

Towards an Aesthetic of Administration: Otto Neurath's Statistical Materialism and the Art of the Five-Year Plan

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Abstract: In this essay, I propose to revisit the positive links between socialization, rationalization, and economic planning established in the Marxist debate of the interwar period and its resonances in aesthetic thought and practice. I therefore turn to the work of Otto Neurath, an advocate of Marxism as a form of scientific positivism, fervent defender of centralized planning in the socialization debates of the 1920s, and inventor of a pictorial method of mass education through statistics. I claim that from the perspective of Neurath's writings, planning and administration can be interpreted as part of a formative process of social freedom. I examine Neurath's engagement with statistics as a medium of *Bildung* and highlight the intrinsically aesthetic dimensions of this project. In the second part of the essay, I discuss the importance of statistical imagery and infographics in the context of the Soviet cultural revolution and adjacent European communist art movements of the late 1920s and early 1930s. The aestheticization of statistics and its dissemination into everyday life is a key element of the communist avant-garde's attempt to collectively organize cultural production beyond the specialized forms of traditional artistic labor. At the historical conjuncture of the first Five-Year Plan (1928–32), the projected synchronization of economic and cultural production resulted—at least on the level of discourse—in a short-lived convergence between an aesthetic of administration and a collectively administered aesthetic practice.

Keywords: *Economic Planning; Socialization; Otto Neurath; Statistics; Political Aesthetics*

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From the Critique of Institutions to the Aesthetic of Administration

In modern art criticism, the notion of administration has a bad reputation. In his assessment of North American and European conceptual art of the postwar period, Benjamin Buchloh famously counterposes a critical variant of conceptualism of the late 1960s ("Critique of Institutions") to the affirmative involvement by conceptual artists with logical positivism, the latter of which he interprets as mimetic identification with late capitalist bureaucracy and instrumental rationality ("Aesthetic of Administration").¹ Flipped around, these terms also seem to provide an adequate (if slightly caricatural) description of the trajectory of left-wing avant-garde art from the late 1910s to the early 1930s: from the subjective assault on bourgeois social norms and its (museal) institutions to an affirmation of instrumental rationality and systems of producing and administering knowledge in the name of the building of socialism. To illustrate this shift, it is sufficient to compare the Dadaists' performative and semiotic disruptions to the Soviet avant-garde's "hatred of everything unorganized," as Sergei Tret'iakov once put it,² and its affirmative use of visual techniques and the archive to build ordered, politically useful systems of knowledge. As the radical left-wing avant-garde's focus turned from the criticism of bourgeois cultural institutions and subjectivities to the building of socialism—first in early Soviet Russia, but subsequently also in Weimar Germany and Central Europe—the notion of administration was revaluated. The tendency reached its apogee during the period of the first Five-Year Plan in the Soviet Union, when the avant-garde was concerned with the "direct organization of the collective way of life,"³ following "principles of organization [...], planning and purposefulness."⁴

In an essay on the Soviet avant-garde,⁵ Buchloh interprets this historical sequence as one in which modernism's critical negativity is successively abandoned in favor of the instrumentalization of art by mass propaganda and totalitarian bureaucracy,

notions that he applies to fascism, Stalinism, and the late capitalist cultural industry, beyond their historical differences, and mediated through an Adornian critique of a “totally administered world.”⁶ In this essay, I question this interpretative pattern of periodization and its underlying theoretical assumptions about the intrinsic links between administration and totalitarianism. This historical narrative, which emerged from leftist criticisms of Stalinist state bureaucracy and proved to be influential within the context of Western Marxist analyses of culture in the postwar period, appears problematic for at least three interconnected reasons: first, in political terms, it tends to subsume various forms of centralized organization of social, economic, and cultural processes, including socialist planning, under generalized notions of bureaucratization and administration, which were modeled after the critique of the capitalist state; second, normatively, it upholds a questionable dichotomy of a “good,” critically self-reflexive, autonomous avant-garde and its later functionalization under Stalinism, the historical specificity of which it fails to register; and third, theoretically, it is based on the dismissal of empiricism, positivism, and scientism as intrinsically capitalist which informed the early Frankfurt School’s accounts of instrumental reason and its conflation of a Marxian critique of political economy and a Weberian critique of rationalization. Social and aesthetic freedom are then linked to the capacity of the autonomous subject to resist the logic of rationalization within modern administrative apparatus. Aesthetics appears as a major theoretical site of this resistance, as it provides a reservoir of concepts (first and foremost, autonomy itself) for subjective freedom to be mobilized against the social objectivity of administration.

The counterargument I try to sketch in this essay revisits the positive links between socialization, rationalization, and economic planning established in Marxist debates of the interwar period and its resonances in aesthetic thought and practice. I therefore turn to the work of Otto Neurath, an advocate of Marxism as a form of scientific positivism, fervent defender of centralized planning in the socialization debates of the 1920s, and inventor of a pictorial method of mass education through statistics. I claim that from the perspective of Neurath’s writings, planning and administration can be interpreted as part of a formative process of social freedom. I examine Neurath’s engagement with statistics as a medium of collective *Bildung* (formation) that is as political as it is aesthetic. While Neurath’s work is rarely discussed in the context of aesthetics, I argue that his perspective on socialization, which connects economic planning to broader issues of what he calls “total life design” (*Gesamtlebensgestaltung*), can also be apprehended as an original contribution to Marxist debates around social aesthetics. Neurath advocates a positivist materialism embedded in an Enlightenment-derived, rationalist worldview, epitomized in statistics and social engineering, that was sought to encompass the sensuous totality of social life, including everyday life forms and collective affects and emotions. The more social life is collectively administered

and rendered transparent through the means of statistics and visual education, Neurath contends, the more it allows individuals and groups to face the objective conditions of unfreedom and achieve social freedom.

Neurath's materialism of statistics provides a heuristic framework for my discussion, in the second half of this essay, of interwar avant-garde practices in the Soviet Union, Austria, and the Weimar Republic, some of which are directly connected to Neurath's work, others of which loosely resonate with its broader concerns. The turn toward a statistical imaginary that I will trace in different communist-leaning cultural productions toward the end of the 1920s—of which Neurath's Vienna Method of Pictorial Statistics applied in the context of urbanism and public housing programs of Red Vienna and, later, the Soviet Union is but one symptomatic example—constitutes what could tentatively be called a Marxist “aesthetic of administration.” I argue that the aestheticization of statistics and its dissemination into everyday life is a key element of the communist avant-garde's attempt to collectively organize cultural production beyond the specialized forms of traditional artistic labor. At the historical conjuncture of the first Five-Year Plan (1928–32), the projected synchronization of economic planning and cultural production resulted—at least on the level of discourse—in a short-lived convergence between an aesthetic of administration and a collectively administered aesthetic practice.

The objective of this essay is thus twofold. First, it seeks to elucidate Neurath's theoretical approach toward socialist planning and statistics as connected to questions of a Marxist and materialist aesthetics in the broader context of the interwar socialization debates. Neurath's writings have recently received renewed attention, as the calculation debates of the interwar period are being revisited in contemporary Marxist accounts of planned economy.⁷ The present essay aims at complementing this perspective by looking at the resonance of these historical debates within the field of aesthetics. Second, the framing of visual practices of the communist avant-gardes through Neurath's positive model of statistics and planning provides an alternative to art-historical accounts of Soviet and European modernism based on anti-totalitarian critiques of administration and rationalization as well as on the normative yardstick of subjective autonomy. To be clear, such an undertaking neither invalidates the criticism of the administrative apparatus of authoritarian capitalist state formations as formulated by the (First Generation) Frankfurt School nor does it aim at setting up the aesthetic of the plan as a critical model for a Marxist aesthetics beyond the specific historical constellation out of which it emerged. Properly understanding the latter, however, requires accounting for a situation—that of an “embedded modernism”⁸—in which communist artists and intellectuals effectively entailed the sacrifice of subjective aesthetic freedom in favor of an “administered” practice that they hoped would realize social freedom.

Aesthetics as Planned Science

In 1932, Marxist art historian Fritz Schiff, looking back at “the bitter experience of the last fourteen years” of the Weimar Republic, criticized the deterministic view of history shared by many socialists, which, according to Schiff, contributed to the failure of the revolutionary project. He wrote: “Most of the political mistakes have been ideologically legitimized by the illusionary view that social laws are analogous to natural laws.”⁹ However, Schiff does not reject the adaptation of scientific methods by a Marxist theory of society per se, but rather calls for historical materialism as a science that should not passively reflect but actively shape history. To become a “practical science,” historical materialism must be turned into a “planned science,”¹⁰ a term he borrows from evolutionary biologist Julius Schaxel, founder of the communist- and *Freidenker*-leaning publishing house journal of popular science *Urania* (1924–33).¹¹

