understand the connection these forms had to the different civilizations that had produced them. Only with figures like Johann Winckelmann and Giovanni Piranesi did the first inkling of such an understanding appear. As a result, the majority of premodern architectural theorists felt themselves to be dealing with timeless and immutable principles such as "proportion" (*proportio*), "symmetry" (*symmetria*), "eurhythmics" (*eurhythmia*), and "distribution" (*distributio*). From the rediscovery of Vitruvius' *Ten Books on Architecture* in the Renaissance down to its subsequent exegesis and elaboration by the great master Leon Battista Alberti,[102] the subject of history in the discipline of architecture factored in only peripherally.[103] But with the newfound sense of historical consciousness rising out of the temporal dialectic of modernity, the manifold styles of architecture revealed themselves with increasing clarity.

It may be fairly objected, however, that these apparently distinct stylistic "epochs" of architectural creation were not at all self-evident, and that they were instead the artificial

---

[101] Giedion, Sigfried. *Space, Time, and Architecture: The Growth of a New Tradition*. (Harvard University Press. Cambridge, MA: 1982). Pg. 21. Lectures first delivered between 1938-1939.

[102] Alberti, Leon Battista. *On the Art of Building in Ten Books*. Translated by Joseph Rykwert, Neil Leach, and Robert Tavernor. (The MIT Press. Cambridge, MA: 1991).

[103] In Book II, Vitruvius declared that aspiring architects should be trained in history, but only so that they might have a firmer knowledge of ornamentation and its symbolic justification. Pollio, Vitruvius. *Ten Books on Architecture*. Translated by Ingrid D. Rowland. (Cambridge University Press. New York, NY: 1999). Originally published 46 BCE.

invention of later thinkers. In their attempt to organize and make sense of the past, it is argued, these historians imposed flimsy or arbitrary criteria on the objects of their study so that they could be more easily classified and grouped together. This was all part of the modern project of drafting secular "metanarratives" in the nineteenth century, intended to somehow ratify or legitimate the present. "[T]he diachronical periodization of history is typically a modern obsession," noted Jean-François Lyotard, the French philosopher.[104] According to postmodernists, of course, the notion of history as a sequence of inevitable stages leading up to the present has itself lost its legitimacy — "the grand narrative has lost its credibility, regardless of what mode of unification it uses."[105] One of the results of its delegitimation, as the Marxist critic Fredric Jameson has pointed out, is that the general validity of qualitative demarcations between historical periods has been radically undermined. It "raise[s] the whole issue of periodization and of how a historian (literary or other) posits a radical break between two henceforth distinct periods."[106] Can one really pinpoint a specific moment as marking the end of one era and the beginning of another? "One of the concerns frequently aroused by periodizing hypotheses," Jameson explained in his treatise on *Postmodernism*, "is that these tend to obliterate difference and to project an idea of the historical period as massive homogeneity (bounded on either side by inexplicable chronological metamorphoses and punctuation marks)."[107]

In light of such postmodern objections or concerns, does it therefore follow that the modern understanding of history as a progression of distinct periods or epochs is a total fabrication, the sequence of architectural styles wholly a lie? To be sure, the historians of the nineteenth century did not dream up their notion of successive "ages" of world history out of thin air. There was a certain objectivity that held sway in their investigations of

---

[104] Lyotard, Jean-François. "Re-writing Modernity." *SubStance*. (Vol. 16, № 3, Issue 54: 1987). Pg. 4.

[105] Lyotard, François. *The Postmodern Condition: A Report on Knowledge*. Translated by Brian Massumi and Geoff Bennington. (Manchester University Press. Manchester, England: 1984). Pg. 37.

[106] Jameson, Fredric. "Postmodernism and Consumer Society." *The Cultural Turn: Selected Writings on the Postmodern, 1983-1998*. (Verso Books. New York, NY: 1998). Pg. 18.

[107] Jameson himself transparently admits to the problematic concept of historical periodization while explicitly making use of it. Jameson, Fredric. *Postmodernism, Or the Cultural Logic of Late Capitalism*. (Duke University Press. Durham, NC: 1991). Pgs. 2-3.

the past. The characteristic features they identified as belonging to a specific age or to a particular style of architecture doubtless possessed some underlying reality. This does not mean, however, that these objects of the modern historians' contemplation were mere *facta bruta* allowing for no alternate explanation. For their very subjectivity had itself been molded by the various social forces prevailing during its day. The categories by which these historians apprehended the past reflected the epistemic structures that existed at their time. If these corresponded to the historical consciousness emerging out of the temporal dialectic of capitalism, such an understanding would only be appropriate.

The unconscious theoretical underpinnings for the traditionalist account of historical architecture — which then forms the point of departure for the practice of architectural traditionalism — are best explained by the concept of "invented traditions," which was first introduced by the British Marxist Eric Hobsbawm several decades ago.[108] "In short, ['invented traditions'] are *responses to novel situations which take the form of reference to old situations*, or *which establish their own past* by quasi-obligatory repetition," wrote Hobsbawm. "It is the contrast between the constant change and innovation of the modern world and the attempt to structure at least some parts of social life within it as unchanging and invariant, that makes the 'invention of tradition' so interesting for historians of the past two centuries."[109] Notice how Hobsbawm specified the last couple centuries as the ones in which this pattern of constant transformation and upheaval was occurring. This is consistent with our previous claim that modern historical consciousness arose precisely during this period.[110] Not only was the view of the past as an unfolding series of stages

---

[108] "'Invented tradition' is taken to mean a set of practices, normally governed by overtly or tacitly accepted rules and of a ritual or symbolic nature, which seeks to inculcate certain values and norms of behaviour by repetition, which automatically implies continuity with the past. *In fact, where possible, they normally attempt to establish continuity with a suitable historic past* [my emphasis]." Hobsbawm continues with recourse to an explicitly architectural example: "A striking example is the deliberate choice of a Gothic style for the nineteenth-century rebuilding of the British parliament, and the equally deliberate decision after World War II to rebuild the parliamentary chamber on exactly the same plan as before." Hobsbawm, Eric. "Inventing Traditions." *The Invention of Tradition*. (Cambridge University Press. New York, NY: 1983). Pgs. 1-2.

[109] *Ibid.*, 2. My emphasis.

[110] Compare Hobsbawm's mention of "the constant change and innovation of the modern world" with our

formed on this basis, but also the need for a stable body of *historical traditions* appearing to endure throughout this instability. Distinct from organic customs and conventions that exist in precapitalist societies (some of which occasionally survive modernization), which are hardly set down in stone the way they are once they have been exalted as belonging to "perennial" tradition,[111] "traditions" in the Hobsbawmian sense are rigid, codified, and elaborately formalized.[112] In fact, the creation of these strictly circumscribed traditions is far more a feature of modern society than it is of so-called "traditional" society.[113] As Hobsbawm himself indicated, the void of Weberian traditional authority[114] left by the bourgeois revolutions in Europe during the nineteenth century often meant that fledgling liberal regimes felt it necessary to invent traditions in order to supplement their purely legal authority. "Invented traditions," he wrote, have become more prevalent "since the industrial revolution," as more generally longstanding traditions like monarchy, fealty, and serfdom were usurped.[115]

Applying this concept specifically to the architectural and ornamental histories that took shape during the nineteenth century, it becomes clear that the various styles that they

---

discussion of the convulsive societal changes taking place during the late eighteenth through the nineteenth and twentieth centuries on page 28, which established the historical consciousness of modernity.

[111] "'Custom' cannot afford to be invariant, because even in 'traditional' societies life is not so." *Ibid.*, pg. 2.

[112] "Inventing traditions, it is assumed here, is essentially a process of formalization and ritualization, characterized by reference to the past, if only by imposing repetitions." *Ibid.*, pg. 4.

[113] "Such changes have been particularly significant in the past 200 years, and it is therefore reasonable to expect these instant formalizations ['inventions'] of new traditions to cluster during this period. This implies, against both nineteenth-century liberalism and more recent 'modernization' theory that such formalizations are not confined to so-called 'traditional' societies, but also have their place, in one form or another, in 'modern' ones." *Ibid.*, pg. 5. I would take this one step further and point out that most invented traditions in "traditional" societies were imposed from without by modern societies during the colonial age.

[114] "Authority will be called traditional if legitimacy is claimed for it and believed in by virtue of the sanctity of age-old rules and powers." Weber, Max. *Economy and Society, Volume 1*. Translated by Ephraim Fischoff, Hans Gerth, A.M. Henderson, Ferdinand Kolegar, C. Wright Mills, Talcott Parsons, Max Rheinstein, Guenther Roth, Edward Shils, and Claus Wittich. (University of California Press. Los Angeles, CA: 1978). Pg. 226.

[115] Hobsbawm, "Inventing Traditions." Pg. 9.

described had not been simply "discovered" by archeologists and observers. They were to some extent, by the very dint of their enshrinement *as* traditions, also "invented." For all its utility, unfortunately, this terminology is still slightly misleading, because it is not as if the common characteristics identified by these architectural historians as belonging to a particular style had been created by them *ex nihilo*. The buildings and ruins they grouped together usually *did* possess a great deal of structural and stylistic similarity. It is rather that the historians of the nineteenth century were investigating building practices that had been founded upon a fluid and organic set of customs and convention. By taking certain aspects of a given period of building as the ones most typical of that era, however, it was as if they were freezing these architectural "traditions" in a more fixed state than they had ever possessed during their life. In selecting those features of art or architecture that captured a style in its utmost "purity," as its apogee or apotheosis, modern historians often formalized these practices to a far greater degree than they had been in actuality. Thus could Sir Joshua Reynolds assess the relative quality of the Florentine, Bolognese, Roman, and Venetian schools of Italian painting in expressing the Renaissance ideal.[116] So also could John Ruskin declare that "it is in the pause of the star [tracery] that we have the great, pure, and perfect form of French Gothic."[117]

---

[116] "[The rendering of drapery] is the great principle by which we must be directed in the nobler branches of our art. Upon this principle the Roman, the Florentine, the Bolognese schools, have formed their practice; and by this they have deservedly obtained the highest praise. These are the three great schools of the world in the epic style. The best of the French school, Poussin, Le Sueur, and Le Brun, have formed themselves upon these models, and consequently may be said, though Frenchmen, to be a colony from the Roman school. Next to these, but in a very different style of excellence, we may rank the Venetian, together with the Flemish and the Dutch schools, all professing to depart from the great purposes of painting, and catching at applause by inferior qualities." Reynolds, Joshua. *Seven Discourses on Art*. (The Echo Library. Middlesex, England: 2007). Pg. 31.

[117] "…at the instant when the rudeness of the intermediate space had finally been conquered, when the light had been expanded to its fullest, and yet had not lost its radiant unity, principality, and the visible first causing of the whole." Ruskin, John. *The Seven Lamps of Architecture*. (Dover Publications, Inc. New York, NY: 1989). Pg. 59.

   Another example of this tendency comes in Ruskin's discussion of variations within the Gothic: "The capital [of San Michele of Lucca] is of the noblest period of the Venetian Gothic; and it is interesting to see the play of leafage so luxuriant, absolutely subordinated to the breadth of two masses of light and shade.

Before examining specific examples of the architectural periodicities compiled during this time, one further peculiarity can be noted. This occurs in connection with an aspect of the concrete spatiality of capitalism discussed above. For it was the ubiquity of the form of the nation-state and the nationalist sentiments accompanying it that colored modern historians' view of past political entities.[118] Though nationalism was a relatively recent development, historians understood the past in terms of their present. The modern concept of the "nation" was transposed upon the past. Despite the fact that the "nations" they referred to were often self-contained empires, kingdoms, and principalities, it would nevertheless be an error to think of them as nationalities in the strict sense of the term. Again, however, these historians should not be blamed for making what appears to us as a rudimentary category mistake; this mistake itself bore the mark of its age, the impress of capitalism's concrete spatiality, and could hardly have been otherwise.

And so we can see that on the one hand nineteenth-century architectural discourse temporally divided styles according to their "age," "era," or "epoch," while on the other hand it spatially divided them according to their "nation" of origin. Statements like the following, by the British architectural historian Edward A. Freeman, writing in 1849, are thus symptomatic of this approach to history: "The most remarkable feature in the history of architecture…is the fixedness with which each age and nation adhered to its own form of the art."[119] This assertion leads off Freeman's second chapter, on the "Causes of the Diversity of Styles" in architecture. The following chapter explains how, despite the multiplicity of peoples and distinct societies in any given era, one particular "nation" can gain civilizational ascendance over all its peers. At the same time, Freeman claimed that

What is done by the Venetian architect, with a power as irresistible as that of the waves of his surrounding sea, is done by the masters of the Cis-Alpine Gothic, more timidly, and with a manner somewhat cramped and cold, but not less expressing their assent to the same great law." *Ibid.*, pg. 89.

[118] "The concept of the nation is a late arrival; it was alien to the Middle Ages." Adorno, Theodor. *History and Freedom: Lectures 1964-1965*. Translated by Rolf Tiedemann. (Polity Press. Malden, MA: 2006). Pg. 103. Indeed, the notion of a concrete "people" — linked to one another through geography, language, or common traditions and enclosed within defined borders — was nowhere to be found in Europe during the age of feudalism. See also our own discussion of the subject on pages 41-42.

[119] Freeman, Edward A. *A History of Architecture*. (Joseph Masters Publishers. London, England: 1849). Pgs. 11-12.

particular ages rise above the others in terms of their significance and value. "In a survey of the world's history," he wrote, in a very Hegelian vein, "some periods, some nations, stand forth conspicuous above others for their intrinsic splendour, and their influence in moulding the minds of institutions of other lands and peoples."[120] With this concept in mind, Freeman thus divided the succession of architectural styles as "Celtic — Pelagian — Hindoo — Central American — Egyptian — Grecian — Roman — Romanesque — Saracenic — Gothic — Revived Italian [Renaissance]."[121]

Freeman's early *History of Architecture* was in many ways typical of the overarching tendency we are trying to demonstrate. For roughly the same pattern can also be found in Louise C. Tuthill's contemporaneous *History of Architecture from Earliest Times*,[122] James Fergusson's massive three-volume *History of Architecture in All Countries from the Earliest Times to the Present* from the 1860s,[123] Thomas Mitchell's *Rudimentary Manual of Architecture* of 1870,[124] N. D'Anver's *Elementary History of Architecture of All Countries* from 1883,[125] Arthur Lyman Tuckerman's 1887 *Short History of*

---

[120] *Ibid.*, pgs. 17-18.

[121] *Ibid.*, pgs. 23-29.

[122] Tuthill's progression: "Egyptian — Hindoo — Persian — Jewish — Chinese — Aboriginal or American — Cyclopean and Etruscan — Grecian — Roman — Middle Ages — the Romanesque or Lombardic, the Saxon and Norman — Gothic — Greco-Roman Revival — the Present." Tuthill, Louise C. *The History of Architecture from Earliest Times, Its Present Condition in Europe and the United States*. (Lindsay and Blakiston. Philadelphia, PA: 1848).

