

Walter Benjamin and the Tectonic Unconscious: Using Architecture as an Optical Instrument

Detlef Mertins

The writings of Walter Benjamin include appropriations and transformations of modernist architectural history and theory that offer an opportunity to broaden the interpretation of how the relationship between the 'unconscious' and technologically aided 'optics' is figured in his commentaries on cultural modernity. This essay focuses on three moments in his writings, each of which touches on this topic in a different way: first, on Benjamin's reading of Carl Bötticher's theory of architectural tectonics as a theory of history in which the unconscious serves as a generative and productive source that challenges the existing matrix of representation; secondly, on Benjamin's transformation of Sigfried Giedion's presentation of iron structures into optical instruments for glimpsing a space interwoven with unconsciousness, a new world of space the image of which had seemingly been captured by photography; and thirdly, on Benjamin's suggestion that the mimetic faculty continues to play within representation, history and technology to produce similarities between the human and the non-human. In each instance, Benjamin reworked the dynamic dualism of nineteenth-

century architectural tectonics – (self)representation seeking reconciliation with alterity – into a dialectic. In so doing, he set the cause of revolution (of a modernity yet to come) against metaphysical and utopian claims, progressive and regressive alike.

Technical Forms

In the opening segment of his well-known exposé for the *Arcades* project of 1935 – “Paris, Capital of the Nineteenth Century” – Benjamin referred to the architect and historian Carl Bötticher, and he was not flattering.¹ He associated Bötticher with what he elsewhere referred to as the nineteenth-century's deficient reception of industrial technology, that is, the problematic production of images in which the old persists and intermingles with the new. He called these “wish-images” in which “the collective seeks both to preserve and to transfigure the inchoateness of the social product and the deficiencies in the social system of production.” Benjamin explained that, Janus-like, such wish-fulfilling images (which is how Freud had characterised dreams) tended to direct the visual imagination “back to the primeval past,” thus linking their power of prophecy (for that which is to follow appears first in the images of dreams) to “elements from prehistory, that is, of a classless society.” Intimations of a classless society, archived in the collective unconscious, mingle with the new “to produce the utopia that has left its traces in thousands of configurations of life, from permanent buildings to fleeting fashions.” Benjamin offered Charles Fourier's utopian vision of a community housed in a phalanstery as such an image that combines promise and problematics. He considered its architecture a “reactionary transformation” of the arcades into “the colourful idyll of Biedermeier” inserted into the austere, formal world of the Empire.

For Benjamin, it was the destiny of the working masses to realise the non-instrumental potentiality of industry and yet the latent physiognomy of technical forms remained constrained under the rule of the bourgeoisie, just as the workers were themselves. Concurring

with Max Weber's analysis of how Enlightenment rationality had "disenchanted" the world, he nevertheless recognised that modernity was not yet free of myth. Things produced as commodities under the conditions of alienated labour were enveloped by false mythologies, as evident in advertisements, fashion and architecture. "Capitalism," he noted in the *Arcades* project, "is a natural phenomenon with which a new dream-sleep came over Europe, and in it, a reactivation of mythic powers." [K 1a, 8] These myths, to which Georg Lukács had drawn attention to as being characteristic of the class consciousness of the bourgeoisie, gave the world of reified commodities the appearance and status of "nature" – a second nature that occluded the original as it exploited it.² To awaken from the nightmare of capitalist phantasmagoria, to dissolve mythology into the space of history was Benjamin's principal aim for the *Arcades* project, which he thought of – in terms similar to the work of dreams and dream analysis – as his *Passagenarbeit*, or work of passage. In Jeffrey Mehlman's apt formulation, "Benjamin's work on the phantasmagoric glass and iron arcades of Paris constituted a devastating enactment of the messianic dream of plunging into evil, albeit to defeat it from within."³ Benjamin's reading of modern architecture and photography during the late 1920s in Germany (*neues Bauen* and *neue Optik*), like his reading of their histories, was informed by these problematics of dream-consciousness – the resistance posed by the old for passage across the threshold of modernity into an undistorted and fully revolutionary state of redemption.