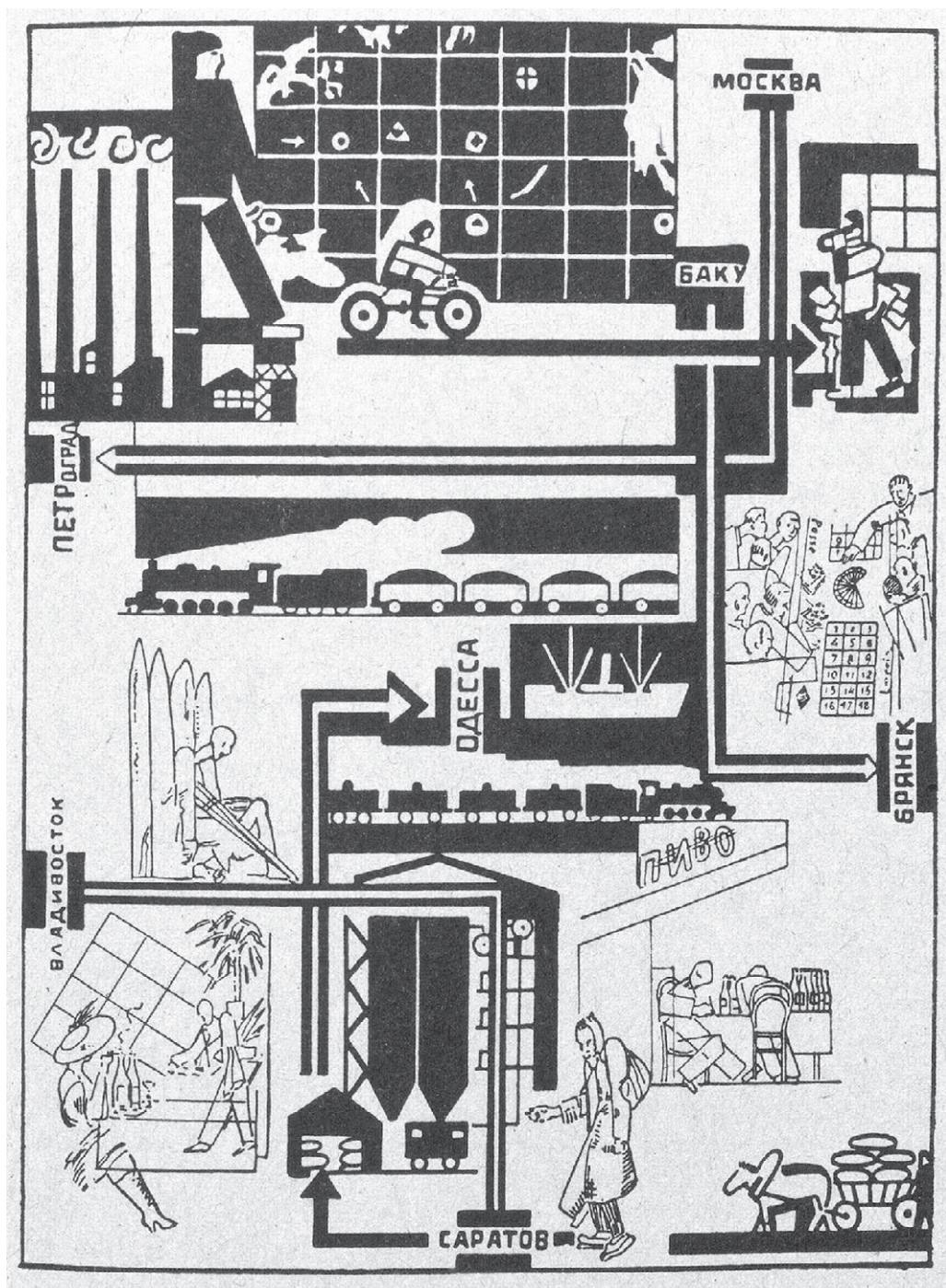
For Schaxel, *Planwissenschaft* refers to the collectivization of intellectual labor in accordance with economic planning within a classless “world labor association” to come.¹² Science in capitalism is seen as both anarchic (dependent on the “planless rule of competition”) and individualistic (based on the division between manual and intellectual labor). In contrast, a socialist or communist science will have to be “consciously integrated into the production process.”¹³ While in capitalism, the application of scientific knowledge to the productive forces of society is limited by private property to individual productive units and alienated by the irrational law of surplus accumulation, the coordination of production and distribution on the general level of society (its “total socialization”¹⁴) would both afford scientific rationality and unleash its transformative potential. Just like Alexander Bogdanov’s universal organizational science, which proved to be influential on the communist avant-garde of the 1920s and 1930s, Neurath’s unitary science (*Einheitswissenschaft*) could be regarded as *Planwissenschaft* in Schaxel’s terms. Both Bogdanov and Neurath proposed the “socialization of knowledge”¹⁵ from a methodically monist, system-theoretical, and enlightenment standpoint that sought to integrate the transformation of consciousness and experience with the transformation of material life.

Schaxel’s reflection on a collective administration of intellectual labor coincides, not accidentally, with the broad return within the communist left of debates on planned economy in the aftermath of Stalin’s “Great Turn” after the liberalism of the NEP (1921–28). For communist intellectuals—including writers and visual artists—this shift entailed thinking through the question how, in accordance with planned material production, mental labor could be administered collectively beyond the market and private production and consumption. Within the context of Weimar Marxist intellectuals working on questions of political economy and social theory, this led to a resurgence of

the socialization debates of the early 1920s. But with regard to the question of the cultural revolution, attitudes had shifted. Whereas, in the early 1920s, the communist cultural scene was leaning toward the spontaneism of anarchism, libertarianism, or council communism, and was generally hostile to art's administration through party apparatus,¹⁶ the years between 1928 and 1933 witnessed a downright infusion of leftist avant-garde sensibilities with the idea of planning and administration.

For the history of aesthetic theories, this raises the question: Can *aesthetics* be a planned science? Or in other words, can a planned aesthetics complement the project, laid out by scientific Marxism, of a theoretical and practical homologization between a planned economy and a planned science from the vantage point of cultural production? If the project of a materialist aesthetics can be formulated as a planned aesthetics,¹⁷ it must share core features with the idea of scientific and economic planning. These are: instrumental rationality; statistical calculability; theoretical abstraction; a functional, utilitarian attitude toward materials, forms, and techniques; transparency and objective legibility; the centralization and collective coordination of operative processes; and, most importantly, a future-oriented temporality that minimizes contingency through conscious decision-making. It seems fairly evident that all these characteristics are in contradiction to almost all the most fundamental assumptions and premises of aesthetics both as a philosophical discourse and the common-sense use of the term. With notions such as autonomy and subjective experience, "free play" and conceptual indeterminacy, intuition and spontaneity, modern aesthetic discourse is precisely positioned as realizing subjective human freedom *against* modern rationality with all the characteristics outlined above. Especially in its variant as an (post-Kantian, post-phenomenological, and/or post-Frankfurt School) aesthetic of experience, the "aesthetic" is a name for that which cannot be planned. In a similar fashion, the forms of aesthetic subjectivity underlining the programs of early twentieth-century avant-garde movements—from the vitalism of expressionism and futurism to the Freudo-Marxism of surrealism—all emphasize the irrational as a liberatory counterforce against scientific, economic, and social rationality seen as the hegemonic principle of capitalist modernity.

The hypothesis I wish to examine is that an aesthetic of the plan can be interpreted as being consistent with a formative process of social freedom. This claim has to be sustained against some of its obvious theoretical and historical limitations: the possible interpretation of planning as a proto-cybernetic vision of technocratic management; fantasies of control that elide political antagonism and repress the non-accessible conditions of social subjectivity, both in terms of the structure of the unconscious and of material and ecological infrastructures; and its perverted historical realization as the nightmare of forced

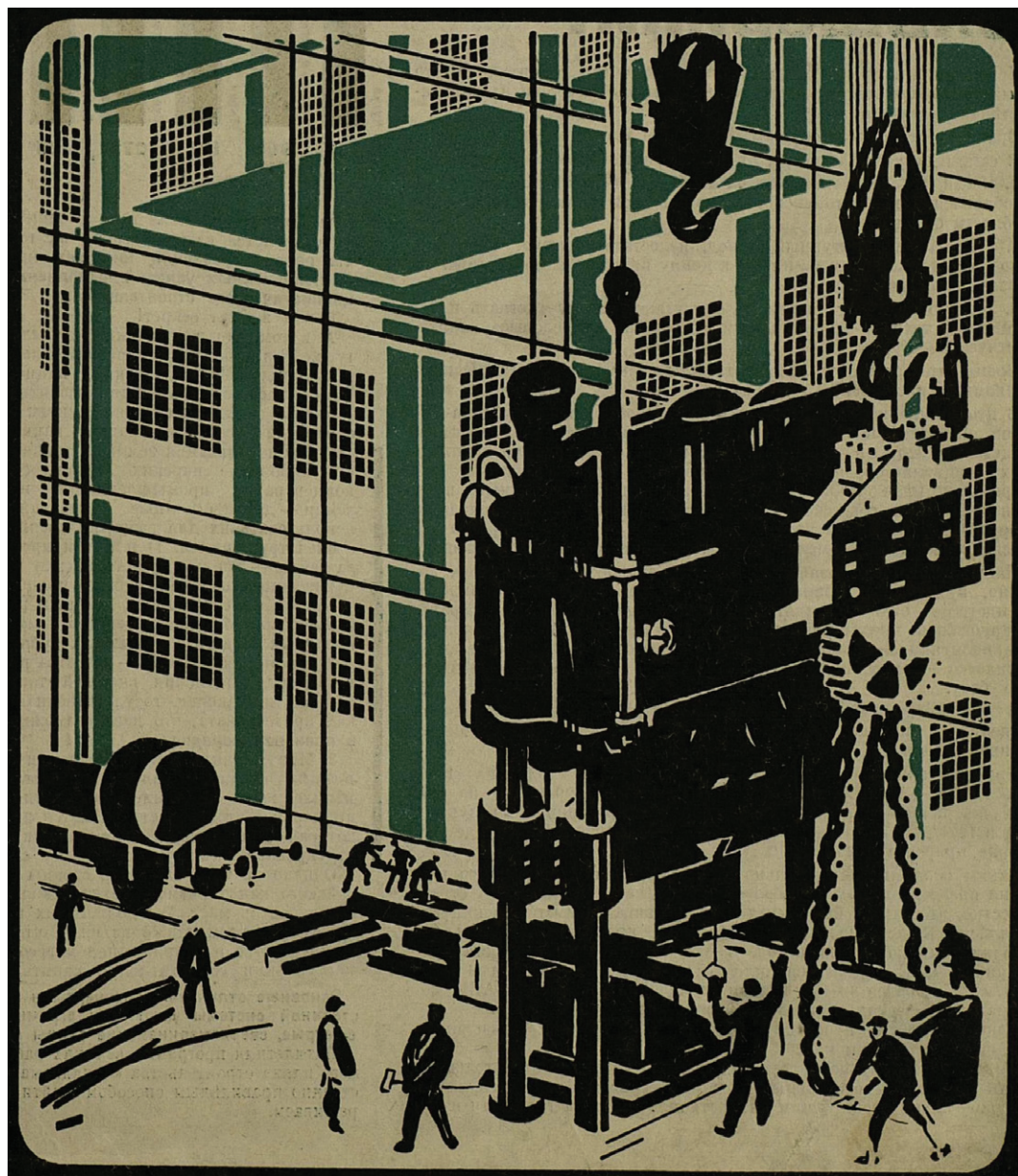


1. Vladimir Krinsky, a constructivist-symbolic representation of the communist planned economy in contrast to old Russia, ca. 1926.

industrialization, to name but a few. If it can be shown that the framework of an aesthetic as *Planwissenschaft* is consistent with the Marxian concept of social—communist—freedom, then it could equally offer a historical corrective to the identification of (Western) Marxist aesthetics with an individualistic opposition against “administration”—a position that has been by marked by the reception of postwar figures of Marxist aesthetics like Herbert Marcuse, Theodor W. Adorno, or Guy Debord.