[123] Fergusson's schema: "ANCIENT — Egyptian — Assyrian — Grecian — Etruscan and Roman — CHRISTIAN — French — Belgian and Dutch — German — Scandinavian — English — Spanish and Portuguese — Italian — Byzantine — PAGAN — Persian — Indian — Hindu — Indian Saracenic — Naga — Chinese — Mexican and Peruvian — EASTERN — Buddhist — Jaina — Himalayan — Dravidian — Chalukyan — Indo-Aryan — Indian Saracenic — Chinese." Fergusson, James. *A History of Architecture in All Countries from the Earliest Times to the Present Day, Volumes 1, 2, & 3*. (John Murray Publishers. London, England: 1865, 1867, & 1876).

[124] Mitchell's sequence: "Greek — Roman — Byzantine and Saracenic — Romanesque — Mediæval — Elizabethan — Renaissance." Mitchell, Thomas. *A Rudimentary Manual of Architecture, Being a History of the Principal Styles of European Architecture: Ancient, Mediæval, and Renaissance, with Their Chief Variations Described and Illustrated*. (Longmans, Green, and Co. London, England: 1870).

[125] D'Anver's history: "Indian — Egyptian — Assyrian — Medo-Persian — Asia Minor — Early American — Greek — Etruscan — Roman — Early Christian — Byzantine — Romanesque — Moorish

Architecture,[126] Clara Erskine Clement's 1886 *Outline of the History of Architecture for Beginners and Students*,[127] Alfred Hamlin's *Text-Book on the History of Architecture* written in 1896,[128] Harold Edgell's and Fiske Kimball's co-authored *History of Architecture* from 1918.[129] Minor variations appear between each author's selection of individual styles, but the commonalities between them are too overwhelming to be denied. While certain interpretive choices were made — for example the subsumption of "Babylonian" architecture into "Assyrian" architecture — the sequential periodization of architectural styles was largely the same. There were obvious chronological reasons that lay behind this, of course, and so again it should not be imagined that these divisions were wholly arbitrary. But the very fact of the *presentation* of these styles in such a manner is itself significant, an indication of these authors' historical consciousness.

Nor were the British the only ones compiling such histories of style, either. French historians also produced a number of works in this vein, especially at L'École des Beaux-

— Gothic — Renaissance — Nineteenth-Century." D'Anver, N. *Elementary History of Architecture of All Countries*. (Simpson Low, Marston, Searle, & Rivington. London, England: 1883).

[126] Tuckerman's series: "Celtic or Druidical — Egyptian — Asiatic — Greek — Etruscan and Roman — Early Christian — Byzantine — Mahometan — Romanesque — Gothic — Renaissance." Tuckerman, Arthur Lyman. *A Short History of Architecture*. (Charles Scribner's & Sons. New York, NY: 1887).

[127] Clement's periodicity: "ANCIENT OR HEATHEN — Egyptian — Assyrian — Babylonian — Persian — Judean — Greek — Etruscan — Roman — CHRISTIAN — Early Christian — Gothic — Byzantine — Saracenic — MODERN — Italian — Spanish — French — English — German — American." Clement, Clara Erskine. *An Outline History of Architecture for Beginners and Students*. (White, Stokes, & Allen. New York, NY: 1886).

[128] Hamlin's derivation of styles: "Primitive and Prehistoric — Egyptian — Chaldæn and Assyrian — Persian, Lycian, and Jewish — Greek — Roman — Early Christian — Byzantine — Sassanian and Mohammedan — Early Mediæval — Gothic — Renaissance — Neoclassicism — Recent European — American — Oriental." Hamlin, Alfred Dwight Foster. *A Text-Book on the History of Architecture*. (Longmans, Green, and Co. London, England: 1896).

[129] Edgell's and Kimball's genealogy of styles runs: "Prehistoric — Preclassical — Greek — Roman — Early Christian — Byzantine — Romanesque — Gothic — Renaissance — Post-Renaissance —Modern — American — Eastern." Edgell, George Harold and Kimball, Fiske. *A History of Architecture*. (Harper & Brothers. New York, NY: 1918).

Arts. Among the architectural histories and treatises produced during this time, one must include Léonce Reynaud's landmark *Traité d'architecture* from 1850,[130] Charles Blanc's *Grammaire des arts du dessin* of 1867,[131] Eugène-Emmanuel Viollet-le-Duc's 1877 *Lectures on Architecture*,[132] Roger Peyre's 1894 *Histoire générale des beaux-arts*,[133] and Auguste Choisy's *Histoire de l'architecture* of 1899. The Germans and Austrians were no less prolific in their production of carefully periodized histories. Carl Schnaase's Hegelian *Geschichte der bildenden Künste* from 1843,[134] Wilhelm Lübke's *Geschichte der Architektur* of 1858,[135] Gottfried Semper's 1860 *Style in the Technical and Tectonic Arts, or, Practical Aesthetics*,[136] and his great critic Aloïs Riegl's own *Problems of Style: Foundations for a History of Ornament*[137] from 1897 took up the question of historical

[130] "De l'antiquité — Du moyen age — De la Renaissance — Des les temps modernes." Reynaud, Léonce. *Traité d'architecture*. (Librairie pour l'architecture. Paris, France: 1850).

[131] "Le plein cintre — Style byzantine — Style roman — L'art outre-passé/Style arabs — L'ogive/Style gothique." Blanc, Charles. *Grammaire des arts du dessin: Architecture, sculpture, peinture*. (Jules Renouard. Paris, France: 1867).

[132] "Primitive — Greek — Roman — Western Christian — Byzantine — Renaissance — Nineteenth Century." Viollet-le-Duc, Eugène-Emmanuel. *Lectures on Architecture, Volume 1*. Translated by Benjamin Bucknall. (Sampson Low, Marston, Searle, and Rivington. London, England: 1877).

[133] "ANTIQUITÉ — Art égyptien — Orient — La Grèce — L'art étrusque et l'art romain — MOYEN AGE — L'art byzantine — L'art musulman et les arts de l'Asie — L'art roman — Art gothique ou ogival — LA RENAISSANCE — Da Giotto à Vinci — La grande époque — TEMPS MODERNES — Dix-septième siècle — Dix-huitième siècle — Dix-neuvème siècle." Peyre, Roger. *Histoire générale des beaux-arts*. (Librairie Charles Delagrave. Paris, France: 1894).

[134] "Indische — Babylonische — Ägyptischen — Griechen — Etruskische — Cyclopische — Römische — Altchristliche — Byzantinische — Muhammedanische — Karolingische — Mittelalter italienischen — Gothische — Spanische — Englische." Schnaase, Carl. *Geschichte der bildenden Künste, Banden 1-7*. (Verlag von Julius Buddens. Düsseldorf, Prussia: 1843).

[135] Lübke, Wilhelm. *Geschichte der Architektur*. (E.A. Seemann's Verlagsexpedition. Köln, Prussia: 1858).

[136] "Egyptian — Chaldean — Assyrian — Indian — Doric — Ionic — Corinthian — Hellenic — Roman — Byzantine — Oriental — Merovingian — Romanesque — Gothic — Renaissance — Modern." Semper. Gottfried. *Style in the Technical and Tectonic Arts, or, Practical Aesthetics*. Translated by Harry Francis Mallgrave, Michael Robinson, and Amir Baghdadchi. (Getty Research Institute. Los Angeles, CA: 2004). Originally published in 1860.

[137] Aloïs Riegl. *Problems of Style: Foundations for a History of Ornament*. Translated by Evelyn Kain.

styles in the building arts. Their inquiries yielded many similar results, in terms of their overall progression.

Riegl's *Problems of Style* brings us to an academic field that was closely allied to the history of architecture during this period: namely, the history of ornament. This field was virtually founded by singular act of publication, by Owen Jones, a close friend and colleague of Ruskin's. In 1856, Jones released what would come to be regarded as his masterpiece, *The Grammar of Ornament*.[138] The book was released to rave reviews that appeared in many of the major British newspapers and journals, making it an instant success.[139] Not only did it have a profound influence on young designers, however. It also inaugurated the popular new genre of chromolithographic folios devoted to the study of historic ornament. A number of authors followed in Jones' footsteps by writing books like this. Albert Charles Auguste Racinet wrote *L'Ornement Polychrome* in 1869,[140] Heinrich Dolmetsch wrote *Der Ornamentenschatz* in 1883,[141] and Alexander Speltz wrote *The Styles of Ornament*.[142] Each of these works similarly aspired to achieve the encyclopedic effect of Jones' original *Grammar*. More formal histories on the subject were also written, such as Ralph N. Wornum's 1855 lecture *Analysis of Ornament*[143] and A.D.F. Hamlin's *History of Ornament*, published in 1916.[144]

(Princeton University Press. Princeton, NJ: 1992). Originally published in 1897.

[138] Owen Jones. *The Grammar of Ornament: Illustrated by Examples from Various Styles of Ornament*. (Studio Editions. London, England: 1986). Originally published in 1856.

[139] Cf. George Eliot's piece for the Fortnightly Review, and the anonymous reviews for Athenaeum and Fine Arts Quarterly. Eliot, George. "Owen Jones' *Grammar of Ornament*." *Fortnightly Review*. № 1. (May 1865). Pgs. 124-125.

   This review (and others) were written after a cheaper, more portable reprint of Jones' original volume had been issued in 1865.

[140] Racinet, Albert Charles Auguste. *Handbook of Ornaments in Color: Volumes 1-3*. Translated by J.A. Underwood. (Van Nostrand Reinhold Company. New York, NY: 1978). Originally published in 1869.

[141] Dolmetsch, Heinrich. *The Treasury of Ornament: Pattern in the Decorative Arts*. Translated by Richard Phené Spiers. (Portland House. New York, NY: 1989). Originally published in 1883.

[142] Speltz, Alexander. *The Styles of Ornament: Exhibited in Designs, and Arranged in Historical Order, with Descriptive Text*. Translated by David O'Conor. Originally published in 1906.

[143] Wornum, Ralph N. *Analysis of Ornament*. (Chapman and Hall. London, England: 1855).

[144] Hamlin, A.D.F. *A History of Ornament*. (The Century Co. New York, NY: 1916).

All that has been established so far tells us much about the architectural *histories* that were written during the nineteenth century. However, it does not say much of the actual *architecture* that was produced simultaneously. For how exactly did traditionalism in architecture evolve out of the ever more elaborate histories of architectural tradition? Indeed, the transition is by no means as obvious as it was been previously suggested. The historians of architecture during this period considered their work very important at a *descriptive* level, but did not thereby endorse the forms they described as the *prescriptive* basis for a new architecture. "[The] example [of past styles]," warned Tuckerman, "teaches us never to copy slavishly, but to initiate old examples only so far as they may suit modern needs, in principle rather than detail, and to eschew the reproduction of defects, however picturesque, so that architecture may be a living art instead of the mummified representation of archæological researches."[145] Whence the traditionalist architects came to their predisposition to historicist eclecticism, then, cannot be so easily derived from the work of the architectural historians.

Nevertheless, the *fact* of architectural traditionalism's tendencies toward historicism and eclecticism remains. No less a figure than Viollet-le-Duc spoke out against it in his time, anticipating many of the criticisms that the modernists would later level at it. And in his vicious excoriation of the architects of his day, he would cite the very wealth of historical knowledge regarding past architecture as an "obstruction" blocking the creation of a new style. It would thus seem that Viollet-le-Duc himself identified the historical consciousness of architectural tradition as the root of eclecticist architecture's imitative degeneracy. His call for the development of a new architectural methodology is so unequivocal that it deserves to be quoted at length. Toward the end of his *Lectures on Architecture*, he therefore asked:

> Is the nineteenth century destined to close without possessing an architecture of its own? Will this age, which is so fertile in discoveries, and which displays an energetic vitality, transmit to posterity *only imitations or hybrid works*, without character, and which it is impossible to class? Is this sterility one of the inevitable consequences of our *social* conditions? Does it result from the influence on the teaching of the art exercised by an effete coterie? And can a coterie, whether it be young or old, acquire such a power in the midst of vital elements? Assuredly not. Why then has not the nineteenth century its architecture? We are building everywhere, and largely; millions are

---

[145] Tuckerman, *A Short History of Architecture*. Pg. 166.

being expended in our cities, and yet we can only point here and there to a true and practical application of the very considerable means at our disposal.

Since the Revolution of the last century [1789] we have entered on a transitional phase; *we are investigating, searching into the past, and accumulating abundance of materials, while our means and appliances have been increased.* What then is wanting to enable us to give an original embodiment and form to so many various elements? Is it not simply method that is lacking? In the arts, as in the sciences, the absence of method, whether we are engaged in investigating or in attempting to apply the knowledge we have acquired, occasions an embarrassment and confusion proportional to the increase of our resources; *the abundance becomes an obstruction.* Every transitional period however must have a limit; it must tend towards an aim of which we get a glimpse only when, weary of searching through a chaos of ideas and materials brought from every quarter, we set to work to disentangle certain principles from this disorderly mass — to develop and apply them by the help of a determinate method. This is the work that devolves upon us, and to which we should devote ourselves with uncompromising persistency — struggling against those deleterious elements which are invariably engendered during all transitional periods, just as miasmas exhale from matter in a state of fermentation.

The arts are diseased; architecture is dying in the midst of prosperity, notwithstanding the presence of energetic vital principles; it is dying of excesses and a debilitating regime. The more abundant the stores of our knowledge, the more strength and rectitude of judgment is needed to make a productive use of them, and the more necessary is it to recur to rigorous principles. The disease from which architectural art suffers dates from a remote period; it has not been developed in a single day; we see it increasing from the sixteenth century to our own times; from the time when, after a very superficial study of the architecture of ancient Rome — certain of whose externals were made objects of imitation — our architects ceased to make the alliance of the form with the requirements and the means of construction the chief consideration. Once out of the way of truth, architecture has been more and more misled into degenerating paths.[146]

Incidentally, Viollet-le-Duc would not be the only one to identify the imitative aspect of the Renaissance and its reverence for classical forms as the beginning of the decline of architecture. Though impressive in its formal accomplishments, the otherwise-celebrated Renaissance was viewed as symptomatic of an ideological regression. Wright would thus later remark, in the opening years of the twentieth century, that "with the beginning of the sixteenth century, the malady of architecture is visible. It becomes classic art in a miserable manner; from being indigenous, it becomes Greek and Roman…It is this decadence which we call the Renaissance…*It is the setting sun which we mistake for*

---

[146] Viollet-le-Duc, *Lectures on Architecture*. Pgs. 446-447.

dawn."[147] This same sentiment was simultaneously expressed by Hermann Muthesius in 1901: "What was achieved in Renaissance building-art could be but a pale image of a superior original art — a claim that will be evident to every visitor to Italy who observes how any single antique building (the Roman Coliseum or the Pantheon, for example) eclipses the entire building-art of the Renaissance."[148]

It was probably Muthesius who best summarized the development of what he referred to as "style-architecture" [*Stilarchitektur*] in his famous book, *Style-Architecture and Building-Art: Transformations of Architecture in the Nineteenth Century and Its Present Condition*. In a retrospective on the traditionalist architectural construction that went on during this time, Muthesius dated the beginning of the modern discourse on styles to 1762.[149] He followed its development through Schinkelite Hellenism in Germany, neoclassicism in France and England, Louis XIV-XVI French revivalism, restoration mania on the continent, Nordic Romanticism and the neogothic, German Renaissance, all the way up to post-1870s eclecticism proper.[150] During this last phase, there took place what Muthesius termed a "battle of the styles": "Like a hungry herd, architects and artisans of the last two decades grazed over all periods of artistic development subsequent to the German Renaissance for their models. A stylistic battle began, in which the late Renaissance, Baroque, Rococo, Zopf, and Empire were slaughtered indifferently."[151] The result of this battle was what later architects would pejoratively call "eclecticism" (what Muthesius called "architectural formalism"). It would reign until the end of the century: "Architectural formalism appeared most directly in the stylistic hunt that began

---

[147] While Wright would express his admiration for the works of the Renaissance masters, he believed that architecture was in terminal decline at this point because the invention of the printing press had rendered the building façade anachronistic. Wright, Frank Lloyd. "The Art and Craft of the Machine." *The Essential Frank Lloyd Wright: Critical Writings on Architecture*. (Princeton University Press. Princeton, NJ: 2008). Pgs. 24-25. Originally published in 1901.