Having noted in the exposé that the emergence of construction in iron was critical for the appearance of the skylit and gaslit Parisian arcades during the fashion boom around 1820, Benjamin referred to Bötticher's conviction that the art forms of the new system of iron construction must follow the formal principle of the Hellenic mode. As Mitchell Schwarzer has shown, Bötticher's tectonic theory centred on the hermeneutic problem of architectural ornamentation or (self)representation seeking to interpret the raw ontological moment in which artifice is created out of unformed matter, drawing new and

unassimilated appearance into the already given system of architectural representation.⁴ Benjamin went on to describe the Empire style, which conformed to Bötticher's prescription, as being the equivalent in architecture to "revolutionary terrorism" in politics, for which "the State was an end in itself." Invoking a kind of functionalism against the politics of historicism, which served to legitimate the present by reiterating the forms of the past, he wrote,

Just as Napoleon little realised the functional nature of the State as an instrument of the rule of the bourgeois class, so the master-builders of his time equally little realised the functional nature of iron, with which the constructional principle entered upon its rule in architecture. These master-builders fashioned supports in the style of the Pompeian column, factories in the style of dwelling-houses, just as later the first railway stations were modelled on chalets.⁵

That Benjamin sided with the engineer against the architect is clear from the first part of the exposé, in which he suggested that engineering had a revolutionary role to play, not only for architecture but for society. Having already introduced this theme in his essay "Surrealism" of 1929 and again, more radically, in "Erfahrung und Armut", ("Experience and Poverty") of 1933,⁶ Benjamin returned to it at the end of the exposé. There he took up what he called the surrealists' gaze across "the ruination of the bourgeoisie" and observed that,

The development of the forces of production had turned the wish-symbols of the previous century into rubble, even before the monuments which represented them had crumbled. This development during the nineteenth century liberated the forms of creation from art, just as in the sixteenth century the sciences freed themselves from philosophy. A start is made by architecture as engineering.⁷

By linking "artistic" architecture to the phantasmagoria of bourgeois capitalism, while at the same time linking "engineering" architecture to social revolution, Benjamin radicalised and politicised the conflict

between engineering and architecture that had marked the nineteenth-century. He drew it into the overarching dialectical struggle between the classes and the new and old.

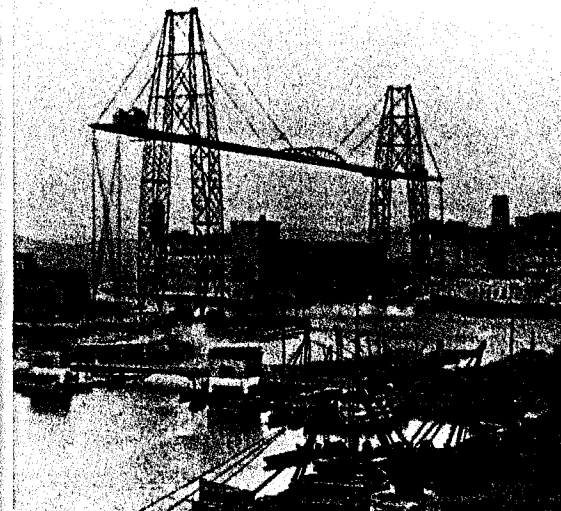
In this context, Benjamin's reading of Bötticher's tribute of 1846 to Karl Friedrich Schinkel takes on a rather strategic significance for the dialectical theory of architecture that may be glimpsed between the lines of his writings. It was, of course, in this text – "The Principles of the Hellenic and Germanic Ways of Building with Regard to Their Application to Our Present Way of Building"⁸ – that Bötticher had extended his theory of tectonics to the matter of iron. Having previously analysed the two great historical styles – the trabeated Hellenic system and the vaulted Germanic-Gothic – he turned to speculate on the architecture of the future, the new architecture that so many in the nineteenth century longed for so intensely. In the notes of the *Arcades* project, Benjamin assembled the following excerpts:

Another art will emerge from the womb of time and will take on a life of its own: an art in which a different structural principle will sound a more ringing keynote than the other two A new and so far unknown system of covering (which will of course bring in its train a new world of art-forms) can appear only with the adoption of an unknown material, or rather a material that so far has not been used as a guiding principle Such a material is iron, whose use for these purposes began in our century. Further testing and greater knowledge of its structural properties will ensure that iron will become the basis for the covering system of the future and that structurally it will in times to come be as superior to the Hellenic and medieval systems as the arcuated medieval system was to the monolithic trabeated system of antiquity The structural principle is thus to be adopted from the arcuated system and transformed into a new and hitherto unknown system; for the art-forms of the new system, on the other hand, the formative principle of the Hellenic style must be adopted [F 1, 1]⁹