The question of a planned aesthetics comprises at least three aspects, which can be methodologically distinguished. These aspects contain relatively distinct conceptual definitions of “aesthetic,” which shift depending on the contextual meaning evoked in the discourses they refer to. First, an aesthetics of the plan includes forms of visibility and mediativity. The plan is, above all, a *form* that can be understood as a mediation of sensuous-material and theoretically and socially abstract qualities. Planning is dependent on visualization, understood as projection of a future temporality of complex social systems onto a tangible (usually two-dimensional) spatiality. In the Latin root of the word, this dependence of planning as a future-directed operation of rationalizing decisions on graphic forms of representation becomes apparent, as it refers to the surface of representation (*planus*) as evidenced by technical drawings, diagrams, and other means of visualization. The theory of operative images as advanced by philosopher and media theorist Sybille Krämer is helpful here, as it allows us to embed the historical examples of an intersection of economic and social planning with visual art within a broader perspective on epistemological and anthropological conditions of specifically modern forms of visual rationality.¹⁸ It is within forms of operative visual abstractions in which statistical graphs, architectural models, polygraphic design, and elements of technical images intersect with the affective language of both figurative and constructive pictorial traditions that the aesthetics of the plan is articulated in the context of both Neurath’s *Bildstatistik* and the Soviet cultural revolution (figs. 1–3).

Second, and more importantly, an aesthetic of the plan comprises the sensuous forms of everyday life that result from the economic and social realities shaped by the organizational forms of the plan. For Neurath, to whose work I will turn shortly, planning is not the affair of economic experts alone but needs to be embedded in an all-encompassing project of proletarian *Bildung*. Within the framework of “*Gesamtlebensgestaltung*,”¹⁹ the politics of socialization involves “the totality of affects, inclinations, fantasy images, institutions, and actions.”²⁰ It is at this point that the political project of socialization acquires an irreducibly aesthetic dimension. And it is in this—holistic—sense, not simply as pertaining to the visual and other forms in which the plan and the knowledge it organized is (re)presented that the term “aesthetic” should be understood in the following.



2. Mechislav Dobrokovsky, cover design for the journal *Daesh* ("Let's Produce"), no. 3, 1929 (detail).

Third, such a totalizing and systemic approach toward socialization equally informs the concrete forms of cultural production that would themselves be transformed through the implementation of the plan. This becomes particularly evident in the context of Soviet productivism, which, according to Hans Günther's account of the Bogdanovian aesthetics of Proletkult and LEF, sets out to "organize people's representations, emotions, and moods [*Stimmungen*]" and "to implement a rational, planned, and scientific organization [...] from the standpoint of the 'all-organizing' proletariat."²¹ Oktiabr', the avant-garde group formed at the moment of the implementation of the first Five-Year Plan, proposed to revive the "achievements of the last decades, when the methods of the rational and constructive approaches to artistic creation, which had been lost by the artists of the petty bourgeoisie, were restored and developed considerably."²² Next to the mentioned aspects of an *aesthetic of the plan*—both in terms of its visual forms and its social materialization in everyday life—this involves the perspective of a *planned aesthetics*; namely, the question of aesthetic production and the concrete organizational forms of a transformation of artistic practice under the dictatorship of the proletariat.

Planned Economy and Empiricist Materialism after Neurath

Neurath formulated his idea of communist planning in the context of the early twentieth-century socialist calculation debate. He attempted to practically implement his concepts as economic minister of the short-lived council Republic in Munich in 1919, and he further developed his ideas in the context of museology and urban planning in the Social-Democratic-governed Vienna of the 1920s. "To socialize an economy," Neurath stated in an address to the Munich Workers' Council in January 1919, "means to subject it to *planned administration by society for the benefit of society*" (emphasis in the original).²³ Neurath's take on economic planning is defined by two main principles: the shift from a monetary economy to an economy in kind and the shift from small-scale private production to large-scale operations, which was already underway through late capitalism's monopolistic tendencies.²⁴ In Neurath's view, only a centralized plan operating on the most general level of social reproduction could manage to deal with the complexity of conflicting human needs of mass populations. Society should be treated as one single gigantic organization. In contrast to many Marxists involved in the calculation debate who believed there should still be separate branches of private and public production and consumption, he advocated for a "total socialization."²⁵ Neurath rejected the necessity of a functional equivalent of money for acquiring privately produced goods, like labor time certificates. For many socialists, including the Dutch Council communists, socially necessary labor time would still play the role of

a “measure for individual consumption.”²⁶ While the latter position seems to be in line with a Marxian understanding of the labor theory of value, Neurath’s model of a calculation in kind can be seen as radicalizing Marx’s vision for communism—also in the sense of being more amenable to a feminist politics of social reproduction—because in Neurath’s model socially mediated needs are allocated independently of the measure of productive labor.²⁷

According to Neurath, production in communism should be organized around the qualitative difference of needs and capacities, and not the quantitative unity of labor time, or in fact of any “unit of calculation” at all.²⁸ From this perspective, Marx’s so-called labor theory of value has no validity in communism, where labor is no longer the means for individuals to acquire goods. Labor time is only one *qualitative* factor of calculation among many. The aim of a centralized economic plan is to calculate the distribution of incommensurable material “life conditions” or “standards of living” (*Lebenslagen*),²⁹ such as labor, housing, health, childcare, education, and leisure. Because these conditions are necessarily incommensurable, they are also necessarily conflictual. Therefore, economic calculation (which would be carried out by economic experts as functionaries, and could today be largely done by machines) has to be combined with democratic decision making. Technical calculability (the economic plan) is restrained and mediated by “extra-technical considerations”³⁰ (the choice between economic plans according to social needs). It is this mixture of cybernetic social-engineering and a politically democratic vision of communism that makes Neurath’s position amenable to contemporary debates on economic planning.³¹ Total socialization does not mean the technocratic management of populations, but rather the collective securing of material life for all.

The tool that mediates between the technical and the political dimension of economic planning is statistics. Neurath understands Marxism as an empirical social science, grounded in the positivism of Ernst Mach and of the logical empiricism of the Vienna Circle. According to his radically anti-metaphysical, scientist, and physicalist worldview, social life must be described in terms of spatio-temporal processes (consciousness is also understood in this way). The empiricism of Neurath’s conception is expressed in the importance of statistical calculation, which both comprehends existing social and economic relations and is directly operative in a planned economy.

In writings like *Wirtschaftsplan und Naturalrechnung* (1925) or *Lebensgestaltung und Klassenkampf* (1928), Neurath addressed both a scientific and a proletarian lay audience to propagate his vision of a socialist planned economy. His sociological and economical thought was indebted to the universalism of the Enlightenment, which equally shows in the didactic forms of his intellectual output (apart from his writings, especially his work in museum pedagogy) that

were directed toward mass audiences, allowing people to better understand their material life conditions with the aid of empirical science. He understood Marxism as a monist, empirical sociology apt to “tracing correlations between the social condition and the behaviour of whole classes.”³² Neurath believed that production and distribution plans were possible on the basis of the collection of local and global empirical data from various fields, such as natural resources, working hours, leisure, consumer needs, health and safety, housing, care, and so on.

In Neurath’s vision, the degree of happiness of large populations, as seen as directly dependent on material needs, could be statistically calculated and directly factored into production and distribution plans. Statistics are, therefore, crucial. To model an Epicurean materialism into a communist cybernetic “felicology” (*Glückslehre*),³³ was to treat the “happiness of the totality” (*Glück der Gesamtheit*)³⁴ as an “effect of social institutions.”³⁵ This could be achieved by the scientific means of statistically collecting data of subjectively experienced “states of felicity” (*Lebensstimmung*)³⁶ and mapping them in an “inventory” or “cataster,” allowing for an objective assessment of the “the conditions under which the totality of feeling becomes more or less pleasurable.”³⁷

What was at stake for an administrative and collective take on a utilitarian and hedonistic ethics was socialism or communism not as a final stage of humanity in which ultimate happiness and freedom is achieved, but rather as a historically finite stage, contingent on existing technological developments and social relations and conditions of struggle. That happiness can—and needs to be—administered because it is situated at the level of material life conditions is a challenge to the naturalized individualism of bourgeois society, which treats happiness as a category of personal achievement, often idealistically relegated to the spiritual realm (which, for Neurath’s monist materialism, is not methodically separate). For Neurath, happiness is an empirical social affect, not a personal ideal. But neither is socialism the final achievement of collective happiness. It does not do away with conflict, unhappiness, and unfreedom, but subjects its conditions to a conscious collective decision making.

СНИЖАЙ БРАК

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обгоним показатели пятилетия

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Максимальная задача второго года пяти-
летки — обеспечить быстрый подъем уровня
благополучия рабочего класса.

Statistics as a Medium of Proletarian *Bildung*

In capitalist society, statistics were entirely a matter for “government servants”, or for narrow specialists; we must carry statistics to the people and make them popular.

—V. I. Lenin, “The Immediate Tasks of the Soviet Government.”³⁸

Numbers become flags of victory.

—Otto Neurath, *Lebensgestaltung und Klassenkampf*.³⁹

Apart from being the primary instrument for economic calculation, statistics are also a key component of proletarian life in the building of socialism. For Neurath, statistics was something like a lifestyle, indeed, a proletarian aesthetics of the everyday and the medium of proletarian happiness. Because “statistics show what social events mean for social groups” they become “important for the proletarian as the basis for humane thought.”⁴⁰ Statistics is considered a form of practical rationality; that is, a way for individuals and groups to organize epistemic and affective relations of the social totality which they both constitute and by which they are constituted as a subject. It is through the medium of statistics that individuals participate in the plan as producers and consumers, comprehend its rationale, and feel empathy for those macrosocial systemic formations outside the reach of their immediate lifeworld.

Statistics have the function to render transparent large-scale production processes to the producers themselves, to mediate between plan and production, but they also allow people to relate to the collective emotionally. “When the collective takes the place of many individual entrepreneurs, it must know how to allocate specific amounts of labor, machinery, and raw materials to ensure a certain amount of housing, food, clothing, education, entertainment, healthcare, etc.”⁴¹ But statistics don’t operate on the rational plane only; they are also considered a medium for affectively relating to the world, a medium of empathy. “Whoever cares about the fate of the broad masses is not so much interested in how excellently a single sanatorium is set up, but rather in how many people are reached by a tuberculosis care organization and how many are discharged in improved condition.”⁴² Statistics is thus a means to expand empathy and emotional involvement from the individual to the collective. The statistical abstraction of concrete individual experiences of suffering or joy is not an obstacle to empathy, but rather the condition for its collective reach.