[148] Muthesius, Hermann. *Style-Architecture and Building-Art: Transformations of Architecture in the Nineteenth Century and Its Present Condition*. Translated by Stanford Anderson. (The Getty Center for the History of Art and Humanities. Los Angeles, CA: 1994). Pg. 51.

[149] "The work on the antiquities of Athens by the English architects Stuart and Revett, which appeared in 1762, forms the milestone of this new discovery." *Ibid.*, pg. 53.

[150] *Ibid.*, pgs. 54-68.

[151] *Ibid.*, pg. 69.

with the German Renaissance of the 1870s and cursorily rushed through all the styles of the last four hundred years."[152] Thus was the outcome of traditionalism in architecture.

Modernist Architecture — Negative Bases

One of the motive forces in the move toward modernist architecture, its *negative* thrust, was its categorical rejection of the traditionalist architecture that preceded it. Certainly, the formation of the architectural avant-garde in the early twentieth century had its very positive basis in social processes going on at the time, in economic industrialization and the newfound understanding of "space-time" expressed by abstract art. But exploration into the more positive underpinnings of modernist architecture will be saved for the next subsection; for now, we will confine ourselves to an investigation of its negative bases. For while the modernists could easily point to aspects of modern society that they stood *for*, they could just as easily point to eclecticist architecture as an example of that which they stood *against*. Because so much of the ground for the modernist project was staked out polemically, this side of its development deserves separate treatment.

But eclectic historicism in architecture was not all that the avant-garde stood against. In a broader sense, as a sort of analogue to its architectural rival, the standpoint adopted by the modernists placed them in critical relation to bourgeois society as a whole. While this did not amount to an outright opposition to capitalism as such, there were still many features associated with early twentieth-century bourgeois society of which they strongly disapproved. As it happened, many of the same things that the modernists criticized in traditionalist architecture were reproduced on a larger scale at the level of society. For the apparent anarchy, capriciousness, and confusion of production that seemed to govern capitalism was mirrored in the arbitrariness and stylistic disorder of eclecticism. A more generalized feeling of discontent — the haunting sense that the productive forces of the present remained enchained to the dead labor of the past — loomed over the avant-garde with respect to both society as well as architecture. The "[t]radition from all the dead generations weigh[ed] like a nightmare on the brain of the living."[153]

---

[152] *Ibid.*, pg. 77.

[153] Marx, Karl. *The Eighteenth Brumaire of Louis Napoleon*. Translated by Terrell Carver. *Later Political Writings*. (Cambridge University Press. New York, NY: 1993). Pg. 32.

Though one might reasonably contend that the modernists' stance against bourgeois society was built on the positive basis of leftist movements existing at the time, their discontent with the society of their day did not lead them into any determinate tendency. While there were many committed communists within the avant-garde (Teige, Ginzburg, Lurçat, Meyer), there were also many who belonged to the less radical Social-Democrats (Bourgeois, May, Hilberseimer, Taut), and a number who had no tangible affiliation with any party at all (Gropius). In certain cases, the positive link between the architectural modernists and anti-capitalist political parties was more apparent. The connection of the architectural avant-garde to the Bolshevik political vanguard in the Soviet Union was especially obvious, despite their divergent temporalities.[154] In Germany, the ties between SDP ideology and modernist architecture was likewise quite strong, as Manfredo Tafuri rightly pointed out.[155] Often times, as he observed, the modernists simply countered the "anarchy" of capitalism with the ideology of "the plan."[156] From this, it would seem that the modernists were defined more by an inchoate anti-capitalism than they were by any particular political alternative, at least any that immediately presented itself in the 1920s.

The most immediate point of reference for the avant-garde's negative definition was, as would seem natural, traditionalist architecture. The prevailing atavistic practices in architectural construction toward the turn of the century had to be torn down before a new practice could be built up. And this the modernists pursued with zeal. "For nearly two centuries," Ginzburg declared in 1923, "architectural creativity in Europe has lived parasitically off its past." The reproduction of motifs and patterns stemming from the stylistic traditions of the past, he argued, was an exercise in necromancy — the social

---

[154] Susan Buck-Morss noted that "[t]he 'time' of the cultural avant-garde [in revolutionary Russia was] not the same as that of the vanguard party." Buck-Morss, Susan. *Dreamworld and Catastrophe: The Passing of Mass Utopia in East and West*. (The MIT Press. Cambridge, MA: 2002). Pg. 49.

[155] "Nazi propaganda was to speak of the Frankfurt settlements as *constructed socialism*. We must see them as realized social democracy." Tafuri, *Architecture and Utopia*. Pg. 115.

[156] "Dada's ferocious decomposition of the linguistic material and its opposition to prefiguration: what were these, after all, if not the sublimation of automatism and commercialization of 'values' now spread through all levels of existence by the advance of capitalism? *De Stijl* and the Bauhaus introduced the *ideology of the plan* into a design method that was always closely related to the city as a productive structure. Dada, by means of the absurd, demonstrated — without naming it — the necessity of a plan." *Ibid.*, pg. 93.

foundations on which these styles had been erected had disappeared, and along with them the vitality they had originally possessed.[157] For many of the modernists, this led them to reject the concept of "style" altogether. As Le Corbusier would proclaim: "Architecture has nothing to do with the 'styles'…Louis XV, XVI, XIV and Gothic are to architecture what feathers are to a woman's head; they are pretty sometimes, but not always, and nothing more."[158] Modernist architecture thus sought to divorce building processes from notions of fashion, taste, ornamentation, and "style." All these elements, it held, were extraneous to the actual practice of architecture. "The concept of 'form,'" wrote Adolf Behne in 1926, "does not deal with accessories, decoration, taste, or style (from Gothic to Biedermeier) but with the consequences arising from a building's ability to be an enduring structure."[159]

Indeed, among the international modernists there was a certain ambivalence when it came to the prospect of inventing a new "style."[160] On the one hand, they felt themselves

---

[157] "At a time when the other arts somehow managed to move forward, systematically transforming their revolutionary innovators into 'classics,' architecture persisted, with unparalleled stubbornness, in refusing to tear its sights away from the ancient world or from the epoch of the Italian Renaissance. Academies of art were concerned with nothing more, it seems, than weeding out young people's enthusiasm for the new and leveling their aptitude for creative work without, however, teaching them to see in the creations of the past the system of legitimate development that always flows inevitably out of the vital structure of the epoch and thus derives its true meaning only in that context. Consequently, such 'academic' training yielded two results: the pupil lost touch with modernity and, at the same time, remained alienated from the true spirit of the great creations of the past." Ginzburg, Moisei. *Style and Epoch*. Translated by Anatole Senkevitch. (The MIT Press. Cambridge, MA: 1982). Pg. 38. Originally published in 1923.

[158] Le Corbusier, *Toward an Architecture*. Pg. 101. Compare to Hermann Muthesius' prior statement: "The world lies under the spell of the phantom 'style-architecture.' It is hardly possible for people today to grasp that the true values in the building-art are totally independent of the question of style, indeed that a proper approach to a work of architecture has absolutely nothing to do with 'style.'" Muthesius, *Style-Architecture and Building Art*.

[159] Behne, Adolf. *The Modern Functional Dwelling*. Translated by Michael Robinson. (The Getty Center for the History of Art. Los Angeles, CA: 1996). Pg. 137. Originally published in 1926.

[160] Even Theo van Doesburg, founder of the *De Stijl* movement in Holland, felt it necessary upon reflection to distinguish between the antiquated and outmoded sense of "style" and the modern sense of a "new style" dissolving the old: "[I]n a paradoxical way: the De Stijl idea as the idea of a new style, as an addition to the multitude of existing evolutionary possibilities, is meaningless and anachronistic. The De Stijl idea as the

61

tasked with the problem of formally expressing the essence of their age, of creating a language of architecture adequate to modern life. Walter Curt Behrendt would thus write of *The Victory of the New Building Style,* the title of his 1928 reflective on the successful development of modernist architecture.[161] Despite his opposition to "the styles," so also could Le Corbusier write with confidence that "[o]ur era fixes its style every day. It is right before our eyes."[162] In Russia, Ginzburg arrived at much the same notion in his outstanding work *Style and Epoch,* where he first outlined the "prerequisites for the new style," the acceptance of which demanded the negation of architecture's servility to past forms.[163] The signatories of the international "Call for Elementarist Art," issued in 1922, addressed this paradox concretely. "Reject the styles," they implored. "We demand freedom from the styles to reach the STYLE."[164] Muthesius, lecturing fifteen years earlier in Berlin, would state that while a style could not be consciously sought out, one could nevertheless emerge out of the social *Zeitgeist*.[165] Hannes Meyer, who would later

---

dissolution of all styles within one elementary plasticism is significant, spiritually alive, and in advance of its time." Doesburg, Theo van. *"De Stijl*, Jubilee Number." Translated by Hans L.C. Jaffé. *De Stijl*. (H.N. Abrams. New York: 1971). Originally published in *De Stijl*, pgs. 2-9, 1927. Pg. 219.

[161] "[I]n the struggle for the new style that we have so respectfully considered, the architecture has solid ground under its feet now that it has entered on the path that all original creations follow. If it continues along this path…then the blessing of *art*…will be bestowed of its own accord on the works of the new style, of the machine style, of — if one wishes to call it thus — the *technical* style." Behrendt, *The Victory of the New Building Style*. Pg. 142.

[162] Le Corbusier, *Toward an Architecture*. Pg. 156.

[163] "A new style does not emerge all at once. It begins in various facets of human life, which frequently are totally unrelated to one another…[T]he new elements manage, on the strength of their vitality and purely organic legitimacy, gradually to entice more and more facets of the old world until, finally, nothing can stem the tide. The new style becomes a fact, and those refusing to accept that fact condemn themselves to a complete and grievous isolation: no homage to past cultures can alter the situation; the world, steeped in its bold sense of legitimacy, recognizes only itself. This provides the key to its creative power and to the triumph of its march of conquest." Ginzburg, *Style and Epoch*. Pg. 76.

[164] Hausmann, Raoul; Arp, Hans; Puni, Ivan; and Moholy-Nagy, László. "A Call for Elementarist Art." Translated by Stephen Bann. *The Tradition of Constructivism*. (Da Capo Press. New York, NY: 1974). Pg. 51. Originally published in *De Stijl* 1922 (Vol. IV, № 10).

[165] "Styles do not grow up overnight and cannot be invented to order. They can only be the fruit of periods of serious striving, when inner forces are made explicit…Nor can style be anticipated; it can only grow up

rise to the position of Bauhaus director, echoed these sentiments in 1926 by writing: "Each age demands its own form. It is our mission to give our new world a new shape with the means of today. But our knowledge of the past is a burden that weighs upon us, and inherent in our advanced education are impediments tragically barring our new paths. The unqualified affirmation of the present age presupposes the ruthless denial of the past."[166]

On the other hand, however, many feared the conceptual *rigor mortis* that might set in with modernism's formalization as a new "style" or "tradition." Despite the inherent negativity that a new style would express with respect to the old, the members of the avant-garde hoped to prevent the petrifaction of its stylistic elements into a lifeless and formulaic system. The modernists, to be sure, aimed at a universal language of form, but they would take great measures to ensure that these forms would not ossify and be held apart from life. "Wherever possible," advised Muthesius, "we should for now ban completely the notion of style."[167] This was, in particular, a concern of the Bauhaus brand of modern architecture, which suddenly (and unexpectedly) found that its forms had become stylish in late Weimar society. The brilliant Hungarian critic Ernő Kállai would thus reflect in his article, "Ten Years of Bauhaus":

> What, during the early years at Weimar, used to be the vehemently disputed activity of a few outsiders has now become a big business boom. Houses and even whole housing settlements are being built everywhere; all with smooth white walls, horizontal rows of windows, spacious terraces, and flat roofs. The public accepts them, if not always with great enthusiasm, at least without opposition, as the products of an already familiar "Bauhaus style"…Today everybody knows about it. Houses with lots of glass and shining metal: Bauhaus style. The same is true of home hygiene without home atmosphere: Bauhaus style. Tubular steel armchair frames: Bauhaus style. Lamp with nickel-coated body and a disk of opaque glass as lampshade: Bauhaus style. Wallpaper patterned in cubes: Bauhaus style. No painting on the wall: Bauhaus style.

as the all-embracing expression of the spirit of the age." Muthesius, Hermann. "The Meaning of the Arts and Crafts." Translated by Tim Benton. *Architecture and Design, 1890-1939: An International Anthology of Original Articles*. (The Whitney Library of Design. New York, NY: 1975). Pg. 39. Lectures originally delivered in 1907.

[166] Meyer, Hannes. "The New World." Translated by D.Q. Stephenson. *Buildings, Projects, and Writings*, (Teufen AR/Schweiz. Arthur Niggli Ltd.: 1965). Pg. 93. Originally published in 1930.

[167] Muthesius, *Style-Architecture and Building-Art*. Pg. 81.

Incomprehensible painting on the wall: Bauhaus style. Printing with sans-serif letters and bold rules: Bauhaus style. everything written in small letters: bauhaus style. EVERYTHING EXPRESSED IN BIG CAPITALS: BAUHAUS STYLE.[168]

According to the precepts of its founder, this was a most unwelcome development. "The object of the Bauhaus," asserted Gropius, "was not to propagate any 'style,' system, dogma, formula, or vogue, but simply to exert a revitalizing influence on design. We did not base our teaching on any preconceived ideas of form, but sought the vital spark of life behind life's ever-changing forms." Even less ambiguously, he stated that "[a] 'Bauhaus Style' would have been a confession of failure and a return to that very stagnation and devitalizing inertia which I had called it into being to combat."[169] Gropius' successor, Meyer, would reiterate the school's social commitment as follows: "work means our search for the harmonious form of existence. we are not seeking a bauhaus style or a bauhaus fashion."[170] But the members of the Bauhaus school were not the only ones to warn against the reduction of modernist architecture to a set of readymade forms and solutions to be applied to every imaginable situation. Already by its fourth issue in 1926, the iconic Constructivist journal *SA* declared that it was not content to "merely push that 'objective' hodgepodge of prerevolutionary tripe that has today unfortunately become fashionable as 'the constructive style.'"[171]

Regardless of how they came down on the question of "style," however, the avant-garde was almost uniformly opposed to the lavish ornamentation that had characterized nineteenth-century architectural production. By 1908, the first major volley had been fired in the modernists' war against overdecorative eclecticism by the Austrian Adolf Loos, in his seminal essay on "Ornament and Crime." "[O]rnament is no longer a natural

---

[168] Kállai, Ernő. "Ten Years of Bauhaus." Translated from the German by Wolfgang Jabs and Basil Gilbert. *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930.* (The MIT Press. Cambridge, MA: 2002). Pg. 637. Originally published in 1930.