For Bötticher, the new iron architecture had a double origin – structure pursuing a "new and hitherto unknown system," while art assimilated

the new with the old principles of antique form. In his earlier writings, Bötticher had introduced the twin notions of *Kernform* and *Kunstform* (technical form and art form) precisely to account for what he took to be the necessary relationship between material origins and idealised re-presentations of material properties and structuring forces in Hellenic and Gothic architecture. This relationship was central to his understanding of architectural style *per se*, as an integrated system of production and symbolisation. He conceived of unmediated material and structural self-expression on the one hand, and interpretative self-representation through ornament on the other, as mutually mediating and hence indivisible. In transposing this historical schema into the future, into his speculations about the physiognomy of a new iron architecture, he clearly hoped to promote the emergence of an equally integrative architectonic system for the new epoch.

Yet in positing the split between nature and culture as a condition of modernity, Bötticher inscribed into his tectonic theory an unending struggle to maintain their mutuality over the process of historical development. If in linking "technical form" and "art form" to the opposition between Germanic and Hellenic styles Bötticher had hoped



Sigfried Giedion, Pont Transbordeur spanning the industrial harbour of Marseilles, built by the engineer Ferdinand Arnodin in 1905. From Sigfried Giedion, *Bauen in Frankreich: Bauen in Eisen – Bauen in Eisenbeton*, 1928.

to draw on the integrative strength of his dualism to forge a new and higher architecture through *stylistic* synthesis, his strategy may have had the opposite effect. It merely confirmed the split that was becoming increasingly apparent and freed the impulse for a new structural principle from the obligation to represent itself through the mediation of old tectonic systems.

Benjamin's brief commentary on these passages reveals that he took Bötticher's notion of a double origin as a sign of conflict rather than the complementary relationship that Bötticher had intended. Subtly reworking Bötticher's dualism, Benjamin noted that his history demonstrated the "*dialectical* derivation of iron construction" (emphasis added). In so doing, Benjamin was informed by Alfred Gotthold Meyer's prior reworking of tectonic theory in his posthumously published *Eisenbauten (Iron Constructions)* of 1907.¹⁰ Benjamin held Meyer's book in the highest esteem calling it a "prototype of materialist historiography." He singled it out in 1929 as one of four books that had "remained alive," the others being Alois Riegl's *Late Roman Art Industry* (1901), Franz Rosenzweig's *The Star of Redemption* (1921), and Georg Lukács's *History of Class Consciousness* (1923). In his book, Meyer had been critical of the Berlin tectonic school inaugurated by Schinkel, for its insistence that traditional forms and principles of architectonic expression, developed for stone and wood, be used to assimilate iron construction into the art of architecture. Instead, Meyer adopted engineering as the vital and dynamic basis of a new architecture that would grant to technical forms the potential of a new self-generated beauty. Where Bötticher found, in 1846, that the various efforts to "shake off the shackles of the past" had not yet achieved persuasively original art forms or structural systems, Meyer spoke of the Eiffel Tower of 1889 in terms of a "new beauty, the beauty of steely sharpness" and the expression of a new tempo of tectonic vitality. While Bötticher argued that "the acceptance and continuation of tradition, not its negation, is historically the only correct course for art ... leading it toward the destined emergence from tradition to