Neurath considered the implementation of statistics into proletarian everyday life a key pedagogical task of a socialist/communist cultural politics, one he sought to realize in the fields of infographics, museology, mass publication, and

urban planning. Topics connected to statistics and planning—like the representation of large-scale economic processes, the collectivization of affect, and the social functionality of mass education—challenged traditional (including modernist) notions of artwork and producer and prompted what one could call a political aesthetics of planned economy. The dissemination of statistics in everyday life was also a key concern in revolutionary Soviet Russia. From the outset, this involved questions of an aesthetic pedagogy. Its aim could be summarized as transforming “dry, dead, bureaucratic accounts into living examples,” as Lenin wrote in 1918.⁴³

During his stay in Moscow in the winter of 1926/27, when he visited a children’s sanatorium and a peasant club, Walter Benjamin noted how he was

struck by the fact that the walls of the reading room were entirely covered with visual aids. The material here consisted largely of statistics, some of which had been illustrated with little color pictures, posted here by the peasants themselves (village life, agricultural development, production conditions, and cultural institutions were all recorded).⁴⁴

Tret’iakov, whose praxis as a writer consisted of immersing himself in the daily life of factories, collective farms, or sanatoriums, wrote in 1928 that one of the tasks of cultural producers is “to draw up an inventory of the socialist economy that we are building”; in the same year, he lauded “graphic representations,” which are better suited for representing “tendencies and processes” than paintings.⁴⁵ Tret’iakov also demanded that the decoration for street festivities be replaced by infographics and statistical models. As a method of socially operative literature, factography involved the deskilling of literary production through cooperatives which included non-literary specialists as well as proletarian amateur writers and photographers. The positivism, factuality, and operativity of statistics challenged the traditional forms of literary and pictorial expression which were seen as inadequate to represent both capitalist and socialist mass production and industrialization.

For avant-garde cultural producers, the need for representing the masses of production *to* the masses of producers revealed the limitations of the traditional anthropomorphic forms of the novel and painting. In 1931, the writer Ernst Ottwalt criticized Georg Lukács’s defense of the novel form against the *Tatsachenroman* (“novel of facts”—a notion that some of the debates related to the Soviet concept of “factography”)⁴⁶ by saying that it is impossible to depict the “gigantic reality” of the Five-Year Plan through the interactions of individual literary characters.⁴⁷ Bertolt Brecht’s conception of epic theatre, privileging typified “gestures” over psychological interiority directly echoes Neurath’s empiricist contention that for empiricist science “there are only

gestures, words, behavior, but no ‘motives’, no ‘ego’, no ‘personality’ beyond what can be formulated spatio-temporally.”⁴⁸ In his *Messingkauf Dialogues*, written in the late 1930s, one of the characters defines Marxism as a science that deals with “the behaviour of large masses of people” and theater and art as means to empirical experimentation, among other things through “graphic demonstrations” that “help people acquire practically applicable knowledge.”⁴⁹

Film and photomontage, likewise, offered techniques to connect the bodies of the proletarian masses to their abstract representation as statistical quantities. The superposition—through the montage of shots, collage, transparent layering, or double exposure—of numbers with bodies was employed by avant-garde practitioners as an innovative incorporation of statistics into pictorial media, whether the pictorial message is to highlight the disastrous effects of capitalist crisis on mass populations or their formation as a revolutionary subject. Image techniques of juxtaposing numerical with figurative representation were used, for example, in John Heartfield’s cover of a 1924 German edition of Vladimir Mayakovsky’s poem *150 000 000*, in Hans Richter’s 1928 experimental short film on the economic crisis (*Inflation*), in Sergei Eisenstein’s 1929 take on the industrialization of agriculture (*The Old and the New*), or in an educational lantern slide film which presents Marx’s *Capital* as a series of photomontages, produced by Friedl Dicker-Brandeis, Max Bronstein (Mordecai Ardon), and Margit Téry-Buschmann in the context of Marxist workers’ education (*Das Kapital*, 1932–33, fig. 4).

Film, especially, was seen as a medium to overcome the anthropomorphism of literature and painting; a mass medium in terms of its reception and, in the words of Marxist art theorist and writer Lu Märten, an “instrument of pictorial communication”⁵⁰ apt to embody the political, scientific, and affective aspirations of the proletariat for the building of socialism. This is because film is better suited to representing the subject matter of “mass events, mass destinies, and [mass] experiences” than theater and literature.⁵¹ The dramatic and epic forms of theater and the novel, which are “supported by individual action and the unity of time,” fail when it comes to depicting the dynamic collective experience of the present, which is monumental in character and involves “historical unities and quantitative experiences” (*geschichtliche Einheiten, Erlebnisse in Quantitäten*).⁵² Moreover, it is because of film’s formal ability to sensually organize the proletariat’s structure of experience on the basis of industrial technology that it qualifies, for Märten, as the medium of proletarian *Bildung* par excellence. Thus, particularly the *Kulturfilm* or scientific educational film struck Märten as promising the potential of the new medium.

Lantern slides were also used in the Gesellschafts- und Wirtschaftsmuseum’s educational activities. Neurath’s inspiration for the visual language of his



4. Friedl Dicker-Brandeis, Max Bronstein, Margit Téry-Buschmann, photomontages for *Das Kapital*, 1932–33. Positive film for slide show.

universal system of infographics (Wiener Bildstatistik), however, came originally from painting. The figurative constructivism of the council-communist-leaning Cologne Progressives provided Neurath with a model of pictorial representation, in which naturalist detail is sacrificed to make way for a clear geometrical organization of pictorial space, and in which all individual traits of the human figure are effaced in order to mark individuals as types of larger social groups. In 1929, the graphic artist Gerd Arntz became Neurath's closest collaborator and designer of the pictograms for the method of visual statistics.⁵³ Both the paintings of Franz Wilhelm Seiwert and the political graphics of Arntz employ the flatness of the two-dimensional picture plane as an epistemic tool for representing the objective laws of social orders, oscillating between a depiction of an alienated capitalist reality and the organizational strength of the proletariat.⁵⁴

From 1923 onwards, Seiwert developed a semiotic conception of painterly representation, in which recurring symbols (sun, smokestack, locomotive, hammer and sickle, etc.) replace naturalistic depiction, anticipating the graphic abstraction of *Bildstatistik*. In a way, Seiwert's paintings are already diagrams, "hybrids of the iconic and the discursive," to use Sybille Krämer's and Christina Ljungberg's formulation.⁵⁵ Defying spatial depth, they not only oppose romantic interiority—that which Neurath calls the "mysterious power of the individual personality"⁵⁶—as a fetish of the bourgeois class, but also the representational mode of social realism.⁵⁷ This can be illustrated by comparing Seiwert's painting *Die Arbeitsmänner* (1925, fig. 5) with Otto Griebel's *Die Internationale* (1929–30), both programmatic depictions of the international proletariat as a revolutionary subject. In Griebel's painting the virtual infinity of the mass is depicted through spatial layering, whereas in Seiwert's painting, the same subject is conveyed by means of a tectonic organization of the picture plane. Such a mode of pictorial representation corresponds well with Neurath's anti-metaphysical, scientist interpretation of Marxism for which "there are no 'depths'; there is surface everywhere."⁵⁸ It was precisely such a semiotic conception of the image as diagram that Neurath would adapt for his method of visual statistics, in which schematized two-dimensional shapes of human figures and objects are conveyed to signal quantitative relationships.

The Total Socialization of Art: The Example of Oktiabr'

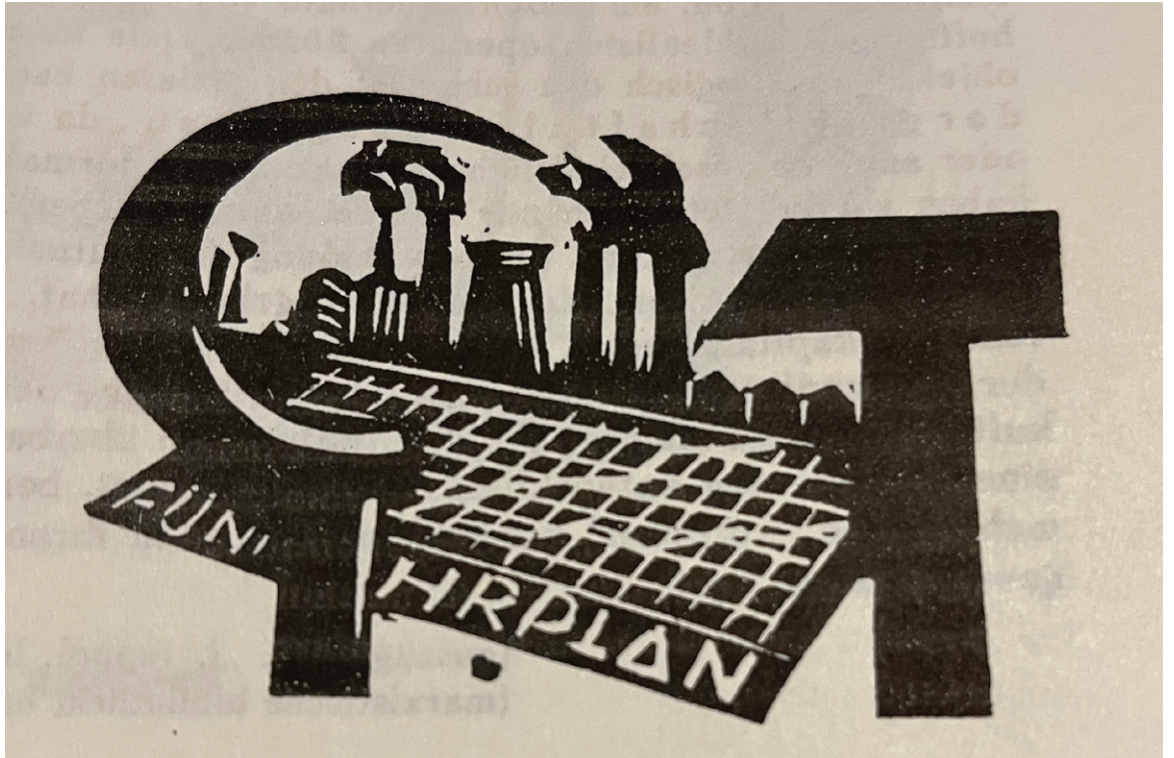
The integration of visual art and statistics intensified in Soviet Russia with the first Five-Year Plan, from 1928 onward. It was at this conjuncture that the aesthetics of the plan first fully corresponded with a planned aesthetics; that is, with an attempt to fully socialize and collectivize cultural production itself. In April 1929, when the full-scale variant of the plan was confirmed, the Central Committee of the Bolshevik Party also decided on the "development of a unified plan of



5. Franz Wilhelm Seiwert, *Die Arbeitsmänner*
[The workingmen], 1925. Oil on canvas,
69.4 × 90 cm. Kunstpalast Düsseldorf.

artistic labor that could be coordinated and discussed with the mass of workers in the factories and carried out with their direct participation.”⁵⁹ A year earlier, the theorists of the organization of art workers, Oktiabr’ (the last avant-garde group of the Soviet Union), had sketched a program for coordinating the activities of graphic and interior designers, architects, poster artists, photographers, painters, textile artists, filmmakers, and other professionally trained artists to collaborate with untrained amateurs in factories and workers’ clubs. Oktiabr’s core members consisted mainly of constructivists and productivists (Aleksei Gan, Aleksander Rodchenko, Gustav Klutssis, Valentina Kulagina, El Lissitzky, and the Vesnin brothers are some of the familiar names), but also included, crucially, the figurative painter Aleksandr Deineka. The group’s (short-lived) success was an immediate result of the left political turn in the reconstruction period, and its rationale was to provide an alternative to at least three distinct artistic movements that were dominant in the art system during the NEP years: the realists of the Association of Artists of Revolutionary Russia (AKhRR, 1922–28, continued as AKhR from 1928–32), the figurative modernists of the Society of Easel Painters (OST, 1925–32), and the formalist variant of constructivism and factography represented by the members of the journals LEF (1923–25) and Novy LEF (1927–29). The aesthetic and political program of Oktiabr’, announced as “proletarian realism,”⁶⁰ proposed a synthesis of, on the one hand, an affectively charged visual propaganda which included Deineka’s painterly representations of the proletarian body, the documentary photography of Rodchenko and his pupils, as well as the “polygraphic” printed arts of photomontage, typography, book design, journals, and, most importantly, poster design, and production art on the other hand. The latter aspect consisted of architecture and industrial design, but it included, crucially, artist brigades in factories, the construction of workers’ clubs and several initiatives for lay cultural production.