[169] Gropius, Walter. *The New Architecture and the Bauhaus.* Translated by P. Morton Shand. (MIT Press. Cambridge, MA: 1965). Pg. 92. Originally published in 1932.

[170] Meyer, Hannes. "bauhaus and society." Translated by D.Q. Stephenson. *Buildings, Projects, and Writings*. (Teufen AR/Schweiz. Arthur Niggli Ltd.: 1965). All lower-case in the original. Originally published in 1929.

[171] Author uncredited. "*Stroitel'naia promyshlennost'* kritikuet *SA*." *Sovremennaia arkhitektura. (Volume 1, № 4. Moscow, Soviet Union: 1926).* Pg. 105.

product of our culture," sneered Loos, "s[uch] that it is a phenomenon either of backwardness or degeneration."[172] But while Loos' text would provide perhaps the most bombastic condemnation of ornament, he was not the first to call for a scaling back of decorative forms in artistic and architectural production. Otto Wagner, his predecessor in Vienna and one of the great initiators of architectural modernism, had already anticipated this austere gesture through his advocacy of simple, practical, and indeed "military" forms in his book *Modern Architecture*, published in 1896.[173] Muthesius spoke out with force against "the ornament craze," lamenting that "[w]e were and are still today fixed in the ornamental phase of the craft arts; the so-called new ornament has now simply stepped in and replaced the previously fashionable Rococo ornament. Still the concept of ornament prevails everywhere."[174] Karl Grosz, one of the many influenced by Muthesius in the *Deutscher Werkbund*, extended this line of criticism further. In a 1911 article he wrote on "Ornament," he asserted: "The use of ornamental decoration for objects of mass consumption is strictly speaking a devaluation…Industry can only achieve its real goals if the following principle is remembered: everything of a decorative nature must possess artistic and technical quality."[175]

These initial critiques of nineteenth-century ornamental extravagance were taken up again after the war, this time with even greater ferocity. What had begun as merely a call to bring decorative excesses back into order, a primarily moralistic critique,[176] was now elevated into a matter of architectural principle. Decrying "romantic" and "baroque"

---

[172] Loos, "Ornament and Crime."

[173] "If the work being created is to be a true reflection of our time, the simple, the practical, the — one might almost say — military approach must be fully and completely expressed, and for this reason alone everything extravagant must be avoided." Wagner, Otto. *Modern Architecture: A Guidebook for His Students to this Field of Art*. Translated by Wolfgang Hermann. (The Getty Center for the History of Art and the Humanities. Los Angeles, CA: 1988). Pg. 85. Originally published 1896.

[174] Muthesius, *Style-Architecture and Building-Art*. Pg. 88.

[175] Grosz, Karl. "Ornament." Translated by Tim Benton. *Architecture and Design, 1890-1939: An International Anthology of Original Articles*. (The Whitney Library of Design. New York, NY: 1975). Pg. 47. Originally published for 1911.

[176] "In Europe during the [1890s] a demand for morality in architecture arose in many different countries. As [Henry] van de Velde puts it, people say the reigning architecture as a 'lie,' all posturing and no truth, and that a greater purity of expression was needed." Giedion, *Space, Time, and Architecture*. Pg. 25.

tendencies in early twentieth-century construction, the Dutch architectural modernist and innovator J.J.P. Oud thus complained that "as long as…beauty is equated with ornament then the slogan 'all ornament is founded upon construction' has not been supplanted."[177] Five years later, his one-time colleague and leader of *De Stijl*, Theo van Doesburg, would assert plainly: "The new architecture is anti-decorative."[178] The following year, Le Corbusier came out with his major work devoted to the subject, *The Decorative Art of Today*. Here he eulogized the oncoming extinction of ornamentation in design: "Without a revolution, barricades, or gun-fire, but as a result of simple evolution accelerated by the rapid tempo of our time, we can see decorative in its decline, and observe that the almost hysterical rush in recent years towards quasi-orgiastic decoration is no more than the final spasm of an already foreseeable death."[179] In 1929, Roman Khiger, a Constructivist architect and Ginzburg's successor as editor of *SA*, would go so far as to write that "[i]n the organic epochs of history architecture was never decorative or ornamental, but always

---

[177] Oud, J.J.P. "Orientation." Translated by Hans L.C. Jaffé. *De Stijl*. (H.N. Abrams. New York: 1971). Pg. 140. Originally published in *De Stijl* 1919, Vol. III, № 5, p. 46.

[178] Doesburg, Theo van. "Towards a Plastic Architecture." Translated by Hans L.C. Jaffé. *De Stijl*. (H.N. Abrams. New York: 1971). Pg. 187. Originally published in *De Stijl* 1924, Vol. VI, № 6/7, pgs. 78-83.

[179] Le Corbusier. *The Decorative Arts of Today*. Translated by James I. Dunnett. (The MIT Press. Cambridge, MA: 1987). Pg. 96. Originally published as *L'Art décoratif d'aujourd'hui* in 1925.

Le Corbusier's critique of ornamentation is deeply indebted to Loos' "Ornament and Crime." Compare the following lines from Loos: "The Papuan tattoos his skin, his boat, his paddles, in short everything he can get his hands on. He is not a criminal. The modern man who tattoos himself is either a criminal or a degenerate." Loos, "Ornament and Crime."

Now with the example of Le Corbusier: "[T]he Papuan who inscribes on his paddle the figure of an albatross and a surging wave [is] making an act of devotion toward nature…We are at the dawn of the machine age. A new consciousness disposes us to look for a different satisfaction from that afforded by the bud carved on the capitals in churches." Le Corbusier, *The Decorative Arts of Today*. Pgs. 120, 126.

Both these examples can be read as a sort of response to the theory of Gottfried Semper, who argued materialistically that the ornamentation of objects evolved from the ornamentation of the body through tattoo and piercing: "[I]t would not be too great a paradox to ascribe the origin of certain traditional surface ornaments to the art of tattooing." Semper, Gottfried. *Concerning the Formal Principles of Ornament and Its Significance as Artistic Symbol*. Translated by David Britt. From *The Theory of Decorative Art: An Anthology of European & American Writings, 1750-1940*. (Yale University Press. New Haven, MA: 2000). Pg. 93.

— constructive."[180] Whether or not this held true throughout history, architecture could no longer remain decorative and ornamental in the modern age, as Behrendt pointed out. "[The new] way of designing," he maintained, "no longer permits chance ornament, superfluous adornment, or applied decoration."[181] Gropius drew a definitive conclusion from this fact, writing that modern architecture "bodies itself forth, not in stylistic imitation or ornamental frippery, but in those simple and sharply modeled designs in which every part merges naturally into the comprehensive volume of the whole."[182]

One final aspect of traditionalist architecture — besides its excessive ornamentation and historicist stylization — united the architectural avant-garde in opposition. This was its *institutionalization* in the high academies that trained young architects and accustomed them to its practice. Everywhere the modernists revolted against "beautiful academic art, *ars academica, les beaux arts,* which modernity dethrones."[183] In many cases, this led the avant-garde to oppose "Art" as such, at least insofar as it had been hypostatized and canonized by the academies. "WE DECLARE UNCOMPROMISING WAR ON ART," Aleksei Gan thus exclaimed in 1922, in the opening pages of his foundational book on *Constructivism*.[184] Though most architects would refrain from such brazenly iconoclastic antiaestheticism,[185] the modernists by and large did not hesitate to attack the academies. "[T]here are, in all countries," wrote Le Corbusier, "national, regional, municipal schools

---

[180] Khiger, Roman. "O sotsiologii iskusstva." *Sovremennaia arkhitektura*. (Volume 4, № 3. Moscow, Soviet Union: 1929). Pg. 116.

[181] Behrendt, *The Victory of the New Building Style*. Pg. 126.

[182] Gropius, *The New Architecture and the Bauhaus*. Pg. 43.

[183] Teige, Karel. "Constructivism and the Liquidation of 'Art.'" Translated by Alexandra Büchler. *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930*. (The MIT Press. Cambridge, MA: 2002). Pg. 583. Originally published as 'Konstruktivism a likvidace urnenf,' *Disk*, No. 2, 1925.

[184] Gan, Aleksei. *Konstruktivizm*. (Moscow, Soviet Union: 1922). Pg. 1.

[185] Ginzburg would not long thereafter scale back Gan's assault on art, writing that "we shall likewise attempt to evaluate modern 'constructivism' as an artistic phenomenon. Perhaps now we shall be better able to comprehend both the menacing slogan advanced by the Russian Constructivists and its bravado, which are quite natural psychologically and quite familiar to the art historian: there has never, it seems, been a young movement which feeling its power, did not wish in its own time and place to press for the abolition of everything that did not conform to its precepts." Ginzburg, *Style and Epoch*. Pgs. 100-101.

for architects that muddle young minds and teach them the falsehood, fakery, and obsequiousness of courtiers. National schools!"[186] Lissitzky, in one of his earliest essays on architecture, maintained that these institutions had taken the vital practices of building and artificially divorced them from life. He claimed that "[e]ver since they transplanted our living, naturally-cultivated creations into the hothouses of the academies, everything truly creative has passed these conservatories by."[187] Le Corbusier's friend and official historian of avant-garde architecture, Sigfried Giedion, similarly wrote that "academic incrustations bear the blame" for architecture lagging behind the other modern arts in France.[188] The academies were thus seen as obstructions rather than effective means to the realization of an architecture adequate to modern times.   "With a few notable exceptions," wrote Behrendt, "the *official educational institutions* — the academies and the technical colleges — charged with acquainting the next generation with the new building problems now pay no attention to this present responsibility…Historical styles, however, are discussed all the more."[189] Nikolai Dokuchaev, one of the chief theorists of the Rationalist movement within the Soviet avant-garde, wrote that besides ASNOVA and OSA, "academic epigonism and eclecticism" reigned in the field of architecture.[190]

Many modernist theorists extrapolated from the specific state of architecture under the influence of post-1762 traditionalism and its institutionalization in the academies to view these as mere surface manifestations bespeaking a deeper crisis within bourgeois civilization. Karel Teige expressed this viewpoint with exceptional clarity:

---

[186] Le Corbusier, *Toward an Architecture*. Pg. 94.

[187] Lissitzky, El. "The Catastrophe of Architecture." *El Lissitzky: Life, Letters, Texts*. Translated by Sophie Lissitzky-Kuppers. (Thames & Hudson Press. London: 1980). Pg. 370. Originally published in *ISO*, № 1, Moscow, March 1921.

[188] "The role of France is well established in the painting and literature of the nineteenth century. This is not at all as clear with architecture. The academic incrustations bear the blame. They dazzled all formally educated souls. When the new architecture will have advanced far enough to allow a broader survey, it may become evident: all the academic incrustations were unable to smother the constructional soul of French architecture!" Giedion, Sigfried. *Building in France, Building in Ferroconcrete*. Translated from by J. Duncan Berry. (The Getty Center for the History of Art. Los Angeles, CA: 1995). Pg. 100.

[189] Behrendt, *The Victory of the New Building Style*. Pg. 141.

[190] Dokuchaev, Nikolai. "Sovremennaia russkaia arkhitektura i zapadnye paralleli [Part 1]." *Sovetskoe iskusstvo*. (Vol. III, № 1. Moscow, Soviet Union: January 1927). Pg. 10.

Historical academicism, in which today we rightly see both the true manifestation of nineteenth-century bourgeois culture and the mature expression of its ideological thought, remained hostile to the prosaic, almost scientifically exact and sober work of the classicistic Empire style. The romantic cult of the Gothic, the romanticizing fancy sought in ruins and asymmetrical forms, would lead the art of building astray, away from true architecture. The stylized, historicist architecture that reached its zenith in the 1850s and persisted until the century's end…was affected, unhealthy, exhausted, and decadent. It produced formally decorative and monumentalizing agglomerations, which merely led architecture down a blind alley…[T]he architecture that followed sought only to dazzle us with vacuous academic formulas borrowed from a dead past.[191]

Teige's view, that traditionalist architecture was simply an outcropping of the logic of nineteenth-century bourgeois society, must to some extent be confirmed by our own analysis of the concrete side of the spatiotemporal dialectic of capitalism.[192] This bridges modernist architecture's negative basis in traditionalist architecture with its negative basis in bourgeois society as a whole. The identification of historicism and eclecticism as the architectural ideologies of the ruling class was common amongst political leftists within the avant-garde. So wrote the radical Czechoslovakian modernist organization in its *Founding Manifesto* of 1929: "The basis on which the Left Front is being built is revolutionary: the Left Front is an organized and conscious resistance movement of intellectual productive forces against the ruling, disintegrating culture of liberalism, and takes a stand of resolute non-conformism against its traditions, outdated ideas, academies, aesthetics and morals of a disorganized and decaying social system."[193] There was a sense in which the European bourgeoisie already stood for the *status quo*, or worse yet,

---

[191] Teige, *Modern Architecture in Czechoslovakia*. Pg. 62.

[192] The extent to which modernist architecture positively reflected the abstract dimension of this dialectic (as will be shown in the next subsection), did not wholly escape political leftists within the avant-garde. In the same way as Marxists traditionally view capitalism as a dynamic system preparing the productive and social means for a postcapitalist society, so also could the technologies and abstract sense of space and time engendered by capitalism be understood as means for a postcapitalist architecture. Of course, the avant-garde's positive grounding in capitalism was not entirely transparent to them, at least in the terms that we have developed here.

[193] *Founding Manifesto of the Left Front*. Translated by Alexandra Büchler. *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930*. (The MIT Press. Cambridge, MA: 2002). Pgs. 678-679. Originally published as "Leva fronta," in *ReD*, Vol. III, № 2 (1929).

the "old order" — blocking the path to architecture's revitalizing of the new society. The image of the bourgeoisie clinging to the tatters of its outdated social structure even in the face of sweeping historical transformations made a deep impression on the avant-garde. Even outside of Bolshevik Russia and their supporters in Eastern Europe, the prevailing attitude of the modernists with respect to bourgeois society was highly critical. Alfréd Kemény, a Polish constructivist, remarking on the revolutionary art of the West, observed that "[t]he revolutionary element in West European art lies on a different plane [than in Russia]. Those artists who operate on that plane do not embrace abstraction as a refuge from the reality of a decaying society. They make realistic works that unmask the decay of bourgeois society and fight against it for a better future."[194]

Beyond the general feeling that bourgeois society was a sinking ship, many of the artists and architects in the avant-garde felt on a more immediate level that the bourgeois fetishization of "taste" stood in the way of cultivating new constructive forms. Giedion, far less radical than many when it came to his politics, recognized bourgeois taste as an impediment to the growth of modern architecture: "The backbone of the young people is still artificially broken in the schools, and the ideal of the Academie des Beaux-Arts survives in the minds of the bourgeoisie."[195] Taking stock of the historical development of the arts under modern capitalism, and the progressive separation of art from life, the Polish theorist Mieczysław Szczuka commented on the bourgeois *mentalité* in a 1927 essay on "Art and Reality." In particular, he noted the atavistic qualities that it tended to foster, as it sought to anchor itself in ancient history, despite having uprooted the social forms whose traditions it was now laying claim to. "This social situation, this cowardly sneaking one's way into the ranks of the privileged, results in the great-bourgeoisie having a deeply parvenu attitude to art and life" he asserted. "Typically parvenu is its fixation with all things past, with all kinds of 'styles,' with outdated fashions, its searching for beauty in that which is old, which has lost all utility value, and its feeling ashamed of those real, utilitarian values which it has brought in. Hence those aesthetic

---

[194] Kemény, Alfréd. "Abstract Design from Suprematism to the Present." Translated by David Britt. From *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930*. (The MIT Press. Cambridge, MA: 2002). Pg. 480. Originally published in 1924.