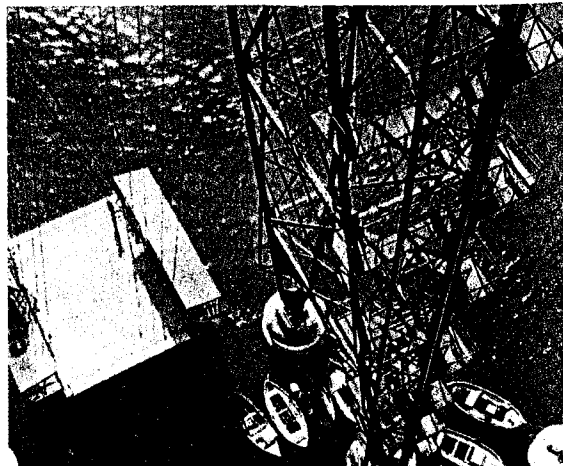
a newborn, original, and unique style," Meyer's later more *sachlich* and anti-representational approach to the relation between art and iron technology was distinguished by his refusal of any wilful symbolisation. Instead he favoured the supposed immediacy of material properties, calculations, purposes and modes of production. He conceived of beauty as the immanent expression not only of the material but of the society that produced it. Where Bötticher feared what remained outside the system of order, Meyer embraced the rush and terror of the technological sublime.¹¹

While rejecting Bötticher's prescription for contemporary architecture, Meyer and Benjamin both reiterated aspects of the theory of history that underpins his tectonics, in which material and structural innovations are seen to emerge from a mysterious source – "the womb of time" – to play a leading role in the formation of a new system. For Bötticher, a new structural system specific to a new material was to be born out of the old in the same way that a distinctive and integral Roman vaulted architecture had emerged out of the Hellenic through a process of hybridisation, mutation and rationalisation. Meyer, too, was interested in the unknowable source of new architectures, but instead of Bötticher's metaphors of birth and metamorphosis, Meyer suggested that a new style is always precipitated by an "unconscious urge" and that "any generation destined to create a new style ... [will] need to start the process of formal creation from the beginning." In the case of iron construction, the drawing board of rational engineering calculations and structural diagrams constituted such a new beginning, with the path to formal self-realisation moving from elementary to complex and from part to whole. In "Experience and Poverty", Benjamin likewise mobilised the blank rationality of the engineer's drawing board as a groundless ground for a new (proletarian) society, for starting again at the beginning, albeit within the phantasmagoria. In the exposé, he referred to construction as the "subconscious of the nineteenth-century," taking the phrase not from Meyer but from the young architectural historian Sigfried Giedion, whose book of 1928,

Building in France – Building in Iron – Building in Ferro-Concrete,¹² Benjamin admired almost as much as Meyer's.¹³

Conflating metaphors of organic growth and subconscious impulses, Giedion held that the new forms of iron construction, and the new forms of life (mass society) that emerged with them, began as kernels struggling within the old to gradually assume their own identity. His story of the historical passage of iron construction follows a morphological evolution – from the simple iron roof frame of the Théâtre Français of 1786 to the full realisation of iron's potential in the vast spans and gracefully engineered arcs of the Palais des Machines of 1889. This natural progression was, in his portrayal, hindered by the persistence of tradition among architects, until the twentieth-century, when they finally took up the task of bringing what had emerged in the dark subconscious of industrial labour into the clarity of a self-conscious architectural system, distinguished by a new kind of spatial experience.

Benjamin's quotation of Giedion's thesis about construction as the subconscious of the epoch may be considered in relation to a pair of images that Giedion used graphically to present what he took to be the line of development from the glass façade of an exhibition hall of 1848 to the curtain wall of Walter Gropius's Bauhaus at Dessau of 1925–1926 – the technical form “finally” purified, refined and



Sigfried Giedion, View of the water, boats and ferry platform in the harbour of Marseilles, taken from the top of the Pont Transbordeur. From Sigfried Giedion, *Bauen*.

self-reflexive. But it should also be read in conjunction with Benjamin's commentary on it: “Shouldn't one rather,” he suggested, “substitute [for the subconscious]: ‘the role of the bodily processes’, on which ‘artistic’ architecture would then lie like dreams supported by the scaffolding of physiological processes?” [V 1027] In reworking Giedion's dualism into a dialectic between physiological processes and phantasmagoric dreams, Benjamin pointed to the immanence of truth within the expression of bodily labours and the physiognomy of historical events. This immanence, however, remained impeded by bourgeois controls, albeit less in the technical realm (unworthy of bourgeois attention) than in the artistic.