As Christina Kiaer writes in her recent book on Deineka, the political aim of the group was to fully decommmodify artmaking, organizing it “outside the capitalist market, laterally and in the collective interest.”⁶¹ Oktiabr’s slogan *from an art for the masses to an art of the masses* signaled the socialization of art as a link between coordinated deskilling and general polytechnical education. From the perspective of socialization, the art system had to be treated like a large-scale operation, in which professional artists assume the role of administrators of collective production, eventually leading to ever higher degrees of permeability, both between professionals and non-professionals, and between different sets of techniques and skills. This conception of an administered mass culture is echoed in Benjamin’s claim that the “polytechnical formation of man” is the positive flipside of the general deskilling of proletarian labor; the critique of artistic autonomy and the specialization of skills in the name of “an active and practical universality: the universality of readiness.”⁶² Neurath’s ideal of economic and social planning, in which centralization does not reduce but multiplies the diversity of skills, needs,



6. Anonymous (Fritz Schulze?), *Fünfjahrplan*, 1931. Woodcut, printed in *Stross von links 6* (1931).

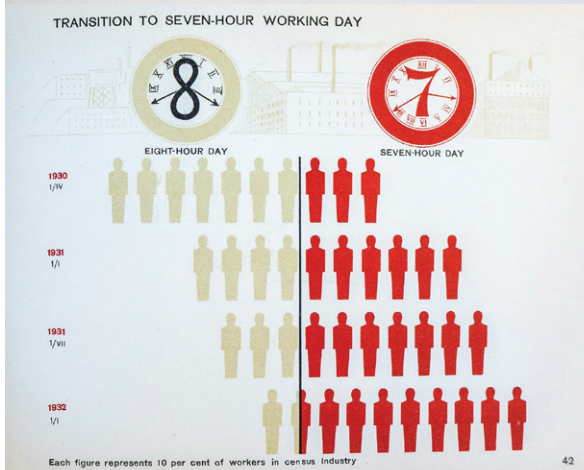
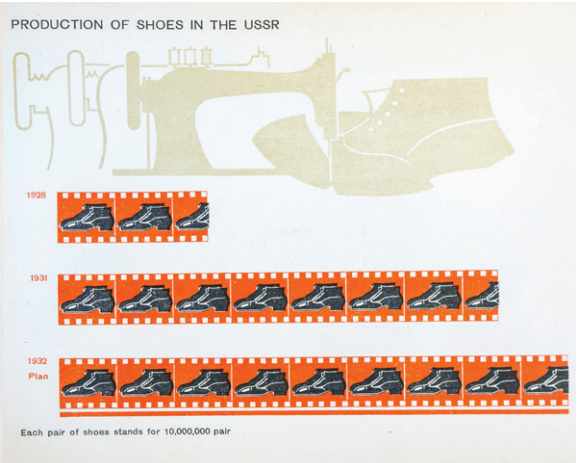
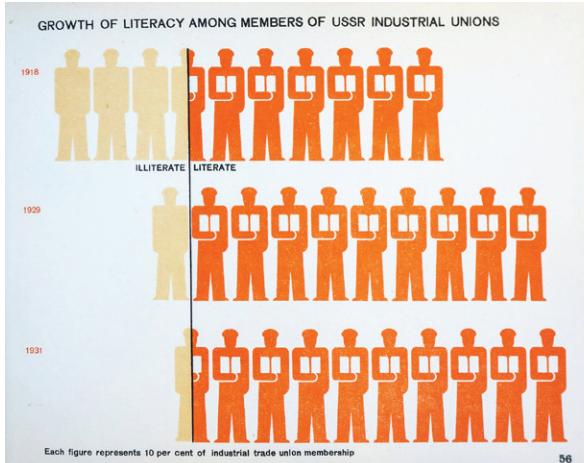
and life forms, and in which the social engineering of planning experts coexists with democratic decision-making, seems to resonate within this conception. Needless to say, such a conception is hardly compatible with the specialized skill set of easel painting, which is bound to the studio, as a production facility of private small-scale producers. Operating on a thin line between the collective and lateral socialization of cultural production and the forced synchronization of intellectual with industrialized factory work, the Oktiabr' group embodied the politics of the cultural revolution "to eliminate [the] disproportion between the development of art and the socioeconomic development of our country."⁶³

In September 1930, members of the German Association of Revolutionary Artists exhibited works of the Oktiabr' group in Berlin under the title *An der Front des Fünfjahrplans* (On the frontline of the five-year plan). In his review of the show for the German Communist Party's (KPD) paper *Rote Fahne*, the critic Alfréd Kemény highlighted the fact that no paintings were shown, and that the most important group of exhibits, next to posters, photomontages, and book designs, was constituted by "architectural projects [...] of the great socialist cities, which are to be erected within the framework of the Five-Year Plan."⁶⁴ Iwan Matsa (János Mácsa), theoretician of Oktiabr', also mentions architecture as a leading discipline of the new synthetic organizational form of aesthetic practice:

Our art still faces the great task of developing an artistic, emotionally accentuated, and rhythmically structured representation of the dialectical and materialist understanding of our organized and planned proletarian reality [...]. The constructive principle [which has so far prevailed only in architecture], that is, the principle of organization, planning, and rationalization, must now and in the future be organically applied to all forms of art.⁶⁵

With its functionalist orientation and future-oriented outlook, architecture serves as a general metaphor for an aesthetic of the plan; as it also did in Neurath's writings on the administrative economy: "The preparation of an economic plan," he writes, "is comparable to the design of an architectural plan," because after all, "the architect more than any other creative person must seek to anticipate the future."⁶⁶ In the experimental forms of the visual avant-garde, the architectural plan and the other key medium of an aesthetic of administration, the visualization of statistics, are combined on the same graphic plane.

Statistical infographics were heavily present in the visual culture of the Oktiabr' group. In all the fourteen issues of its magazine *Daesh* published between 1928 and 1929, next to Deineka's aquarelle drawings, Dmitrii Moor's caricatures, and the documentary series of Rodchenko and Boris Ignatovich, graphs and diagrams spread out over the pages to register the rapid growth of the country's industrialization. The journal's combination of abstract and concrete, factographic



7. Ivan Ivanitsky, illustrations in *The Struggle for Five Years in Four* (State Publishing House of Fine Arts, 1932).

and figurative, affective and cognitive forms of representation amounts to an aestheticization of statistics, giving a living form to the administrative tasks of industrializing the country and building socialism (fig. 3).

The activities of Oktiabr' coincide with Neurath's and Arntz's work of implementing their Vienna Method of *Bildstatistik* in the context of the Soviet Five-Year Plan. From 1931 to 1934, Neurath collaborated with the All-Union Institute of Statistics (IZOSTAT), which resulted in a number of book publications, mostly in collaboration with the graphic designer Ivan Ivanitsky (fig. 7).⁶⁷ Neurath's expectations (he considered the Soviet Union an ideal field of application of his pictorial statistics) were quickly disappointed however, since his abstracted and soberly objective principles of design did not prevail against the need for Soviet propaganda to heroically stage the projected success of surpassing the Western capitalist countries in economic and industrial power.⁶⁸ In most Soviet infographics of the time, the tendentiousness of the representations (in the Soviet Union, the graphs always go up) and their recourse to both naturalist and caricatural depictions are alien to Neurath's visual education, firmly rooted in scientific objectivity (fig. 8).

The synthesis of statistics and figurative representation through simplified pictograms—Neurath's solution to visual education—was given up when conventional methods of visualizing statistics were combined with heroic or caricatural representations of social types such as workers or capitalists.⁶⁹ Nevertheless, before the hegemony of Socialist realism was consolidated in 1934, Neurath's method had an impact on Soviet visual politics under the "dictatorship of the proletariat." It is in this relatively brief conjuncture, between 1928 and 1932, at the tipping point between avant-garde productivism and Socialist realism,⁷⁰ that the experiment of a planned aesthetics coincided with an aesthetics of the plan; where a figurative "realism" of "collective affect"⁷¹ could coincide with abstract pictorial means of statistically representing the economy; and where the radical productivist vision of a total socialization of art had a short-lived revival.

Abstraction and Empathy

Statistical abstraction and its visual correlates, diagrammatic techniques of representation, constitute the main formal element of a socialist aesthetic of administration. As we have seen, this tendency toward abstraction is counterbalanced, in the art of the cultural revolution, by the need to give more sensuously concrete forms to the collective as a "living" dynamic totality. This exigency is expressed in various forms, from the naturalist representation of AkhR—which, from 1932 onwards, would inform the style of Socialist



8. Nicolai Kochergin, "Capitalist England Trembled," poster produced as part of the postcard series, "To Catch Up with and Surpass the Leading Capitalist Countries in Technical and Economic Affairs in 10 Years," 1931.

realism—to the propagandistic montage forms of the polygraphic designers which continued the Bogdanovian tradition of factography as a “life-building” activity. The “building of dialectical models of tomorrow,” as factographer Nikolai Fedorovich Chuzhak put it,⁷² involved an immersion in the material fabric of the present. Oktiabr’s attempt at synthesizing these traditions—a “dress rehearsal for Socialist Realism,”⁷³ in Kiaer’s words—can be summarized as an affective, imaginary, and figurative embodiment of the statistical reality of the plan.