[195] Giedion, *Building in France, Building in Ferro-Concrete*. Pg. 199.

theories which separate beauty and utility — beautiful is only that which has no longer, or never had, any use (the cult of old ruins etc.)."[196] In the Soviet Union, lingering bourgeois prejudices of taste were seen as a major roadblock to be overcome in the building of a new, socialist society. Old-fashioned notions of artistic "beauty" and middle-class "coziness" were relics of the old way of life, and had to be scrapped in order to make way for the new. And so the editors of OSA's *Modern Architecture* declared early on that "issues of quality — these are the questions of a new socialist culture: the question of making a new life for the workers, of combating the atavistic reservoirs of the middle class; issues of derogating petty-bourgeois conceptions of beauty and comfort [*uiute*, more literally 'coziness']; and issues of building-up [*narastaniia*] a new cultural stratum, without which there can be no genuine socialist construction."[197]

Bourgeois taste, its propensity for atavism and "style-mongering" (a product of its unique historical consciousness), was not the only thing that the architectural modernists found problematic about modern capitalist society. Of a more general concern was the apparent chaos of its economic conditions, and the productive anarchy that resulted from this. The avant-garde saw in the disorganized and seemingly arbitrary nature of capitalist relations of production the macrocosmic embodiment of the stylistic capriciousness they found in architectural eclecticism. This was reflected on an even higher level in the disorderly arrangement of bourgeois towns and cities. Some of these, to be sure, were inherited from antiquity and the middle ages, and thus possessed a further accumulation of buildings from disparate epochs. But others had experienced this uncoordinated growth and haphazard pattern of development under capitalism alone, as the conflict of private tastes and the rapid turnover of stylistic norms gave rise to a disconcerting heterogeneity of forms within the space of a single city, or even from building to building within a single neighborhood. "All our modern great cities or industrial landscapes are chaotic," lamented Cornelis van Eesteren, the Dutch urbanist who would later oversee

---

[196] Szczuka, Mieczysław. "Art and Reality." Translated by Klara Kemp-Welch. From *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930.* (The MIT Press. Cambridge, MA: 2002). Pg. 668. Originally published in 1927.

[197] Author(s) uncredited (probably Moisei Ginzburg). "Anketa." *Sovremennaia arkhitektura. (Volume 1, № 5/6. Moscow, Soviet Union: 1926)*. Pg. 111.

CIAM's project for "The Functional City."[198] With this assessment, Le Corbusier, who would later be one of Eesteren's closest colleagues, no doubt concurred. He diagnosed that "in the last hundred years a sudden, chaotic, and sweeping invasion, unforeseen and overwhelming, has descended upon the great city; we have been caught up in this, with all its baffling consequences, with the result that we have stood still and done nothing. The resultant chaos has brought about that the Great City…is today a menacing disaster."[199] For the avant-garde, this disorganized state of affairs — the outcome of the individualistic and unplanned character of modern society — could only be remedied through a thorough process of reorganization. And above all this, *planning*.

"The plan is the basis," recorded Le Corbusier in *Toward an Architecture*. "Without a plan, there is neither grandeur of intention and expression nor rhythm, nor volume, nor coherence. Without a plan there's that sensation, unbearable to man, of formlessness, of something mean, disordered, arbitrary."[200] Tafuri, in his inquiry into *Architecture and Utopia*, recognized the ideological character of this will-to-planning, its compatibility with later, more administrative modes of Fordist capitalism, and yet its "ingenuous radicalism" at the same time.[201] The solution to the problem of chaotic urban growth

---

[198] Eesteren, Cornelis van. "Ten Years of 'Stijl': Art, Technique, and Town Planning." Translated by Hans L.C. Jaffé. *De Stijl*. (H.N. Abrams. New York: 1971). Pg. 228.

[199] Le Corbusier. *The City of To-morrow and Its Planning*. Pg. 25.

Le Corbusier later specifies that "the Great City is a recent event and dates back barely fifty years." *Ibid.*, pg. 84.

[200] Le Corbusier, *Toward an Architecture*. Pg. 118.

[201] "Salvation [from modern capitalist alienation] lies no longer in 'revolt,' but in surrender without discretion. Only a humanity that has absorbed and made its own the ideology of work, that does not persist in considering production and organization *something other* than itself or simply instruments, that *recognizes itself to be part of a comprehensive plan* and as such fully accepts that it must *function* as the cog-wheels of a global machine: only this humanity can atone for its 'original sin'…This sin consists in *man's 'diabolical' insistence on remaining man*, in taking his place as an 'imperfect machine' in a social universe in which the only consistent behavior is that of pure silence…This was exactly the ideology that informed the Futurist manifestos, Dadaist mechanicalism, *De Stijl* elementarism, and international Constructivism. But what is really striking in this ideology of unconditional consensus is its ingenuous radicalism. Among all those literary, artistic, or cinematographic manifestos in favor of the *mechanization of the universe*, there is not one that does not fail to amaze." Tafuri, *Architecture and Utopia*. Pgs. 74-76.

seemed to lie in transferring planning authority to socially minded specialists. "It is only among intelligent professional and public-spirited circles that we can hope to arouse a determination to have done with the noxious anarchy of our towns," asserted Gropius.[202] But it was perhaps Le Corbusier who expressed the ideology of professionalized planning in the most breathtaking terms. In his *Radiant City* of 1933, he wrote:

"What we need, Sir, is a despot!"

Do you too yearn for a king or a tribune? Weakness, abdication, and illusion. The despot a man? Never. *But a fact*, yes.

The calendar is a succession of happy or empty days, of spontaneously occurring events, of unlooked-for incidents. [Note the tacit opposition to organic, heterogeneous time.]

What is the result? The result is that the city is walking on crutches. That it runs into more and more dead ends; that nothing is ever ready; that nothing ever fits. Feverish haste, precipitate action, incoherence, cacophony, submergence: our will is enslaved by the rush of events, all order swallowed up. The human idol you are yearning after could not stem this tide. Only *a fact* can do it. A PLAN. A suitable, long-pondered plan firmly founded on the realities of the age, created with passion and imagination, a work of human divination: man is a being capable of organization.

[…]

I shall tell you who the despot is you are waiting for.

The despot is not a man. The despot is the *Plan*. The *correct, realistic, exact* plan, the one that will provide your solution once the problem has been posited clearly, in its entirety, in its indispensible harmony. This Plan has been drawn up well away from the frenzy in the mayor's offices or the town hall, from the cries of the electorate or the laments of society's victims. It has been drawn up by serene and lucid minds. It has taken account of nothing but human truths. It has ignored all the current regulations, all existing usages and channels. It has not considered whether or not it could be carried out in accordance with the constitution now in force.

And this plan is your despot: a tyrant, a tribune of the people. Without other help, it will plead its cause, reply to objections, overcome the opposition of private interest, thrust aside outworn customs, rescind outmoded regulations, and create its own authority. The authority will follow the plan, not precede it. Such and such a plan, such and such requirements for its execution: creation of an authority adequate to them.

The plan is an emanation of modern society, an answer to its needs, an urgent necessity. It is a product of technology.

Insist on the organization of that Plan. It alone is the despot you need.[203]

---

[202] Gropius, *The New Architecture and the Bauhaus*. Pg. 110.

[203] Le Corbusier. *The Radiant City: Elements of a Doctrine of Urbanism to be Used as the Basis of our Machine-Age Civilization*. Translated by Pamela Knight, Eleanor Levieux, and Derek Coltman. (The

And so it was that the chaos and disorganization plaguing modern towns and countries came to be viewed by Le Corbusier and many of his fellow architectural modernists as the result of a fundamentally diseased social order: bourgeois society, or capitalism. This shows up even more explicitly in lines like the following: "Since I am a professional man, I make plans according to my professional concepts; this is where my judgment is good. If everyone did the same thing and the plans were coordinated by an authority in charge of the public interests, the result would, of course, *be a Five-Year Plan*, impossible to implement. *Impossible because of our present social system!* So now what?"[204] While his rhetoric would never approach such lofty proclamations as those of Le Corbusier, even Gropius would despair, after immigrating to America during World War II, that "the public is still very ignorant of the great benefits awaiting it from good planning. The average citizen is inclined to see an interference with his personal freedom when given direction by government agencies. The necessity continuously to inform him why communal planning is to his own best advantage calls for the highest psychological ability in a planner."[205]

Those in the architectural avant-garde who were convinced Marxists already did not hesitate to link the unplanned, chaotic nature of the cities of modern Europe to its social basis in contemporary capitalism. "Quite obviously," wrote Nikolai Krasil'nikov, the young Soviet Constructivist, "the whole look of a town that forms such a politico-economic center and seedbed for socialist culture will differ significantly from that of the contemporary town which was shaped by capitalism and its anarchically unplanned economy. The arguments of commercial speculation determined the plan and form of its buildings."[206] Teige, a member of the Communist Party in Czechoslovakia, believed that the unmasking of the chaos of the capitalist system was one of the primary tasks facing Constructivism in architecture. His language was quite similar: "Constructivism asserts

Orion Press. New York, NY: 1964). Pgs. 153-154. Originally published in 1933, out of documents compiled 1930-1933.

[204] *Ibid.*, pg. 8. My emphases.

[205] Gropius, Walter. "The Scope of Total Architecture." *The Scope of Total Architecture*. (MacMillan Publishing Company. New York, NY: 1980). Originally published in 1945.

[206] Krasil'nikov, Nikolai. "Problemy sovremennoi arkhitektury." *Sovremennaia arkhitektura. (Volume 3, № 6. Moscow, Soviet Union: 1928)*. Pg. 172.

that the order of our civilization is a coat of paint that conceals the flagrant reality of the individualist anarchy of production."[207]   Others contrasted the strictures on municipal organization under capitalism with the planning possibilities opened up by the advent of socialism in Russia, however. "[T]he transition from a privately owned, unregulated construction industry to a planned and centralized one, committed to rationalization and the reduction of costs, represents an undeniable advance," concluded Ginzburg. "The Building Committee of the RSFSR is an agency with unlimited powers responsible for the rationalization of the whole building process."[208]   In making these claims, these authors were consciously echoing one of the central tenets laid out by Nikolai Bukharin and Evgenii Preobrazhenskii in their popular handbook on *The ABCs of Communism*. Therein they asserted: "ONE OF THE FUNDAMENTAL TASKS OF THE SOVIET POWER WAS AND IS THAT OF UNITING ALL THE ECONOMIC ACTIVITIES OF THE COUNTRY IN ACCORDANCE WITH A GENERAL PLAN OF DIRECTION BY THE STATE…[O]ne of the great merits of the communist system is that it puts an end to the chaos, to the 'anarchy,' of the capitalist system."[209]

The assimilability of state planning and governmental regulations to market-based economies was at this point unclear to many intellectuals within the avant-garde and in Europe more generally. Nearly all of them underestimated the flexibility of the capitalist system, and the heavily bureaucratized administrative society that predominated under Fordism would give the lie to many of their assertions. At the time, many architects saw their position within the capitalist system as untenable. As Tafuri would later wisely point out, "[o]rganization and planning are…the passwords of both democratic socialism and democratic capitalism."[210] This would only become apparent later, however.

---

[207] He continues: "Conflicts between the forces and relations (proportions of ownership) of production, the imbalance between production and consumption, reactions to the crisis of capitalism — all these factors paralyze technological progress and the welfare of humanity. Anarchy reigns in capitalist production, anarchy fostered by the chase after increased gain, without any corresponding increase of real productivity values." Teige, *Modern Architecture in Czechoslovakia*. Pgs. 295-296.

[208] Ginzburg, "Contemporary Architecture in Russia." Pgs. 158-159.

[209] Bukharin, Nikolai and Preobrazhenskii, Evgenii. *The ABCs of Communism*. Translated by Eden Paul and Cedar Paul. (Penguin Books. New York, NY: 1969). Pg. 266. §95. Originally published in 1918.

[210] Tafuri, *Architecture and Utopia*. Pg. 69.

Modernist Architecture — Positive Bases

The theory and practice of modernist architecture were positively based on two primary phenomena that developed under capitalism: the abstract sense of space and time created by the internal dynamic of capitalism, and the more concrete process of industrialization that took place in Europe over the course of the nineteenth century. The former of these developments, the abstract side of capitalism's spatiotemporal dialectic, first manifested itself spatially in the medium of Cubist and post-Cubist abstract painting (Neo-plasticism, Purism, Suprematism) and temporally in the simultaneous representation of motion and light by movements such as Futurism and Rayonism. This abstract temporal dimension was deepened and refined by the avant-garde's appropriation of Taylorism, the system of "scientific management" in industry founded in America just prior to the First World War.[211] A discussion of Taylorization's impact on modernist architecture will lead into a more general discussion of the inescapable influence that European industrialization had on its overall development. Specifically, it will examine the modernists' fascination with machine technologies, efficiency, and the principle of standardization. All these aspects of modern society had been brought into existence by nineteenth-century capitalism in the shift from more primitive manufacturing techniques to full-blown industrialism. In this way, modernist architecture can be seen in its *positive* connection to the forces and logic unfolding out of capitalist modernity, in addition to its negative bases that were outlined in the previous subsection. Modernism captured in its architecture the greater project of "rationalization" that was taking place throughout the Western world during this time, as theorized by thinkers such as Weber, Adorno, and Horkheimer.

A tertiary influence may be cited alongside these two main positive bases of avant-garde architecture: the working class. In some sense, the modernists' identification with the European proletariat can be traced to their general disgust with bourgeois society,

---

[211] "Like the scientific managers, the modernist architects initially sought to improve building practices but soon realized that method, standardization, and planning enabled them to formulate a new approach to architecture. The overarching idea in scientific management was that of order, one that subsequently captivated the modernist architects because it enabled them to move away from the prevailing eclecticism and to present themselves as organizers, as technocrats who could ameliorate social conflict and improve standards of living." Guillén, *The Taylorized Beauty of the Mechanical*. Pg. 4.

coupled with the widespread leftist idea that the working class could play a revolutionary role in the construction of a new and more rational society. But in another sense, the modernists' valorization of working class must have stemmed from its association with industrial production, which held an obvious positive appeal for avant-garde architects. Though this affirmation of the laboring masses of Europe thus had its sources in both positive and negative aspects of modern society, its general character should be seen as positive. Either way, the avant-garde expressed its solidarity with workers in its quest to provide them with adequate dwelling conditions, and, more broadly, to overcome the chronic shortage of urban housing. The modernists' efforts to this end can be seen in their commitment to the creation of a standard *Existenzminimum — l'habitation minimum*, *Kleinstwohnung*, or "minimum dwelling."[212]

Before detailing this more social component of modernist architectural ideology, it is proper to examine the formal properties imparted to it by the abstract spatiotemporal dimension of capitalism. Referring back to the characteristics established beforehand as belonging to the abstract forms of space and time manifested under capitalism,[213] the extent to which these qualities were expressed by modernist art and architecture will be made clear. The scientific, cyclical, and synchronous character of its temporality; the geometric, centrifugal, and global/international character of its spatiality; their mutual homogeneity — all these categories will be important to bear in mind moving through the following analysis. For these traits, generated by the inherent dynamism of modern society, would embed themselves in the artistic unconscious of a generation of painters and architects. These then would bubble to the surface in the works of the modernists, which expressed the new spatiotemporal sensibility of their age. Such expressions of this new aesthetic orientation should be seen as manifestations of the latent social dynamic of capitalism, however, mediated perhaps by the genius of individual artists.[214]

---

[212] See footnote 34 of the present paper.