The architecture of emerging mass society could, then, be seen as beginning not only in the corrupt form of the bourgeois arcades but also in the less deficient forms of utilitarian structures – engineered bridges, train stations, grain silos, exhibition halls and, of course, the factory, the nascent home of workers and engineers. “It is,” Benjamin wrote, invoking Bötticher's terms, “the peculiar property of technical forms (as opposed to artistic forms) that their progress and their success are proportionate to the transparency of their social content. (Whence glass architecture.)” [N 4, 6] Even in the technical realm, Benjamin treated this transparency as mediated – historically, materially and perceptually. With respect to the artistic realm, he suggested, “One can formulate the problem of form for the new art in this way: When and how will the form-worlds of the mechanical, in film, in the building of machines, in the new physics, etc. rise up without our help and overwhelm us, make us aware of that which is natural about it?” [K 3a, 2] When and how, in other words, would construction – pursuing its own inherent logic of purification, working within but against the system of production, working within but against the object riddled with error – bring about the ruination of bourgeois culture and society, and do so without overt politics, but rather through a collective physiological labour that had the character of a constantly renewed originary upsurge?

Optical Instruments

By considering tectonics within the problematics of representation, Benjamin was able to both clarify and radicalise the terms of the tectonic discourse, while functionalist architects and historians of his generation merely eschewed representation, confident of their capacity to step beyond it and materialise the elemental primitiveness of utopia in the here and now of white prismatic volumes, curtain walls and cantilevered slabs. For Benjamin, the process of physiognomic immanence freeing itself from distorting mediations was not only incomplete but could not, in fact, be fulfilled by humanity alone. In seeking to cojoin radical messianic Judaism and revolutionary historical materialism, he considered such redemption contingent on suprahuman intervention. The hope and even excitement that Benjamin revealed in describing the arcades, exhibitions and panoramas of the nineteenth-century as “residues of a dream world” at the beginning of the bourgeois epoch came from a conviction that in them it was possible to glimpse the true face of prehistory, which remained opaque in the artefacts of his own time, that is at the beginning of the next epoch ushered in by the proletariat. “For us,” he noted, “the enticing and threatening face of prehistory becomes clear in the beginnings of technology ... in that which lies closer to our time, it has not yet revealed itself.” [K 2a, 1]

Benjamin’s historicised theory of technological productivity in the field of architecture underscores the significance of metaphors of passage for his theory of history. At the same time, it sets up another constellation of metaphors concerning a new optics – the expansion of vision made possible by modern technologies including iron structures that provided unprecedented views of the city, glimpses perhaps of the “enticing and threatening face of prehistory” yet to come. As is well-known, Benjamin’s “Artwork” essay of 1935–1939 introduced the idea that an equivalent analytical practice had emerged in the realm of the visual to psychoanalysis in the realm of the psyche. Sigmund Freud’s *Psychopathology of Everyday Life*, Benjamin observed, had “isolated and made analysable things which had heretofore floated

along unnoticed in the broad stream of perception. For the entire spectrum of optical, and now also acoustical, perception the film has brought about a similar deepening of apperception.”¹⁴ The technique that Benjamin singled out to exemplify how “the camera introduces us to unconscious optics as psychoanalysis does to unconscious impulses” was the close-up – the blow-up, the enlargement, the cropped image, the fragment. “With the close-up,” he observed, “space expands.” Moreover, “the enlargement of a snap-shot does not simply render more precise what was in any case already visible, though unclear: it reveals entirely new structural formations of the subject matter ... It thereby becomes tangible that a different nature speaks to the camera than to the eye. For in place of a space interwoven with human consciousness one interwoven with unconsciousness steps in.”¹⁵

Such a space interwoven with unconsciousness was palpable for Benjamin, who consistently located the unconscious in the material world itself, not outside, behind, above or below it, but within – as he did the “truth content” of the work of art and “traces” of prehistory. In his first essay on surrealism, “Traumkitsch” (Dreamkitsch) of 1925, he distinguished the analytics of the surrealists from those of Freud precisely for tracking down “the traces not so much of the soul as of things.”¹⁶ For Benjamin, truth was hidden from casual observation, but resided in traces within the welter of base material. He considered it the task of criticism, like the task of history, to make fragments of truth visible and dominant. Regardless of medium, he considered criticism an activity of stripping its objects bare, mortifying them, dragging the truth content of what is depicted in the image out before it, not as “an unveiling that destroys the mystery but a revelation that does it justice.”¹⁷ Thus the negativity and destructiveness of criticism opens up a moment of revelation, which in turn opens the future potentiality of the object. This notion of potentiality was related to Benjamin’s proposition that phenomena have a natural history, that their nature lies in the full and concentrated scope of that history – in their pre-history as well as their present state. The idea that this