Neurath hoped that the communist transformation of social institutions would bring about a new quality of socialized affect. Such affective configuration would be different not only from the egotistic feelings of resentment linked to capitalist property and competition—and its collectivized version of aggressive nationalism and imperialism—but also from moral altruism and traditional notions of community. The main reason for this difference is that for Neurath—whose empiricist and utilitarianist outlook made him skeptical toward all forms of moral justification—“community feeling” was not seen in opposition to, but rather as an effect of scientific reason, technological rationalization, and social abstraction.

Where does one find most future-oriented thought and community? In the proletariat! Where does one meet most of the productive organization of the future? In trusts, in large banks, in public institutions! Organization and the ideology of socialism have not yet found each other. The customers of a banking house do not feel patriotism of accounts. Devotion to cartels or national railways is as uncommon as love for trusts. And yet everyone will one day rejoice in the institutions of socialist administrative economy as though it was his own affair. The place once taken by tribe, church, country, nation, etc., will then be taken by the socialist order of life.⁷⁴

Exactly opposed to the various romantic and vitalist critiques of capitalist modernity that subtended many of the ideological programs of the early avant-gardes—especially in Germany, where *Gemeinschaft* was programmatically opposed to *Gesellschaft*⁷⁵—collective sentiment was seen by Neurath as a function of mass organization. The advanced organizational forms of capitalist economy—banks, trusts, even the war economy—already contained the principles of socialization which needed to be politically appropriated through the dictatorship of the proletariat.⁷⁶ Proposing the language of organizational and statistical abstractions as a medium of “community feeling” might not dispel the skeptical Freudian rejoinder that the “human love of aggression” accounts for the illusory nature of any notion of universal affective bonds—and that, therefore, communism is an “untenable illusion.”⁷⁷ It can, however, be considered a necessary step toward a political aesthetic that relates individuals to the social totality without the necessity of concrete figuration of a community.

From this perspective, Neurath's socialization of affect can be connected to the program of a communism of abstraction.⁷⁸

Communist Administration

The farcical elements of the later official infographics of the first and second Five-Year Plans (fig. 8) can be deciphered as involuntary caricatures, both of the emancipatory intentions of a “universal statistics” as proposed by Neurath, and of the operative “proletarian realism” of cultural-revolutionary groups like Oktiabr'. The political optimism that also drives Neurath's work—and indeed that of many of his contemporary comrades—was perverted into the modeling of a fictional future reality, which exists only on paper, as an aesthetic representation of the victory of socialism in the imperialist race against the Western capitalist economies. That the positive links between economic planning, statistics as a tool of enlightenment *Bildung*, and the socialization of intellectual and artistic labor have been eclipsed in critical thought is undoubtedly a consequence of their perversion by the counterrevolutionary farce of Stalinism. The postwar left, however, has thrown out the baby of a planned economy with the bathwater of Stalinist bureaucracy. Arguing, as I have done in this essay, for an aesthetic theory that revitalizes the interwar project of socialization as a project of aesthetic *Bildung* does not invalidate the Frankfurt School's critique of the administrative apparatus of state socialism. It does, however, question the undialectical identification of aesthetic freedom with subjective freedom that turned out to be one of its main results—one that was retroactively projected onto the histories of the interwar Soviet and European avant-gardes as well.⁷⁹ There are different historical reasons for this: the Trotskyist notion of art as a “free revolutionary activity,” popular among the anti-Stalinist left of the 1930s;⁸⁰ the embracing of political liberalism as a force of resistance against fascism in the context of the post-war Frankfurt School;⁸¹ the shift from notions of social liberation to subjective, cultural, and aesthetic liberation in the post-1968 left; and the anti-Enlightenment sentiments of postmodernism are among these. Revisiting the aesthetics of administration from the perspective of the historical conjuncture of the Soviet cultural revolution might provide resources to reconceptualize planning as consistent with the formation of social freedom.

Planning is not freedom, but the rational organization of the realm of necessity in order to increase the realm of freedom. To determine the needs for freedom, planning is necessary. As Neurath writes, “it is important to note that a person's state of felicity is not already determined by how much gardenland is available to him; one must also indicate how much free time he has at his disposal to use it.”⁸² Planning involves not only the incommensurability and multidirectionality of social needs, it also involves forms of conflict and power; one could say it is a form to collectively administer the condition of

unfreedom—the realm of necessity—more than a realized state of freedom. Differently put, it is the realization of freedom *as* making the conditions of unfreedom available to conscious decision-making. To borrow from Benjamin, one could speak of an aesthetic of administration in the same way in which he characterizes a technologically mediated education: “a mastery of not nature but of the relation between nature and man.” Not, “as the imperialists teach,”⁸³ domination over nature—and by nature, we can understand the “outer” nature of material life conditions as well as the “inner” nature of the subject’s unconscious and affects—but still a form of mastery. It is this organizational aspect that conflicts with the *modern* understanding of aesthetic activity as a realm of free subjectivity.

Likewise, the artists I have discussed in this essay did not see art as a free activity. Rather, they understood art as an activity that is subordinated to the necessities of political struggle. Such a stance can be linked to what Kristin Romberg, in her study of Oktiabr’ member Aleksei Gan, described as “an aesthetics of embeddedness,” by which she means practices which are formed “under pressure” of political and social reality. If this aesthetics is about freedom, then it is about “the freedom to make a collective choice about forms of unfreedom.”⁸⁴ The socialization and collectivization of art is not per se a utopian ideal for them, but rather a finite historical necessity for the building of socialism. Neurath’s approach to proletarian *Bildung* is important to consider when it comes to the problems of the aesthetic figuration of the collective, as he is careful to distinguish between the necessity of aesthetically representing political struggle—through an aesthetic of administration, so to speak—from the aesthetic figuration of a future classless community:

Today it is hardly possible to visualize the community life of the future except perhaps when we endeavor to depict the structure of socialist production and distribution. Then, one might occasionally also consider what the feelings and actions of individuals may be like who feel bound to one another for better or worse—uplifted by a sense of community, yet perhaps also increasingly burdened by a bond they would rather escape.⁸⁵

Neurath’s reflections here point to the necessity of including asociality as a necessary condition for a free sociality. To repeat, total socialization does not mean the subordination of the individual under a collective, but the central planning and coordination of those life conditions that are required to achieve individual freedom. Neurath is skeptical of any vision of future communist planning that eliminates contingency. Despite his cybernetic take, he does not see the future as statistically manageable. Rather, he sees socialism—the political path to communism—as a process of practical transformation of material conditions, consciousness, and affects, one which necessarily involves failures, contingencies, and historical defeats. Neurath’s political optimism is

grounded in an aesthetic ideal of *Bildung*. Its law is the tendency of rationalization, embedded in the social relations of capitalist modernity which have to be transformed through political action. This means striving for a totally administered communist world in which the maximum “happiness of the totality” would be achieved. Communism, then, may be likened to Freud’s pleasure principle: “The programme for attaining happiness which [it] imposes on us, cannot be fulfilled; yet we must not—indeed, we cannot—give up our efforts to bring it nearer to fulfilment by some means or other.”⁸⁶

NOTES

- 1 Benjamin H. D. Buchloh, "Conceptual Art 1962–1969: From the Aesthetics of Administration to the Critique of Institutions," *October* 55 (1990): 105–43.
- 2 Sergej Tretjakow, "Woher und Wohin? Perspektiven des Futurismus [1923]," in *Gesichter der Avantgarde: Porträts—Essays—Briefe* (Aufbau-Verlag, 1985), 38–53. Unless otherwise noted, all translations from the German are my own.
- 3 October—Association of Artistic Labor, "Declaration [1928]," in *Russian Art of the Avant-Garde: Theory and Criticism 1902-1934*, ed. John E. Bowlt (The Viking Press, 1976), 273–79.
- 4 Alfred Kurella, "Von der 'Kunst des revolutionären Rußlands' zur 'proletarischen Kunst' [1928]," quoted in Hubertus Galsner, "Von der Utopie zur Wissenschaft und zurück," in *"Kunst in die Produktion!" sowjetische Kunst während der Phase der Kollektivierung und Industrialisierung 1927–1933*, ed. Veronika Ambros (Neue Gesellschaft für Bildende Kunst, 1977), 87.
- 5 Benjamin H. D. Buchloh, "From Faktura to Factography," *October* 30 (1984): 83–119.
- 6 Theodor W. Adorno quoted in Benjamin H. D. Buchloh, "Marcel Broodthaers: Open Letters, Industrial Poems," in *Neo-Avantgarde and Culture Industry: Essays on European and American Art from 1955 to 1975* (MIT Press, 2003), 97. Buchloh does not give the exact source for this formulation. The expression "administered world" (*verwaltete Welt*) is used frequently in Adorno's, Horkheimer's, and Marcuse's writings from the 1940s onwards. On the Frankfurt School's discussion of administration in the context of theories of state capitalism and totalitarianism, see Deborah Cook, "Adorno on Late Capitalism: Totalitarianism and the Welfare State," *Radical Philosophy* 89 (1998): 16–26.
- 7 See Aaron Benanav, "Socialist Investment, Dynamic Planning, and the Politics of Human Need," *Rethinking Marxism* 34, no. 2 (2022): 193–204; Gareth Dale, "The Technocratic Socialism of Otto Neurath," *Jacobin*, February 20, 2023, <https://jacobin.com/2023/02/technocratic-socialism-otto-neurath-utopianism-capitalism>; Jan Groos and Christoph Sorg, eds., *Creative Construction: Democratic Planning in the 21st Century and Beyond*, (Bristol University Press, 2025); Jacob Blumenfeld, "The Socialization Debate: Revolutionary Confusion after the German Revolution of 1918," *Graduate Faculty Philosophy Journal* 46, no. 1 (2025): 93–122. For an account of Neurath's work in the context of art and aesthetics, see Sven Lütticken, "Plan and Council: Genealogies of Calculation, Organization and Transvaluation," *Grey Room* 91 (2023): 92–127.
- 8 Kristin Romberg, *Gan's Constructivism: Aesthetic Theory for an Embedded Modernism* (University of California Press, 2018).
- 9 Fritz Schiff, *Die grossen Illusionen der Menschheit* (Urania Freidenker Verlag, 1932), 73.
- 10 Schiff, *Die grossen Illusionen*, 78.
- 11 On Schaxel, see Nick Hopwood, "Biology between University and Proletariat: The Making of a Red Professor," *History of Science* 35, no. 4 (1997): 367–424.
- 12 Julius Schaxel, *Das Weltbild der Gegenwart und seine gesellschaftlichen Grundlagen* (Urania Freidenker-Verlag, 1932), 58–59.
- 13 Schaxel, *Das Weltbild der Gegenwart*, 60.
- 14 See Otto Neurath, *Vollsozialisierung: Von der nächsten und übernächsten Zukunft* (Eugen Diederichs, 1920) and Otto Neurath, "Total Socialization [1920]," in *Empiricism and Sociology*, ed. Marie Neurath and Robert S. Cohen (Springer Netherlands, 1973), 156–57.
- 15 Maria Chehonadskih, *Alexander Bogdanov and the Politics of Knowledge after the October Revolution* (Springer International, 2023), 101.
- 16 For an account of the communist avant-garde's opposition to the KPD in the early years of the Weimar Republic, see Martin I. Gaughan, *The German Left and Aesthetic Politics: Cultural Politics between the Second and Third Internationals* (Brill, 2022).
- 17 More recent discussions on a Marxist aesthetics of the plan include "The Aesthetics of the Plan and the Limits of Transition," in Alberto Toscano and Jeff Kinkle, *Cartographies of the Absolute* (Zero Books, 2015) and Lütticken, "Plan and Council."
- 18 Flatness, directionality, graphism, referentiality, operativity, and the reduction of complexity are the main characteristics of what Krämer calls operative images; see Sybille Krämer, "Operative Bildlichkeit. Von der ‚Grammatologie‘ zu einer ‚Diagrammatologie‘? Reflexionen über erkennendes Sehen," in *Logik des Bildlichen: Zur Kritik der ikonischen Vernunft*, ed. Martina Hessler and Dieter Mersch (transcript Verlag, 2009), 94–122. According to her hypothesis of a *diagrammatology*, conceptual thinking is always already mediated by these forms of medial operativity. For diagrammatic representation in the visual arts, see Susanne Leeb, ed., *Materialität der Diagramme: Kunst und Theorie* (b_books, 2012) and Astrit Schmidt-Burkhardt, *Die Kunst der Diagrammatik: Perspektiven eines neuen bildwissenschaftlichen Paradigmas* (transcript Verlag, 2017), the latter including case studies on Neurath's *Wiener Bildstatistik* and Soviet infographics.
- 19 Otto Neurath, *Lebensgestaltung und Klassenkampf* (E. Laubesche Verlagsbuchhandlung, 1928), 7. "Gesamtlebensgestaltung" could be translated as "total formation of life." The translation "whole pattern of personal life," which is kept in the translation of the book title, is rather unfortunate, because it misses the collective and social dimensions of Neurath's conception of life; see Otto Neurath, "Personal Life and Class Struggle [1928]," in Neurath and Cohen, *Empiricism and Sociology*, 249.
- 20 Otto Neurath, *Wirtschaftsplan und Naturalrechnung* (E. Laubesche Verlagsbuchhandlung, 1925), 88.
- 21 Hans Günther, "Proletarische und Avantgardistische Kunst: Die Organisationsästhetik Bogdanovs und die LEF-Konzeption der 'lebensbauenden' Kunst," *Ästhetik und Kommunikation* 4, no. 12 (1973): 69.
- 22 October, "Declaration," 273.