[213] Refer back to the schematic chart on pg. 44.

[214] In his exposition of the unprecedented modernist sense of "space-time," Giedion acknowledged the importance of socioeconomic factors in determining architectural ideology, but urged historians not to dismiss the significance of "emotional" factors: "Social, economic, and functional influences play a vital part in all human activities, from the sciences to the arts. But there are other factors which also have to be taken into account — our feelings and emotions. These factors are often dismissed as trivial, but actually

In his groundbreaking 1938 lectures on *Space, Time, and Architecture*, the modernist and insider historian of the avant-garde movement Sigfried Giedion credited the rise of the new architecture to a newfound sense of "space-time" that congealed around the turn of the twentieth century. According to Giedion, this modern aesthetic[215] sensibility described an abstract, four-dimensional unity of temporalized spatiality, much like the kind outlined in physics by Albert Einstein in 1905. This placed a heavy emphasis on the notion of "simultaneity."[216] Giedion could have easily added the work that was taking place in philosophy in the writings of Henri Bergson around the same time.[217] In either case, he claimed that explicit awareness of this new sense of space and time appeared first in the works of abstract art, years before the artists' insights were later taken up and applied by modernist architects. In the first decade of the century, Giedion asserted, "[p]ainters very different in type but sharing a common isolation from the public worked steadily toward a new conception of space. And no one can understand contemporary architecture, become aware of the feelings hidden behind it, unless he has grasped the spirit animating this painting."[218]

their effect upon men's actions is immense." Giedion, *Space, Time, and Architecture*. Pg. 430. Without writing off these emotional influences wholesale, we must nevertheless regard them as epiphenomenal to the more fundamental sociohistorical forces which made them possible.

[215] "Aesthetic" also carries spatiotemporal connotations, as in the Kantian "Transcendental Aesthetic": "In the transcendental aesthetic we will…first *isolate* sensibility by separating off everything that the understanding thinks through its concepts, so that nothing but empirical intuition remains. Second, we will then detach from the latter everything that belongs to sensation, so that nothing remains except pure intuition and the mere form of appearances, which is the only thing that sensibility can make available *a priori*. In this investigation it will be found that there are two pure forms of sensible intuition as principles of *a priori* cognition, namely space and time." Kant, Immanuel. *The Critique of Pure Reason*. Translated by Paul Guyer and Alan W. Wood. (Cambridge University Press. New York, NY: 1998). Pg. 174.

[216] "The presentation of objects from several points of view introduces a principle which is intimately bound up with modern life — simultaneity. It is a temporal coincidence that Einstein should have begun his famous work, *Elektrodynamik bewegter Körper*, in 1905 with a careful definition of simultaneity." Giedion, *Space, Time, and Architecture*. Pg. 436.

[217] Bergson, Henri. *Duration and Simultaneity: With Reference to Einstein's Theory*. Translated by Herbert Dingle. (Bobs-Merrill Press. New York, NY: 1965). Originally published in 1906.

[218] Giedion, *Space, Time, and Architecture*. Pg. 433.

The pioneers of this radically new approach to spatiality, in Giedion's account, were the Cubists. While Cubism was restricted mostly to the medium of painting, and only found itself translated directly into architecture in rare instances,[219] its explosion of linear perspective was a crucial step in the move toward a new spatiality. "The cubists dissect the object, try to lay hold of its inner composition," wrote Giedion. "They seek to extend the scale of optical vision as contemporary science extends the law of matter. Therefore contemporary spatial approach has to get away from the single point of reference." A consequence of this approach is the simultaneous representation of a single object from multiple points of view. "Fragments of lines hover over the surface, often forming open angles which become the gathering places of darker tones. These angles and lines began to grow, to be extended, and suddenly out of them developed one of the constituent facts of space-time representation — the plane."[220] This was one of the major achievements of the Cubists in painting: their move toward a geometric, planar spatiality. In this respect, even the self-styled "Cubist" architects in Czechoslovakia before the war failed to live up to their artistic counterparts. As Teige observed, with characteristic astuteness: "Czech cubist architecture failed to assimilate the most fertile lesson of cubism: the adherence to geometry, to [Paul] Cézanne's truth of geometric archetypes. Czech cubists might have been able to derive the principles of regularity and perpendicularity required by the new architecture from these sources."[221] Marcel Janco, a Romanian-born Dadaist, in his 1928 "Reflections of Cubism," was so bold as to assert that architecture would have never freed itself from the decorative arts had it not been for the contribution of Cubism.[222]

---

[219] Notably, there was a prominent architectural strain of Cubism that appeared in the Czechoslovakian part of the Austro-Hungarian Empire prior to the Great War. As Teige recorded: "The foremost representatives of cubism in Czech architecture were *Pavel Janák, Josef Gočár, Vlastislav Hofman, Josef Chochol,* and *Jiří Kroha*. These architects transposed the principles of cubism from painting into architecture." Teige, *Modern Architecture in Czechoslovakia*. Pg. 140. Teige further explained: "The aesthetic of cubist architecture is derived from cubist painting. The treatment of space and matter that we can read in cubist paintings is here applied to building." *Ibid.*, pg. 145.

[220] Giedion, *Space, Time, and Architecture*. Pg. 437.

[221] Teige, *Modern Architecture in Czechoslovakia*. Pg. 141.

[222] "Architecture itself was 'contaminated' by the decorative arts. It can certainly be claimed that the groundwork for this event was prepared by a multitude of factors; still, without the cubist experiment it

Thus was the geometric aspect of capitalism's abstract spatiality given definite form, depicted by the Cubist painters in the first decade of the twentieth century. After the war, a new wave of abstract painters rose up to build upon their accomplishments. Kazimir Malevich founded Suprematism in Russia, Piet Mondrian formulated Neo-Plasticism in Holland, and Amédée Ozenfant established Purism in France. Giedion regarded these painters as merely carrying Cubism forward to its logical conclusion. And as he correctly noted, each of these movements eventually extended themselves into the sphere of architecture. "In France appeared Le Corbusier and Ozenfant; in Russia, Malevich; in Hungary, [László] Moholy-Nagy; in Holland, Mondrian and van Doesburg," recorded Giedion. "Common to them was an attempt to rationalize cubism or, as they felt was necessary, to correct its aberrations. The procedure was sometimes very different in different groups, but all moved toward rationalization and into architecture."[223] Each of these painters would eventually address the question of architecture in their theoretical writings. Moreover, each of them would have major modernist architects join them as allies in the search for new tectonic forms. Malevich's paintings inspired El Lissitzky's PROUNs as well as his subsequent move toward architecture. Le Corbusier extended Ozenfant's Purism into his writings on building for *L'Esprit Nouveau*. Oud and van Doesburg for the most part followed Mondrian's conception of Neo-Plasticism in their architectural works of the 1920s.

The members of the *De Stijl* movement in Holland were fully aware of the evolution of modern architecture out of the new spatiotemporal sensibility established by painting. "Only in our time," wrote van Doesburg, "has the leading art form, painting, shown the way which architecture must take in order that it may,…with mechanical means and

would not have been brought to birth. Certainly the architects Perret and the builder of the abattoirs from Lyon were the inspired forgers of revolutions, but the one who formulated in genial fashion the time's sentiment, its needs, was Le Corbusier-Saugnier: 'The home is an machine for living.' The shout of hatred rising against aestheticism was the unification signal that caused architectonic Europe to gather around it. Today, because of the little resistance encountered by it in France, we have many modern accomplishments in Holland, Belgium, and Russia." Janco, Marcel. "Reflections of Cubism." Translated by Julian Semilian. From *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930*. (The MIT Press. Cambridge, MA: 2002). Pgs. 705-706.

[223] Giedion, *Space, Time, and Architecture*. Pg. 439.

disciplines, realize in material form what is already present in the other arts in imaginary (aesthetic) form."[224] Mondrian and van Doesburg, both during their years together in *De Stijl* and after their split, authored several programmatic essays on Neo-Plasticism and architecture. The first was written by Mondrian shortly after J.J.P. Oud joined the group in 1922. In it, he challenged the notion that "Neo-Plasticism's 'planar' expression is…inapplicable to architecture." Mondrian stressed the "planar" aspect of Neo-Plasticist architecture's abstracted and absolutized notion of space and time, just as Teige would later. As in his paintings, the relativity of Renaissance linear perspective was abandoned in favor of the standpoint of infinity. "The new vision…does not proceed from one fixed point of view: it takes its viewpoint *everywhere* and is *nowhere limited*," wrote Mondrian. "*It is not bound by space or time*…In practice it takes its viewpoint before the plane (the most extreme possibility of plastic intensification). Thus it sees architecture as a *multiplicity of planes:* again *the plane.*"[225] Doesburg, in his 1924 manifesto "Towards a Plastic Architecture," likewise expressed the spatiotemporal element of Neo-Plasticism in architecture: "§10. *Space and time.* The new architecture takes account not only of space, but also of time as an accent of architecture. The unity of time and space gives the appearance of architecture a new and completely plastic aspect (four-dimensional temporal and spatial plastic aspects)." At no point did he forget the indebtedness of modernist architecture to modernist painting, however. "[T]he plastic architect, under which heading I also include the painter, *has to construct in the new field, time-space.*"[226]

---

[224] Doesburg added that this movement from abstract art to architecture was not limited to Holland: "Not only in Holland but also in Russia (after 1917) this new movement 'from the aesthetic to its material realization' proceeded from the consequential development of painting (in Holland Neo-Plasticism, in Russia Suprematism [Malevich] and [Lissitzky's] *Proun*)…Now at last architects are gaining confidence in the use of their expressive medium." Doesburg, Theo van. "From the New Aesthetic to Its Material Realization." Translated by Hans L.C. Jaffé. *De Stijl.* (H.N. Abrams. New York: 1971). Pg. 181. Originally published in *De Stijl*, 1922 (Vol. VI, № 1, pgs. 10-14).

[225] Mondrian, Piet. "The Realization of Neo-Plasticism in the Distant Future and in Architecture Today: Architecture, Conceived as Our Total [Non-Natural] Environment." Translated by Hans L.C. Jaffé. *De Stijl.* (H.N. Abrams. New York: 1971). Pg. 169. Originally published in *De Stijl*, 1922 (Vol. V, № 3, pgs. 41-47; №5, pgs. 65-71).

[226] Doesburg, Theo van. "Towards a Plastic Architecture." Translated by Hans L.C. Jaffé. *De Stijl.* (H.N. Abrams. New York: 1971). Pg. 187. Originally published in *De Stijl*, 1924 (Vol. VI, № 6/7, pgs. 78-83).

Even after breaking with van Doesburg in 1924, Mondrian continued to push for Neo-Plasticism in the medium of architecture. Seconding Doesburg's insistence on the use of color in new construction,[227] Mondrian proposed the total unity of plane and color: "[A]s the plastic expression of the plane, Neo-Plastic architecture *irresistibly calls* for color, without which the plane cannot be *living reality*."[228] Doesburg, though his publication of *De Stijl* came to be less important (and less frequent), would continue to be one of best European commentators of modernist architecture, as can be clearly seen from his articles for *Het Bouwbedrijf* in the latter half of the 1920s.[229]

Meanwhile, in France, Le Corbusier-Saugnier (he would later drop the "Saugnier") and Ozenfant were formulating their own post-Cubist doctrine, "Purism," through their journal, *L'Esprit Nouveau*. In their co-authored manifesto for the movement, written in 1920, the intrinsic relationship between painterly and architectural modernism is stated explicitly: "[P]ainting is a question of architecture, and therefore volume is its means."[230] Though both men were originally trained as painters, and though Ozenfant would never venture into architecture, their approach to the link between architecture and painting was nevertheless the inverse of that taken by Doesburg and Mondrian. For Le Corbusier and Ozenfant, architecture did not simply extend the results of modern painting to the realm of building; rather, architecture was already *built into* painting. Both had to be seen in terms of abstract space: "Space is needed for architectural composition; space means three dimensions. Therefore we think of the painting not as a surface, but *as a space*."[231] The *universality* of such spatial composition was implied by the authors' search for a

---

[227] "Color planes form an organic part of the new architecture as an element of the direct expression of its time and space relationships. Without color these relationships are no living reality; they are not visible." *Ibid.*, pg. 188.

[228] Mondrian, Piet. "The Neo-Plastic Architecture of the Future." Translated by Harry Holtzman and Martin S. James. *The New Art — The New Life: The Collected Writings of Piet Mondrian*. Pg. 197. Originally published in *L'Architecture vivante*, Autumn 1925.

[229] Doesburg, Theo van. *On European Architecture: Complete Articles from Het Bouwbedrijf, 1924-1931*. Translated by Charlotte I. Loeb and Arthur L. Loeb. (Birkhäuser Verlag. Boston, MA: 1990).

[230] Le Corbusier and Ozenfant, Amédée. "Purism." Translated by Robert L. Herbert. *Modern Artists on Art*. (Dover Books. Mineola, NY: 2000). Pg. 62. Originally published in *L'Esprit Nouveau* in 1920.

[231] *Ibid.*, pg. 59.

"universal language"[232] of forms and colors, its *mathematico-geometric* character shown in its search for a "mathematical order…[to] be sought among universal means."[233] What is more, the *homogeneous* quality of Purism's modernist spatiality was conveyed through its ideal of artistic "unity": "Unity in plastic art…is the homogeneous relationship of the surface or volume with each of the elements brought into play."[234] Many of the concepts Le Corbusier and Ozenfant introduced in this early manifesto later reappeared in the former's *Towards an Architecture* written three years later, especially in its notions of "volume," "surface," and "regulating lines."[235] Ozenfant, reflecting on the subject of modernist architecture in his 1928 *Foundations of Modern Art*, declared the artistry of the architect to consist in the spatial precision of his designs: "The architect's genius is in relating all the internal organs of the house…*Each square centimeter must yield its maximum*, and the rooms must be exactly related if they are to be pleasant to live in: a perfect harmony which though much to be desired, is rarely attained."[236]

---

[232] "The means of executing a work of art is a transmittable and universal language." *Ibid.*, pg. 54.

[233] *Ibid.*, pg. 54.

   Even further: "The choice of surface for…geometric determinations has been a preoccupation of every age." *Ibid.*, pg. 61.

[234] *Ibid.*, pg. 61.