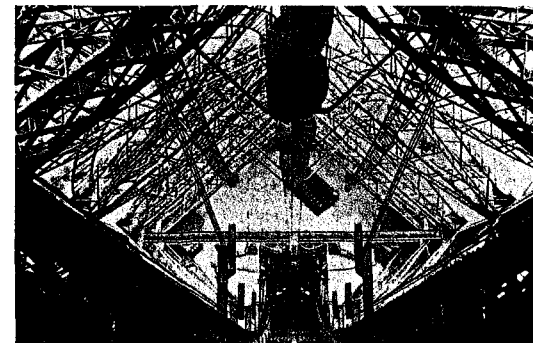
natural history could be fulfilled may be understood within Benjamin's thought as approaching his hope for redemption from yet another perspective.

In the "Artwork" essay, Benjamin was concerned with the problem of the work of art in the modern industrial epoch, distinguished not only by mechanical reproducibility but by phantasmagoria and commodity fetishism. In this context, Benjamin's concern for the intermingling of old and new focused on the perpetuation, into the era of capitalism, of the old phenomenon of aura, which he defined as a uniqueness that, in earlier times dominated by ritual, had enveloped the work of art as "the unique phenomenon of a distance however close the object may be." During the nineteenth-century, the phenomenon of aura had become an agent of bourgeois mythology working to maintain dominance over the masses. Without such constraint, he suggested, the class consciousness of the masses would tend to destroy aura as a function of a desire to "bring things closer spatially and humanly." The photographic image enabled them to get hold of an object at close range, prying it (in its objectivity) from its auratic encasement. Elsewhere, he wrote of other tactics for achieving similar ends: proceeding eccentrically and by leaps to rip things out of context in order to highlight the seemingly inconsequential details of larger structures ignored by the dominant class; and inventing a *historiographic telescope* capable of seeing through the phantasmagoric fog – a haptic-optic instrument for bringing the tangible, tactile concreteness of things closer to view.¹⁸

Just as psychoanalysis treats dream images as rebuses or picture puzzles whose manifest content must be deciphered, so Benjamin discovered in the photographic close-up a technique for reading latent content *within* the manifest, for seeing hidden significance *within* the surface. But what was it that he hoped to see? Perhaps justice with respect to the past; repressions and oppressions worked through; the object or event released to fulfil its mysterious potentiality; the enticing and threatening face of prehistory.¹⁹ And how might this have

appeared? In his "Surrealism" essay of 1929, he suggested that "We penetrate mystery only to the degree that we recognise it in the everyday realm, by virtue of a dialectical optic that perceives the everyday as impenetrable, the impenetrable as everyday." Perhaps these were the affects of the close-up that he had in mind when, in a well-known passage of the "Artwork" essay, he wrote that the moment of the close-up bursts open the prison-world of the everyday metropolis, the milieu of the proletariat – the taverns and metropolitan streets, offices and furnished rooms, railroad stations and factories "that appeared to have us locked up hopelessly ... so that now, in the midst of its far-flung ruins and debris, we calmly and adventurously go travelling."²⁰

Benjamin left several concrete clues to the kind of (impenetrable) images that he associated with such adventurous travelling. Twice in the notes of the *Arcades* project, he recorded his interest in Giedion's photographs of the Pont Transbordeur in *Building in France*. His letter to Giedion, a few weeks following the publication of the 'Surrealism' essay, reveals the strong affinity that he felt for Giedion's historiography – his admiration for what he called Giedion's "radical knowledge." In the *Arcades* project, he wrote that "just as Giedion teaches us we can read the basic features of today's architecture out of buildings of the 1850s, so would we read today's life, today's forms out of the life and the apparently secondary, forgotten forms of that era." [N 1, 11] Familiar with the discourse of the new optics (led in the late 1920s by Giedion's friend László Moholy-Nagy), Benjamin took this ability to read the future in the past as contingent on a new



Sigfried Giedion, View inside the Eiffel Tower. From Sigfried Giedion, *Bauen*.