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- 23 Otto Neurath, "Wesen und Weg der Sozialisierung: Gesellschaftstechnisches Gutachten, vorgetragen in der 8. Vollsitzung des Münchner Arbeiterrates am 25. Januar 1919," in *Wissenschaftliche Weltauffassung, Sozialismus und logischer Empirismus*, ed. Rainer Hegselmann (Suhrkamp, 2016), 243.
- 24 Neurath became a socialist during the years of WW1. Unlike most of his peers in the German-speaking intelligentsia, he neither saw the war as a cathartic event which would spark cultural renewal, nor did he oppose it in terms of pacifism. Rather, he identified the war economy as a model for socialism. It seemed to him that the gigantic mobilization of forces by a centralized state apparatus announced the definitive transition from a mode of production based on market exchange and the competition of private producers to a fully socialized, use-value centered, planned economy, or in his own terms, from an economy of circulation (*Verkehrswirtschaft*) to an economy of administration (*Verwaltungswirtschaft*). What in capitalism appears only as a state of exception and at the cost of millions of lives, he wagered, could, in socialism, effectively provide the basis for a pacified economy for the benefit of humanity. See Otto Neurath, *Durch die Kriegswirtschaft zur Naturalwirtschaft* (Georg D. W. Callwey, 1919).
- 25 Neurath, "Total Socialization."
- 26 See Gruppe Internationaler Kommunisten, *Grundprinzipien kommunistischer Produktion und Verteilung: Kollektivarbeit der Gruppe internationaler Kommunisten, Holland, 1930*, ed. Paul Mattick (Blankertz, 1970), 69.
- 27 On the tensions between Neurath and council communism, see also Lütticken, "Plan and Council," 103–8. I agree with Lütticken's assessment that centralization from above and decentral self-organization from below are "dialectically intertwined" (108) in both Neurath's and the GIK's approach to communist planning. However, I would stress as a fundamental difference that Neurath radically rejects any politics of autonomous self-administration, which makes his position irreconcilable with most of the anarchist-leaning council communists in the 1920s. Neurath makes it clear that communist socialization needs to happen on the most general level of society and it would be "erroneous to assume that a single factory is 'socialized' simply because the workers have taken control of it. [...] After all, how could a single workers' council or individual production cooperative possibly guarantee the overall planning of the economy?" (Neurath, "Wesen und Weg," 244.)
- 28 Neurath, "Personal Life," 263–64 (translation modified).
- 29 Neurath derives his conception of *Lebenslage* both from methods of measuring "standards of living" in mainstream economics and from the writings of Marx and Engels, particularly the latter's "Die Lage der arbeitenden Klasse in England" (1845). See Neurath, *Wirtschaftsplan und Naturalrechnung*, 20, and at 25, where a planned economy consists in the direct, non-market mediated administration and distribution of life conditions (*Lebenslagenverteilung*).
- 30 Neurath, "Personal Life," 263 (translation modified). Such non-quantifiable, extra-technical considerations include the diversity of bodily needs and capacities of people (as producers and consumers) as well as natural resources and ecological systems. It is crucial that these considerations include the option *not* to produce if the effects of a specific branch of production, for instance, are considered harmful for people and the environment.
- 31 See Aaron Benanav's "How to Make a Pencil," where he draws on Neurath's model and argues for a digitally mediated socialism which integrates algorithms (which replace Neurath's social engineers) and what he calls democratically decided "protocols." Other recent proposals for both digitally mediated and democratically controlled planning scenarios that are, in my view, compatible with Neurath's approach without referencing it directly include: Planning for Entropy, "Democratic Economic Planning, Social Metabolism and the Environment," *Science & Society* 86, no. 2 (2022): 291–313; Achim Szepanski, "Derivative QuantumField Communism," *NON/Mille Plateaux*, 2023, <https://non-milleplateaux.de/derivative-quantumfield-communism/>; Max Grünberg, "The Planning Daemon: Future Desire and Communal Production," *Historical Materialism* 31, no. 4 (2023): 115–59.
- 32 Otto Neurath, "Sociology in the Framework of Physicalism (1931)," in *Philosophical Papers 1913–1946*, ed. Robert Sonné Cohen and Marie Neurath (Springer Netherlands, 1983), 419. As a form of monist empiricism, there is no space for a dialectic between being and consciousness, or essence and appearance, in Neurath's Marxism. In other words, Neurath's Marx is a Marx without Hegel.
- 33 Otto Neurath, "Die Utopie als gesellschaftstechnische Konstruktion," in *Wissenschaftliche Weltauffassung, Sozialismus und logischer Empirismus*, ed. Rainer Hegselmann (Suhrkamp, 2016), 239. For the epicurean background, see the chapter "Marx and Epicurus," in Neurath, "Personal Life," 282–90. For an assessment of Neurath's hedonistic ethics within the context of the Vienna Circle, see Joshua Stuchlik, "Felicology: Neurath's Naturalization of Ethics," *HOPOS: The Journal of the International Society for the History of Philosophy of Science* 1, no. 2 (2011): 183–208.
- 34 Neurath, *Wirtschaftsplan und Naturalrechnung*, 106.
- 35 Neurath, "Die Utopie," 239.