[235] Volume: "In the expression of volume, color is a perilous agent; often it destroys or disorganizes volume because the intrinsic properties of color are very different, some being radiant and pushing forward, others receding, still others being massive and staying in the real plane of the canvas, etc." *Ibid.*, pg. 62.

   Surface: "[S]urface has important geometric properties; it permits various regulating lines which determine geometric locations of the highest plastic value." *Ibid.*, pg. 60.

   Regulating lines: "[I]n all ages and times, great works of architecture as well as of painting of have been composed by imperious regulating lines of this nature." *Ibid.*, pg. 61.

   These three Purist concepts are brought up again in *Towards an Architecture*. From the chapter "Three Reminders to Architects: 1. Volume": "Architecture is the masterful, correct, and magnificent play of volumes brought together in light." Le Corbusier, *Towards an Architecture*, pg. 102.

   From the chapter "Three Reminders to Architects: 2. Surface": "[I]t is the architect's task to bring the surfaces that envelop these volumes to life." *Ibid.*, pg. 109.

   From the chapter "Regulating Lines": "The regulating line is a satisfaction of a spiritual order that leads to a search for ingenious relationships and for harmonious relationships." *Ibid.*, pg. 137.

[236] Ozenfant, Amédée. *Foundations of Modern Art*. Translated by John Rodker. (Dover Publications, Inc. New York, NY: 1952). Pg. 140. My emphasis. Originally published in 1928.

Kazimir Malevich's evolution out of Russian Cubo-Futurism into what he dubbed Suprematism was accomplished as early as 1916.[237] Although he would not foray into architecture until the mid-1920s, the fundamental reconception of space enacted in his paintings had immediate consequences for the development of modernist architecture, first through a fellow Russian painter, El Lissitzky, and second through Lissitzky's Hungarian associate and collaborator, László Moholy-Nagy. Nevertheless, Malevich prophesied the birth of a Suprematist architecture out of the principles it established previously in painting, in his internationally-renowned book on *The Non-Objective World*, published in German as part of the *Bauhausbücher* series in 1926. "The new art of Suprematism," he wrote, "which has produced new forms and form relationships by giving external expression to pictorial feeling, will become a new architecture: it will transfer these forms from the surface of canvas to space."[238] Malevich took up this subject at greater length in several articles he contributed to the Ukrainian avant-garde journal *New Generation*, particularly his 1928 essay regarding "Painting and the Problem of Architecture." As with the Purists in France and the *De Stijl* Neo-Plasticists in Holland, Malevich asserted that Suprematism could be easily transposed from the easel into space.[239] But Malevich himself was not interested in proposing new architectural designs; at most, he submitted abstract sculptural models of intersecting geometric shapes that he called "architectonics."[240] Giedion recalled the significance of these projects:

> Interrelation, hovering, and penetration form the basis of Malevich's half-plastic architectural
> studies, which he calls "architectonen." These objects are not intended for a particular purpose,

[237] Malevich, Kazimir. *From Cubism and Futurism to Suprematism: The New Realism in Painting*. Translated by Xenia Glowaki-Prus and Arnold McMillin. *Essays on Art, 1915-1933, Volume 1*. Pg. 40. Originally published in 1916 as *Ot kubizma i futurizma do suprematizma: Novyi zhivopisnyi realizm*.

[238] Malevich, Kazimir. *The Non-Objective World*. Translated by Howard Dearstyne. (Paul Theobald and Company. Chicago, IL: 1959). Pg. 78. Originally published in 1926.

[239] "Suprematism has two methods of revealing the elements of perception: the 'spatial' method and the 'easel' method: space and canvas are the places where they appear." Malevich, Kazimir. "Painting and the Problem of Architecture." Translated by Xenia Glowaki-Prus and Arnold McMillin. *Essays on Art, 1915-1933, Volume 2*. Pg. 11. Originally published in *Nova generatsiia* 1928, № 2. Pgs. 116-124.

[240] "The architectonics — 'Alpha' of horizontal building and 'Gota' of vertical — reveal those features, which, it seems to me, ought to be in the new architecture." *Ibid.*, pg. 17.

but are to be understood simply as spatial research. Interrelations are created between these prisms, slabs, and surfaces when they penetrate or dislodge each other.[241]

Malevich left it to professional architects to design the buildings that would embody the architecture of Suprematism. Unconsciously, he felt, modernist architects in the West were already moving towards its realization. "I do not mean to say that the new architecture of the West is Suprematist," he clarified, "but I can say that new Western architecture stands on the road to Suprematist architectonics."[242] Malevich tended to prefer buildings produced by the French Purist and Dutch Neo-Plasticist architects[243] (for reasons we might guess) to the utilitarianism of Russian Constructivism[244] and German functionalism, the so-called "New Objectivity,"[245] though he did state his approval of the works of the Germans Gropius and Korn.[246] Malevich did not fail to notice the abstract planar aspect of the new architecture's spatiality, as Teige and Mondrian had also pointed out: "Analyzing new architecture we find that it is under the influence of 'plane painting,'

---

[241] Giedion, *Space, Time, and Architecture*. Pgs. 439-440.

[242] Malevich, "Painting and the Problem of Architecture." Pg. 16.

[243] "[L]et us compare the Suprematist construction of…texture with the texture or structure of architecture by the Dutch architect Theo van Doesburg or Le Corbusier, Korn, etc…[T]his architecture is similar in structure to the structure of Suprematism, i.e. the new type of Suprematist art according to one Suprematist formula." Malevich, Kazimir. "The Constructive Painting of Russian Artist and Constructivism." Translated by Xenia Glowaki-Prus and Arnold McMillin. *Essays on Art, 1915-1933, Volume 2*. Pg. 81. Originally published in *Nova generatsiia* 1929, № 8, pgs. 47-54; № 9, pgs. 53-61.

[244] "The architect [Aleksandr] Vesnin sought a pure function, which resulted in a box divided up by a network of glass, whilst in Korn and Doesburg we see a multitude of different forms linked together by the harmony of contrasts;…[I]n the new, Constructivist building…signs [of art] are absent, as a result of which the artistic form in the majority of cases is missing." *Ibid.*, pgs. 82-83.

[245] "[A]rchitecture is basically a pure art form (architectonic)…And therefore no 'matter-of-factness' (*Sachlichkeit*) can offer us what art does. The most *sachlich* engines, telegraph, and radio apparatuses do not help us to reach the Promised Land." Malevich, Kazimir. "Suprematist Architecture." Translated by Tim Benton. *Architecture and Design, 1890-1939: An International Anthology of Original Articles*. (The Whitney Library of Design. New York, NY: 1975). Pgs. 109-110. Originally published in *Wasmuths Monatshefte für Baukunst* 1927, Vol. XI, pg. 412.

[246] "Characteristic examples [of Suprematist principles] can be found in the new architectural work of such artist-architects as Theo van Doesburg, Le Corbusier, Gerrit Rietveld, Walter Gropius, Arthur Korn et al." Malevich, "Painting and the Problem of Architecture." Pg. 16.

i.e. of artistic form containing the plane element…For this reason contemporary architecture gives the impression of being two-dimensional."[247]

Before passing on to the subsequent development of Malevich's spatial theories by Lissitzky and Moholy-Nagy, the more temporal aspect of avant-garde experimentation in the early twentieth century deserves mentioning. For while Doesburg might have spoken of spatiotemporal unity in *De Stijl* architecture,[248] the specifically temporal dimension of this unity remained underdefined. As Giedion argued, however, this work was carried out in the "research into movement" undertaken by members of the Futurist movement in art, along with some strains of Cubism. Again, he claims this mirrored a new scientific understanding of time that arose concurrently.[249] Avant-garde art, in turn, attempted to simulate dynamic motion within static media, either in painting or in sculpture. Giedion thus cited the Futurist sculptor Umberto Boccioni's *Bottle Evolving in Space* (1912) and famous *Unique Forms of Continuity in Space* (1913), the painter Gino Severini's *Walking Dog* (1913), and the unaffiliated artist Marcel Duchamp's celebrated *Nude Descending a Staircase* (1912) as examples of modernism's exploration of temporal simultaneity.[250] He could have easily added Giocamo Balla's *Light and Movement*.

Giedion's claims are corroborated not only by the Futurists' works, but also by their writings. From the moment of its foundation, Futurism in Italy championed dynamism, movement, and speed. "We intend to exalt movement and aggression, feverish insomnia, the racer's stride, the mortal leap, the slap and the punch," shouted Marinetti, in his 1909 *Manifesto*. "We affirm that the beauty of the world has been enriched by a new form of beauty: the beauty of speed."[251] This attitude, the Futurists claimed, reflected the modern pace of life — hectic, buzzing, and frantic — especially in the newfound sphere of the

---

[247] *Ibid.*, pg. 16.

[248] See the quotation of Doesburg's "Towards a Plastic Architecture" on pg. 81.

[249] "In the first decade of [the twentieth] century, the physical sciences were profoundly shaken by an inner change, the most revolutionary perhaps since Aristotle and the Pythagoreans. It concerned, above all, the notion of *time*." Giedion, *Space, Time, and Architecture*, pg. 443.

[250] In each of these works, "movement is dissected mathematically." *Ibid.*, pg. 445.

[251] Marinetti, F.T. "Founding and Manifesto of Futurism." Translated by Lawrence Rainey, Christine Poggi, Laura Wittman. *Futurism: An Anthology*. (Yale University Press. New Haven, CT: 2009). Pg. 51. Originally published in 1909.

metropolis. In an odd way, the concrete spatial accumulations of the modern capitalist city converged with its abstract temporality of deadlines, the daily punch-in clock, store hours, the whole tyranny of standardized time to create the hustle and bustle of city life. As the legendary Russian Cubo-Futurist poet Vladimir Maiakovskii put it:

> The city has enriched our experiences and impressions of the new urban elements, which were not known to poets of the past. The whole modern cultural world is becoming a vast, Cyclopean city. The city replaces nature and the elements. The city itself becomes an environment out of the bowels of which arises a new, urban people. Telephones, airplanes, express-elevators, rotating machines, sidewalks, chimneys, stone masses, soot and smoke — these are the elements of beauty in the new urban nature. We see electric light more often than the old, romantic moon. We, the urbanites, do not know the forests, fields, and flowers — we are familiar with the tunnels of the streets with their traffic, noise, their roaring, flashing, perpetual circuit. And most importantly — they have altered the rhythm of life. Everything has become lightning-quick, as fleeting as film on a tape. The smooth, quiet, slow rhythms of old poetry do not correspond to the psyche of the modern city dweller. Feverishness — that symbolizes the pace of modernity. In the city there are no smooth, measured, rounded lines: angles, bends, zigzags — these are what characterize the picture of the city.[252]

This new feeling of constant, feverish motion had major repercussions for the members of the Futurist current. "In sculpture as in painting," declared Boccioni, "renewal is impossible without looking for a *style of movement*."[253] The Russian Ego-Futurist Vadim Shershenevich shared this sentiment: "We have lost the ability to understand the life of a motionless statue." This loss, he suggested, was symptomatic of the dynamism of their age.[254] The struggle for the Futurists, therefore was to capture in a moment the evolution of an object in time. Their *mathematical* approach to understanding this time, moreover, was commensurate with the abstract time of capitalism.[255] Unlike Cubism, which created

---

[252] Maiakovskii, Vladimir. "Otchet." *Trudovaia gazeta*. November 14th, 1914.

[253] Boccioni, Umberto. "Futurist Sculpture." Translated by Lawrence Rainey, Christine Poggi, Laura Wittman. *Futurism: An Anthology*. (Yale University Press. New Haven, CT: 2009). Pg. 116. Originally published April 11th, 1912.

[254] "Urbanism with its dynamism, its beauty of speed, its intrinsic Americanism, trampled our integral soul." Shershenevich, Vadim. "Preface to *Automobile Gait*." Translated by Anna Lawton. *Words in Revolution: Russian Futurist Manifestos, 1912-1928*. Pg. 149. Originally published in 1916).

[255] "We must take the object which we wish to create and begin with its central core in order to uncover the new laws and new forms which link it invisibly but mathematically to *external plastic infinity* and to

merely spatial fragmentation, Futurism aimed at temporal oblivion — the decomposition of flux. This effect, the simultaneous representation of dynamic continuity, produced in the object a quality that the founder of Futurism, F.T. Marinetti, called "geometrical and mechanical Splendor," while provoking in the subject "the numerical sensibility."[256] In Severini's 1913 manifesto on "Plastic Analogies of Dynamism," the artist recognized the historical character of this new sense of temporality. "Today, in this epoch of dynamism and simultaneity," he wrote, "one cannot separate any event or object from the memories, the plastic affinities or aversions, which its expansive action calls up simultaneously in us."[257] Hence the Futurists' fascination with the whirring of machines, automobiles, and airplanes.[258]

Futurism's temporal self-understanding was of a twofold nature, however. While the movement was interested in achieving a more dynamic, rationalized comprehension of the passage of time as it transpired under modernity, the Futurists understood themselves to be the culmination of the artistic processes of their age and thus the supersession of all that came before it. Their nihilistic stance toward the past, and ruthless intolerance for anachronism in the present, was taken up by subsequent incarnations of the avant-garde. Each new "ism" that took up the mantle of the avant-garde claimed to render all others obsolete.[259] If, for Malevich and the post-Cubist abstract painters his *Black Square* was

internal plastic infinity." *Ibid.*, pg. 114.

[256] Marinetti, F.T. "Geometric and Mechanical Splendor and the Numerical Sensibility." Translated by Lawrence Rainey, Christine Poggi, Laura Wittman. *Futurism: An Anthology*. (Yale University Press. New Haven, CT: 2009). Pg. 175. Originally published March 18th, 1914.

[257] Severini, Gino. "Plastic Analogies of Dynamism: Futurist Manifesto." Translated by Lawrence Rainey, Christine Poggi, Laura Wittman. *Futurism: An Anthology*. (Yale University Press. New Haven, CT: 2009). Pg. 165. Originally published in October 1913.

Boccioni reiterated this point: "With dynamism, then, art rises toward a higher ideal level; it creates a style and expresses our age of speed and simultaneity." Boccioni, Umberto. "Absolute Motion + Relative Motion = Dynamism." Translated by Lawrence Rainey, Christine Poggi, Laura Wittman. *Futurism: An Anthology*. (Yale University Press. New Haven, CT: 2009). Pg. 192.

[258] Even Malevich was enchanted by these frenetic phenomena: "The new life of iron and the machine, the glitter of electric lights, the whirring of propellers, have awoken the soul." Malevich, *From Cubism and Futurism to Suprematism*. Pg. 29.