technologically mediated vision. Implicitly, he affiliated this with the tactics developed by the surrealists to produce profane illuminations, glimpses of a sur-reality within the banal experiences of everyday life – within, for instance, the extraordinary iron and glass structures of nineteenth-century Paris. One of Benjamin's notes begins by citing Giedion's "encounter" with the "fundamental aesthetic experience of today's building" in the "windswept stairwells of the Eiffel Tower, and even more in the steel supports of the Pont Transbordeur ... [where] things flow through the thin net of iron spanning the air – ships, sea, houses, masts, landscape, harbour. Lose their definition: swirl into one another as we climb downward, simultaneously commingling." He then went on to note that the "glorious views of the cities [which] the new iron structures afforded were initially the exclusive privilege of the workers and engineers." [N 1A, 1] Elsewhere he continued, "For who else but the engineers and proletariat climbed these steps, which alone at that time provided an opportunity to recognise the decisive, new spatial feeling of these iron constructions." [F 3, 5]²¹

While similar structures had been built in Rouen, Nantes and Bordeaux, it was the swaying, hovering and dizzying Pont Transbordeur, built by the engineer Ferdinand Arnodin in 1905 across the industrial harbour of Marseilles, that assumed special significance among the avant-garde. Giedion observed how this "balcony springing into space" – photographed by Moholy-Nagy, Germaine Krull, Herbert Bayer, Man Ray and others – had entered the unconscious of modern architecture in Germany.²² In his words, "The 'new architecture' has unconsciously used these projecting 'balconies' again and again. Why? Because there exists the need to live in buildings that strive to overcome the old sense of equilibrium that was based only on fortress-like incarceration."²³ Giedion had even featured the astonishingly delicate yet bold "transporter," built to carry a small ferry across the harbour without interfering with the boats, on the cover of *Building in France*. His photographs, as well as his words, treat its spatial and optical affects (like those of the earlier Eiffel Tower) as paradigmatic

of the emerging epoch. Of course, Meyer had already taken exciting images of technology, such as the bridge over the Firth of Forth as demonstrating that "the power of [iron] speaks to us and in us in every great train station and exhibition hall, in front of every great iron bridge and in the fast-paced modern metropolis." Giedion, too, mobilised a rhetoric that echoed the aesthetics of the sublime, but not as aesthetics. Invoking dematerialisation, spatial extension, shadowless light, and air as a constitutive material, he revelled in the fluid and gravity-free interweaving of subject and object and in the unsettling movement, formlessness and metamorphosis engendered by the pulse of life in iron structures. Both Meyer and Giedion eschewed bourgeois aesthetic categories, and instead treated these new spatial experiences as the structural conditions of the emerging era. For them, technology's transformation of buildings into fleshless open bodies of skeletal transparency, like its transformation of the nature of vision with microscopes, telescopes, aerial photography and X-rays, marked the emergence of new modes of perception, cognition and experience specific to the emerging era.

Hovering weightlessly and breathlessly above the harbour of Marseilles, Giedion's "iron balcony" served to reframe and shatter the familiar, harsh world of the industrial metropolis, providing Benjamin with a graphic image of the "threshold" of awakening from the false dream-consciousness of the bourgeoisie. It is telling that Benjamin focused on photographs by Giedion that were quite distinct from his dizzying and destabilising images of the Eiffel Tower, which Giedion had described as the first instance of the montage principle and exemplary of the tendency of the new structures to "open themselves to all kinds of possibilities," to blur the boundaries of their autonomy in favour of relationships and interpenetrations in which the subject is united with the object in the creative process of space-forming.²⁴ Instead, by selecting abstracted, fragmented close-up views of the harbour's edge taken from the top of the structure and through its open framework, Benjamin effectively distinguished between two

moments in Giedion's thinking: one Benjamin identified as "radical knowledge" serving historical self-consciousness and justice; the other, enthusiastically proclaiming that a new immediacy had already arrived under the sign of a vitalist, technologically mediated transparency in which "there is only one great, indivisible space in which relationships and interweaving rule instead of fixed borders." Benjamin focused, not on images of the great iron structures themselves, but on the unprecedented views of the city that they afforded. Among Giedion's photographs, only the ones singled out by Benjamin treated the view as mediated, and only in them was the unacknowledged misery of working-class life both revealed and simultaneously transformed into the site of revelation, just as they had been in Moholy-Nagy's constructivist film *Marseille, Vieux Port* of 1929.