- 36 Neurath, *Wirtschaftsplan und Naturalrechnung*, 271. The concept of *Stimmung* is derived from the philosophical context of aesthetic idealism, see David Wellbery, "Stimmung," in *Ästhetische Grundbegriffe. 5: Postmoderne - Synästhesie*, ed. Karlheinz Barck (J. B. Metzler, 2003), 312–30. It is characteristic for Neurath's materialism that it includes the subjective aesthetic dimension of the objects of sociological analysis as "sensuous beings" (*empfindende Wesen*; Neurath, *Wirtschaftsplan und Naturalrechnung*, 272). Neurath gives these concepts a cybernetic twist, depriving them of romantic interiority and making them available for scientific calculation.
- 37 Otto Neurath, "Inventory of the Standard of Living," *Zeitschrift Für Sozialforschung* 6, no. 1 (1937): 140–51. The same issue contains a sharp polemic of Max Horkheimer against Neurath's positivism: Max Horkheimer, "Der neueste Angriff auf die Metaphysik," *Zeitschrift Für Sozialforschung* 6, no. 1 (1937): 4–53.
- 38 V. I. Lenin, "The Immediate Tasks of the Soviet Government [1918]," in *Collected Works*, vol. 27, 4th English edition (Progress Publishers, 1972), 235–77, <https://www.marxists.org/archive/lenin/works/1918/mar/x03.htm>.
- 39 Neurath, *Lebensgestaltung und Klassenkampf*, 115.
- 40 Neurath, "Personal Life," 252 (translation modified).
- 41 Neurath, *Lebensgestaltung und Klassenkampf*, 115–16. The chapter "Statistik und Sozialismus" is missing in the partial English translation of the book as Neurath, "Personal Life."
- 42 Neurath, *Lebensgestaltung und Klassenkampf*, 123.
- 43 Lenin, "Immediate Tasks."
- 44 Walter Benjamin, *Moscow Diary*, ed. Gary Smith (MIT Press, 1986 [December 28, 1926]), 49–50.
- 45 Sergej Tretjakov, "Literarische Vierfelderwirtschaft [1828]," in *Die Arbeit des Schriftstellers: Aufsätze, Reportagen, Porträts*, ed. Heiner Boehncke and Karla Hielscher (Rowohlt, 1972), 80.
- 46 Georg Lukács, "Reportage oder Gestaltung? Kritische Bemerkungen anlässlich des Romans von Ottwalt," *Die Linkskurve* 4, no. 7 (1932): 23–29. Lukács's criticism was mainly directed against Ottwalt as an exemplary representative of what in the Weimar debate at the time was called "Reportage" (literary journalism); it could easily be read as a criticism of Tretjakov's factography (briefly referenced in Lukács's essay) as well, which was popularized among the Weimar intelligentsia through a lecture Tretjakov delivered in Berlin in January 1931; see Hugh Ridley, "Tretjakov in Berlin," in *Culture and Society in the Weimar Republic*, ed. Keith Bullivant (Manchester University Press, 1977), 150–65. Lukács's essay was also published in Russian translation in 1933, see Devin Fore, *Soviet Factography: Reality without Realism* (University of Chicago Press, 2024), 60.
- 47 Ernst Ottwalt, "'Tatsachenroman' und Formexperiment: Eine Entgegnung an Georg Lukács," *Die Linkskurve* 4, no. 10 (1932): 21–26. Ottwalt's response clearly shows the impact of Tretjakov's speech, which was printed as Sergej Tretjakov, "Der Schriftsteller und das Sozialistische Dorf," *Das Neue Rußland* 7, no. 2/3 (1931).
- 48 Otto Neurath, "Empirical Sociology: The Scientific Content of History and Political Economy [1931]," in Neurath and Cohen, *Empiricism and Sociology*, 325.
- 49 Bertolt Brecht, "Messingkauf, or Buying Brass," in *Brecht on Performance*, ed. Tom Kuhn, Steve Giles, and Marc Silberman (Bloomsbury Academic, 2019), 49. One could argue that from the early 1930s onwards, Brecht's Marxism owes as much to Neurath's positivism as to Karl Korsch's pragmatism. On Brecht as a reader of Neurath, see also Steve Giles, "Bertolt Brecht, Logical Empiricism and Social Behaviourism," in *Bertolt Brecht and Critical Theory: Marxism, Modernity and the Threepenny Lawsuit* (Lang, 1997), 63–80.
- 50 Lu Märten, "Workers and Film [1928]," ed. Jenny Nachtigall and Kerstin Stakemeier, *October* 178 (2021): 30.
- 51 Märten, 32. Eisenstein's *Potemkin* is given as an example.
- 52 Lu Märten, "Unterscheidungen und Zusammenhänge – Über die Rolle des Films im Theater," unpublished manuscript, Lu Märten Archive, IISG, Amsterdam, Portfolio 42, c. 1927, pp. 1–2.
- 53 From the broad literature on Neurath's collaboration with Amtz in the context of *Wiener Bildstatistik*, see only Johan Frederik Hartle, "Otto Neurath's Visual Politics: An Introduction to 'Pictorial Statistics Following the Vienna Method,'" *ARTMargins* 6, no. 1 (2017): 98–107 with further references.
- 54 For an account that links Seiwert's painting to Neurath's idea of collective empathy, see chapter 11 of Sabine Hake, *The Proletarian Dream: Socialism, Culture, and Emotion in Germany, 1863–1933* (De Gruyter, 2017).
- 55 Sybille Krämer and Christina Ljungberg, eds., "Thinking and Diagrams," in *Thinking with Diagrams: The Semiotic Basis of Human Cognition* (De Gruyter Mouton, 2016), 1.
- 56 Neurath, *Lebensgestaltung und Klassenkampf*, 115. "Das Bürgertum [...] hält sich lieber an die geheimnisvolle Macht der Einzelpersonlichkeit und an alles, was jenseits der bloßen Zahlen liegt."
- 57 A compelling reading of Seiwert's painting as a form of semiotic abstraction is given by Hubertus Gaßner, "Konstruktivistische Bildsprache und die Sprachlosigkeit des Künstlers," in *Politische Konstruktivisten: Die "Progressiven" 1913–33*, ed. Hubertus Gaßner, Eckhart Gillen, and Katrin Sello (Neue Gesellschaft für Bildende Kunst, 1975), unpaginated.
- 58 Otto Neurath, "The Scientific Conception of the World: The Vienna Circle [1929]," in Neurath and Cohen, *Empiricism and Sociology*, 306.
- 59 "O massovoj chudožestvennoj rabote" [On artistic mass production], *Pravda*, November 11, 1929, quoted in Eckhart Gillen, "Künstlerische Publizisten gegen Romantiker der roten Farbe," in *"Kunst in die Produktion!" sowjetische Kunst während der Phase der Kollektivierung und Industrialisierung 1927–1933*, ed. Veronika Ambros (Neue Gesellschaft für Bildende Kunst, 1977), 137.

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- 60 October, "Declaration," 277.
- 61 Christina Kiaer, *Collective Body: Aleksandr Deineka at the Limit of Socialist Realism* (University of Chicago Press, 2024), 7.
- 62 Walter Benjamin, "Eine Kommunistische Pädagogik [1929]," in *Gesammelte Schriften Bd. III*, ed. Rolf Tiedemann and Wolfgang Schweppenhäuser (Suhrkamp, 1977), 208.
- 63 October, "Declaration," 176.
- 64 Durus [= Alfréd Kemény], "Der Künstler wird Industriearbeiter. Zur Oktjabr Ausstellung in Berlin," *Die Rote Fahne*, September 19, 1930. In the context of an aesthetics of the plan, it seems quite significant that the architectural drawings of future building projects form a considerable part of exhibited material. Another example of this is the "Proletarische Bauausstellung," organized by the communist architect Arthur Korn and his "Kollektiv sozialistisches Bauen" in Berlin in 1931, see Jesko Fezer et al., eds., *Kollektiv für sozialistisches Bauen: Proletarische Bauausstellung = Collective for Socialist Architecture: Proletarian Building Exhibition* (Spector Books, 2015).
- 65 Ivan Maca, "Položenie sovremennogo iskusstva v SSSR i aktual'nie zadachi chudožnikov [1928]," quoted in Gillen, "Künstlerische Publizisten," 144. Gaßner speaks consequently of a "hegemony of architecture" within the Oktjabr' group, see "Von der Utopie," 72.
- 66 Neurath, *Lebensgestaltung und Klassenkampf*, 23.
- 67 For a detailed account of their collaboration, see Schmidt-Burkhardt, *Die Kunst der Diagrammatik*, 171–210.
- 68 Ivanitsky remarks that because of their abstract, visually reductive character, in "most cases Neurath's images turned out to be unacceptable for us. [...] With the use of a background illustration and political cartoons, it is possible to better interpret the topic, increasing its impact, and turning a diagram from dry schematic data into a powerful chart-poster propaganda tool." Ivan Ivanitsky, *Izobrazite'naia statistika i venskii metod* [Pictorial statistics and the Vienna Method] (OGIZ-IZOGIZ, 1932), 18 and 33.
- 69 See, for example, the poster work by the AChR, "Labour in the Five Year Plan," 1933, in the Woodburn Collection, National Library of Scotland, <https://digital.nls.uk/soviet-posters/archive/74921376?mode=gallery>.
- 70 Several months before the decree of April 1932, "On the Reorganization of Literary and Artistic Organizations," when all independent cultural organizations were disbanded, Oktjabr' had already internally collapsed; see Hubertus Gaßner and Eckhart Gillen, eds., *Zwischen Revolutionskunst und sozialistischem Realismus: Kunstdebatten in der Sowjetunion von 1917 bis 1934* (DuMont, 1979), 174.
- 71 Kiaer, *Collective Body*, 93.
- 72 N. Čužak, "K zadačam dna [1923]," quoted in Günther, "Proletarische und avantgardistische Kunst," 64. Statements such as this, which demonstrate the future-oriented thinking of the factographers, seem to confirm that a stronger continuity exists between the early constructivist and productivist avant-garde in the Soviet Union and the art of the Five-Year Plan than the polemical demarcations—for example, of the Oktjabr' group against LEF's 'formalism'—might suggest in the first place. Fore argues for a more presentist orientation of factography, remarking that the "disregard for the future put the factographers at odds with the growing appetite for planning and prognosticating that followed the launch of the first Five-Year Plan in 1928" (Fore, *Soviet Factography*, 11).
- 73 Kiaer, *Collective Body*, 93.
- 74 Neurath, "Personal Life," 259.
- 75 Ferdinand Tönnies, *Gemeinschaft und Gesellschaft: Abhandlung des Communismus und des Socialismus als empirischer Culturformen* (R. Reisland, 1887).
- 76 Beverley Best has recently updated the Marxist argument, that the socialization of capital—here, the credit system Marx treats in *Capital* Volume III—paves the way for a socialist economy. See Beverley Best, *The Automatic Fetish: The Perceptual Physics of Capital* (Verso, 2024) and the review in this volume.
- 77 Sigmund Freud, "Civilization and Its Discontents," *The Revised Standard Edition of the Complete Psychological Works of Sigmund Freud*, Volume XXI, ed. Mark Solms, trans. James Strachey (Rowman & Littlefield, 2024), 101. There, Freud argues that altruistic affective bonds to larger social groups are idealizations premised on compensatory mechanisms of libidinal identification, necessarily containing the drive of aggression which manifests itself as "hostility against intruders" (101).
- 78 For the latter, see Benjamin Noys, *Envisioning the Good Life: The Limits of Contemporary Vitalism* (Edinburgh University Press, 2025), 123.
- 79 Even authors sympathetic to the socialist project like Buchloh or Manfredo Tafuri draw sharp distinctions between the (legitimate; i.e., modernist) "formal experimentation" and its functionalization for an "ideology of organisation, the Plan" (Tafuri), whereby, as Toscano and Kinkle comment, "its anti-ideological, demystifying character is squandered" (Toscano and Kinkle, *Cartographies of the Absolute*, 91.)
- 80 See Diego Rivera and André Breton, "Manifesto: Towards a Free Revolutionary Art," *Partisan Review* 6, no. 1 (1938): 49–53: "If, for the development of the better development of the forces of material production, the Revolution must build a socialist regime with centralized control, to develop intellectual creation an anarchist regime of individual liberty should from the first be established." The "revolution" appears now as a mere means to realize "the complete liberation of art."

NOTES

- 81 A "classless society with plan-oriented social production and distribution" was still on the agenda of the *Institut für Sozialforschung* in its first decade; see Kurt Mandelbaum and Gerhard Meyer, "Zur Theorie der Planwirtschaft," *Zeitschrift Für Sozialforschung* 3, no. 2 (1934): 263. Friedrich Pollock's theory of state capitalism was crucial with respect to the further development of the Frankfurt School's critique of administration.
- 82 Neurath, "Inventory of the Standard," 151 (retranslation from the German abstract).
- 83 Walter Benjamin, *One-Way Street*, ed. Michael William Jennings, trans. E. F. N. Jephcott (Belknap Press of Harvard University Press, 2016), 95.
- 84 Romberg, *Gan's Constructivism*, 5, 8.
- 85 Neurath, "Personal Life," 265–66 (translation modified).
- 86 Freud, "Civilization and Its Discontents," 76 (translation modified).