[259] "And I must repeat, all together, and without any distinction between Constructivism and the art of

to spatially embody "[t]he absolute zero that was to mark the beginning of a new world in which the new 'white humanity' would be cleansed of all previous images," as Groys put it,[260] then for the Futurists, the present was to mark a sort of Year Zero. The plodding, irrational time of the past was to be abandoned in favor of a sleeker synchronicity, the rationally choreographed motions of a new, harmonious humanity. Renouncing the spatiotemporal order that had come before, the brothers Naum Gabo and Antoine Pevsner wrote in 1920: "We proclaim: For us, space and time are born today."[261]

While contradictory temporal elements persisted into the present, inhabiting the same space, these were to be extirpated — cleared to make way for the new spatiotemporal order. Traditionalism held onto remnants of the past at the expense of the future. "The speed of cultural evolution is reduced by the stragglers," lamented Loos. "I perhaps am living in 1908 [the year of his essay's publication], but my neighbor is living in 1900 and the man across the way in 1880."[262] Loos' sentiment was later conceptualized more rigorously by the German Marxist Ernst Bloch, in his notion of "non-synchronicity." In an essay he wrote on the subject, he explained succinctly: "Not all people exist in the same Now. They do so only externally, by virtue of the fact that they may all be seen today. But that does not mean that they are living at the same time with others."[263] This can be seen as the incarnation of the concrete, contradictory spatiality of capitalism that was described earlier.[264] The leftovers of ages that had been superseded by the ceaseless

protest. Cubism, Futurism, Dada, all the historical avant-garde movements arose and succeeded each other according to the typical law of industrial production, the essence of which is the continual technical revolution." Tafuri, *Architecture and Utopia*. Pgs. 84-86.

[260] Grois, *The Total Art of Stalinism*. Pg. 19.

Compare with Malevich's own statement: "At the present time man's path lies through space, and Suprematism is a color semaphore in its infinite abyss." Malevich, Kazimir. "Non-Objective Creation and Suprematism." Translated by Xenia Glowaki-Prus and Arnold McMillin. *Essays on Art, 1915-1933, Volume 1*. Pg. 121.

[261] Gabo, Naum and Pevsner, Antoine. "The Realistic Manifesto." Translated by Stephen Bann. *The Tradition of Constructivism*. (Da Capo Press. New York, NY: 1974). Pg. 4.

[262] Loos, "Ornament and Crime."

[263] Bloch, Ernst. "Nonsynchronism and Our Obligation to Its Dialectics." Translated by Mark Ritter. *New German Critique*, № 11 (Spring 1977). Pg. 22. Originally published in 1932.

[264] See the "concrete anachronisms" described on pgs. 42-43.

revolutions in production (itself a result of the concrete temporality that stemmed from relative surplus-value)[265] were deposited in one and the same locality. The "unevenness" of capitalist development could be witnessed in a single space. Ginzburg observed this phenomenon precisely: "The old is regenerated gradually; frequently one can observe how elements of the old world, still persisting by reason of traditions that have outlived the very ideas which engendered them, coexist side by side with elements of the new world, which overwhelm us with their barbaric freshness and the absolute independence of their unexpected appearance."[266]

Of course, this fact did not sit easily with the members of the Futurist avant-garde, nor with those who succeeded them. It could well be argued that the very recognition of such concrete anachronisms, of "backwardness" in general, was unique to modernity, a symptom of the heightened pace of life. Either way, the Futurists were notoriously impatient with those who could not keep up with new developments, and who kept them from instituting a new regime of rationalized, uniform time. This might have been the source of their violent anti-traditionalism. Marinetti thus heaped scorn upon those who revered the art of the past, calling museums "cemeteries," "public dormitories," and "absurd slaughterhouses."[267] The Futurists detested "Academicians," as well as the works and figures they had canonized. "SHIT to…Dante, Shakespeare, Tolstoi, Goethe," roared one of Marinetti's young followers in France, the poet Guillaume Apollinaire.[268] Their counterparts in Russia, the Cubo-Futurist contingent, were equally blunt. "Throw Pushkin, Dostoevskii, Tolstoi, etc., etc., overboard from the steamship of Modernity," they advised. "*We* alone are the *face* of *our* Time. Through us the horn of time blows in

---

[265] See the "spasmodic transformations" described on pg. 28.

[266] Ginzburg, *Style and Epoch*. Pg. 76.

[267] "Museums: cemeteries! Identical, really, in the horrible promiscuity of so many bodies scarcely known to one another. Museums: public dormitories in which someone is put to sleep forever alongside others he hated or didn't know! Museums: absurd slaughterhouses for painters and sculptors who go on thrashing each other with blows of line and color along the disputed walls!" Marinetti, "The Founding and Manifesto of Futurism." Pg. 52.

[268] Apollinaire, Guillaume. "Futurist Anti-Tradition." Translated by Lawrence Rainey, Christine Poggi, Laura Wittman. *Futurism: An Anthology*. (Yale University Press. New Haven, CT: 2009). Pg. 154. Originally published on June 29th, 1913.

the art of the world."[269] This unapologetic hostility toward tradition would be continued by all the avant-garde movements that followed. Even Malevich, who was generally more respectful, announced proudly that "we, the most daring, *have spat upon the altar of its [tradition's] art*."[270]

The ultimate synthesis of Cubist and post-Cubist painting's abstract spatiality and Futurism's abstract temporality in architecture was achieved in the theoretical writings of Lissitzky and Moholy-Nagy. In one of his earliest essays on architecture, Lissitzky explained the spatiotemporal aspects of modernist art and where they came from: "[T]he revolution in art began by giving form to the elements of time, of space, of tempo and rhythm, of movement. Before the war Cubists in France and Futurists in Italy advanced new theses in art."[271] Lissitzky began his career as a painter following Malevich's path of Suprematist non-representation, but later fell under the influence of the Constructivists in art, Tatlin and his protégé Aleksandr Rodchenko. Upon arriving in the West, he was greeted nearly universally as a *cause célèbre*, playing a pivotal role at the International Congress of Progressive Artists in Düsseldorf.[272] His abstract *PROUN* compositions

---

[269] Khlebnikov, Velimir; Maiakovskii, Vladimir; Burliuk, David; Kruchenykh, Aleksei; Kamenskii, Vasilii; and Livshits, Benedikt. "Poshchechina obshestvennomu vkusu." Originally published December 12th, 1912.

[270] Malevich, *From Cubism and Futurism to Suprematism*. Pg. 27.

[271] Lissitzky, "The Catastrophe of Architecture." Pg. 371.

[272] With the avant-garde novelist Il'ia Ehrenburg, Lissitzky authored an important piece on the export of Russian modernism to the West. Lissitzky, El and Ehrenburg, Il'ia. "The Blockade of Russia is Coming to an End." Translated by Stephen Bann. *The Tradition of Constructivism*. (Da Capo Press. New York, NY: 1974). Originally published in *Veshch/Gegenstand/Objet*, March-April 1922 (Vol. I, № 1/2).

He also issued the editorial statement of his journal *Veshch/Gegenstand/Objet* at the International Congress in 1922: "I come here as a representative of the magazine *Veshch/Gegenstand/Objet*, which stands for a new way of thinking and unites the leaders of the new art in nearly all countries." Lissitzky, El. "Statement by the Editors of *Veshch/Gegenstand/Objet*." Translated by Nicholas Bullock. *The Tradition of Constructivism*. (Da Capo Press. New York, NY: 1974). Pg. 63. Originally published in *De Stijl*, 1922 (Vol. V, № 4).

Lissitzky was also a signatory of Theo van Doesburg's foundation of an International Constructivist group. Doesburg, Theo van; Lissitzky, El; Richter, Hans; Maes, Karel; and Burchartz, Max. "International Constructivist Creative Union." Translated by Steven Lindberg. *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930*. (The MIT Press. Cambridge, MA: 2002). Originally

were featured prominently at the Exhibition of Russian Art that took place in Berlin in 1922. Journalists and critics such as Paul Westheim,[273] Adolf Behne,[274] Ernő Kállai,[275] and Branko Ve Poljanski[276] all took note of Lissitzky's innovations in the field of abstract art, and reviewed his work favorably. Giedion, reflecting on Lissitzky's work in 1929, recalled how the artist himself regarded his *PROUNs* as "the interchange station between painting and architecture."[277] Even in designing the room in which the *PROUNs* were to

---

published as "Manifest der K.I. (Konstructivistische Internationale schöpferische Arbeitsgemeinschaft)," *De Stijl*, 1922 (Vol. V, № 8).

[273] Westheim, Paul. "The Exhibition of the Russian Artists." Translated by David Britt. *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930*. (The MIT Press. Cambridge, MA: 2002). Pg. 406. Originally published in *Das Kunstblatt* (November 1922).

[274] Adolf Behne. "On the Russian Exhibition." Translated by Don Reneau. *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930*. (The MIT Press. Cambridge, MA: 2002). Originally published as "Der Staatsanwalt schüzt das Bild," *Die Weltbühne* № 47 (November 23, 1922).

[275] "Lissitzky's *PROUN*…is utmost tension, violent jettisoning. A new world of objects is in the process of being built. Space is filled by all possible variant physical forms of a constant energy. They are very much synthesized, but down to the last details they are strictly subject to the central, unifying law of their structure. This structure is multi-dimensional. Thrusting sharply into space on all sides, it contains layers and strata, diametrical opposites thoroughly intertwined, held in a state of tension, and drawn into the tightly-knit complex of components, which cut across, embrace, support, and resist each other. Numerous projections, incisions, and gradations in all directions help the physical, defined nature of the form to set. All the dialectical wealth available to the creation of form is concentrated on objective synthesis, definition, and clarification." Kállai, Ernő. "Lissitzky." Translated by Sophie Lissitzky-Kuppers. *El Lissitzky: Life, Letters, Texts*. (Thames & Hudson Press. London: 1980). Pg. 379. Originally published in *Das Kunstblatt*, Vol. 6, № 1, 1922.

[276] "*Lissitzky.* The second Suprematist, Constructivist, spectral specialist, and explorer of ultra-violet rays. He is searching for a way to apply Suprematist painting to a true realization of visionary worlds, made real as concrete objects; he is looking for a way to apply this kind of painting to life, to things: a bridge, a monument, a submarine, an airplane, a train, and others." Poljanski, Branko Ve. "Through the Russian Exhibition." Translated by Maja Starčević. *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930*. (The MIT Press. Cambridge, MA: 2002). Pgs. 414-415. Originally published as "Kroz rusku izložbu u berlinu," in *Zenit,* Vol. 3, № 22 (March 1923).

[277] Giedion, Sigfried. "Live Museum." Translated by Sophie Lissitzky-Kuppers. *El Lissitzky: Life, Letters, Texts*. (Thames & Hudson Press. London: 1980). Pg. 382. Originally published in *Der Cicerone*, Vol. 21, № 4, 1929.

be viewed, one of Lissitzky's foremost concerns was with the spatiotemporal layout of the exhibit. "Space has to be organized in such a way as to impel everyone automatically to perambulate in it," he wrote.[278] Lissitzky ended his article on the *PROUN* room with an emphatic statement: "*We reject space as a painted coffin for our living bodies*."[279] Later he would propose that art could create a sort of dynamic "pangeometry" in which abstract time and space could be interchangeably united.[280] With such goals in mind, it is therefore little wonder that the new spatiotemporal sensibility described by Giedion would prove so important to Lissitzky in his writings on architecture. In a 1926 article on "Architecture of the Steel and Ferro-Concrete Skeleton," he thus wrote that "[w]e are faced with *the task of creating spatial architecture which is not only seen by the eye from a distance*, as in painting, and not only touched by the hands, as in sculpture, *but among which people live and move — an architecture of space and time*."[281]

Moholy-Nagy also remarked upon this fact: "Lissitzky says that his pictures (*PROUN*) are a kind of transition between painting and architecture." Moholy-Nagy, László. *The New Vision: Fundamentals of Bauhaus Design, Painting, Sculpture, and Architecture*. Translated by Daphne M. Hoffman. (Dover Publications, Inc. Mineola, NY: 2005). Pg. 84. Originally published in 1928.

[278] Lissitzky, El. "*PROUN* Space: The Great Berlin Art Exhibition of 1923." Translated by Eric Dluhosch. *Russia: An Architecture for World Revolution*. (MIT Press. Cambridge, MA: 1984). Pg. 139. Originally published in *G* № 1, 1923.

[279] *Ibid.*, pg. 140.

[280] "In their vital quest for the enlargement of F[orm] in A[rt], a number of modern artists…believe that they can build up multidimensional real spaces that may be entered without an umbrella, *where space and time have been combined into a mutually interchangeable single whole*." Lissitzky, El. "A[rt] and Pangeometry." Translated by Eric Dluhosch. *Russia: An Architecture for World Revolution*. (MIT Press. Cambridge, MA: 1984). Pg. 145. My emphasis. Originally published in *Europa Almanach*, 1925.

Lissitzky's colleague in the Constructivist publication *ABC*, the Dutch architect Mart Stam, wrote an article on space that was directly inspired by "A[rt] and Pangeometry": "Space is — is everywhere, penetrating and surrounding everything…Time has no boundaries — time crosses all boundaries…Our task is: 1. to perceive our relationship to this specific space, to this specific time; 2. to give this relationship of ours, through our work, a form that everyone can assimilate." Stam, Mart. "Space." Translated by C. v. Amerongen. *Mart Stam: A Documentation of His Work, 1920-1965*. (Royal Institute of British Architects. London: 1970). Pg. 20. Originally published in *ABC* 1925, № 5.

[281] Lissitzky, El. "Arkhitektura stal'nogo i zhelezobetonnogo skeleta." *Stroitel'naia promyshlennost*. (Vol. 3, № 1. Moscow, Soviet Union: 1926). Pg. 63.

Moholy-Nagy, whom Lissitzky converted to Constructivism soon after they met in the early 1920s, would also present a concept of architecture born out of an organization of space and time. Following his initial encounter with Lissitzky, Moholy-Nagy and his fellow Hungarian avant-gardist Alfréd Kemény collaborated on a project for a kinetic sculpture entitled "Dynamic-Constructive System of Forces." They expressed their idea of a temporally dynamic, motive sculpture moving through space. "Vital constructivity is the embodiment of life and the principle of all human and cosmic development," they declared. "Translated into art, *today* this means the activation of space by means of dynamic-constructive systems of forces."[282] Not long after writing this, Moholy-Nagy was appointed by Gropius as a professor at the recently opened Bauhaus school of design. In his 1928 lectures on *The New Vision*, Moholy-Nagy laid out the successive stages of art in painting, sculpture, and architecture as corresponding to material/surface, volume, and space. Already beginning in his section on "Kinetic Sculpture," he cited Boccioni and the Futurists as well as his own work with Kemény. He also quoted from the Russians Gabo's and Pevsner's "Realistic Manifesto" of 1920: "Space and time are the two exclusive forms for the fulfillment of life, and therefore art must be guided by these two basic forms if it is to encompass life."[283] All this, for Moholy-Nagy, still only takes place within the sphere of volume, or sculpture. It is only with the transition to "space" that architecture enters the picture. "The root of architecture lies in the mastery of the problem of space," wrote Moholy-Nagy. "One of its most important components is the ordering of man in space, making space comprehensible, and taking architecture as the arrangement of universal space."[284] But just as it was in sculpture, "[t]he common denominator is the concept of the dynamic (kinetic) in the balanced application of all elements of a [spatial] relationship."[285]

---

[282] Moholy-Nagy, László and Kemény, Alfréd. "Dynamic-Constructive System of Forces." Translated by Krisztina Passuth. *Between Two Worlds: A Sourcebook of Central European Avant-Gardes, 1910-1930.* (The MIT Press. Cambridge, MA: 2002). Originally published in *Der Sturm* № 12 (1922).

[283] Moholy-Nagy, *The New Vision*. Pg. 138.

[284] *Ibid.*, pg. 181.

[285] *Ibid.*, pg. 184.