While Benjamin admired the rationalised technical forms of these montage structures (he too referred to the Eiffel Tower as the first instance of montage), he focused on their role as viewing instruments. Their web-like structures provided opportunities to crop, cut, reframe and abstract the familiar. Like the lens of a camera, they could reveal hidden secrets and provide glimpses of the estranged within the city of representation, "the tiny spark of contingency, of the here and now with which this reality has so to speak seared its subjects." Benjamin called these views glorious, for they released something of a magnificent potentiality locked within the reality of alienation and exploitation. With Giedion's camera and the power of the close-up to expand space and reveal secrets, Benjamin collapsed Bötticher's tectonic dualism, transforming the hermeneutics of origins into an immanence within representation whose visibility in the present was, however, contingent on technology's most powerful instruments of optical analysis. To open the object riddled with error, Benjamin mobilised a dialectical optics that "extends our comprehension of the inevitabilities which rule our Being and at the same time manages to secure for us an immense and unexpected space of play."²⁵

Magical Similarities

The effects attributed by Benjamin to the Pont Transbordeur bear a striking resemblance to his treatment of photographs by David Octavius Hill, Karl Dauthendey and Karl Blossfeldt in his essay "A Small History of Photography" of 1931.²⁶ The fact that a portion of this is repeated verbatim in the section of the "Artwork" essay that deals with the power of close-ups to explode the experience of the metropolis invites a reading of Giedion's photographs in terms parallel to Benjamin's reading of these other images. In this way, a third reformulation of the tectonic problematic may be inferred from his writings.

In his essay on photography, Benjamin suggested that, in contrast to painting, with photography "we encounter something new and strange." His interest was captured, to begin with, by one of the numerous calotypes that Hill had made of fishwives, fishermen and children in Newhaven, Scotland between 1843 and 1847. Unlike the precision and fidelity of the more expensive daguerreotypes, the soft orange-brown and sepia calotypes, with their diffuseness and transparency, were considered by some the most engaging and truly artistic medium, and came to be admired for their power to evoke personality, to find the presence below the surface, to probe behind appearances. Referring to Hill's portrait of Mrs. Elizabeth Hall, Benjamin observed,

In Hill's Newhaven fishwife, her eyes cast down in such indolent, seductive modesty, there remains something that goes beyond testimony to the photographer's art, something that cannot be silenced, that fills you with an unruly desire to know what her name was, the woman who was alive there, who even now is still real and will never consent to be wholly absorbed into art. "And I ask: how did the beauty of that hair, those eyes, beguile our forebears: how did that mouth kiss, to which desire curls up senseless as smoke without fire."²⁷

To underscore his concern for the immediacy of lived experience, as captured by the photographer in a tense relationship with his own artful idealisations, Benjamin turned briefly to a picture by Karl Dauthendey, a German post-mortem photographer of the late nineteenth-century living in Moscow at the time the photograph was taken. Benjamin's description invokes an image of Dauthendey himself, together with the woman he was engaged to, lying in the bedroom of his home, shortly after the birth of her sixth child. Her arteries were severed and her gaze absorbed in "an ominous distance." The silent violence of this image is both shocking in relation to Hill's and revealing of the unconscious realm that Benjamin saw opened up by the new optics. With these photographs already in mind, Benjamin then continued,

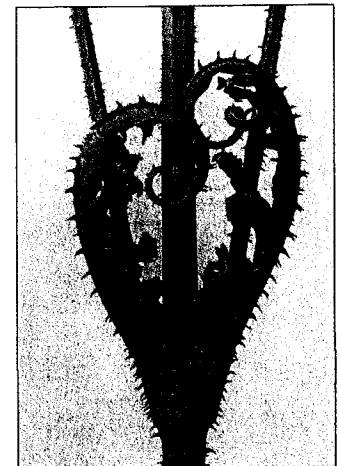
Immerse yourself in such a picture long enough and you will recognise how alive the contradictions are, here too: the most precise technology can give its products a magical value, such as a painted picture can never again have for us. No matter how artful the photographer, no matter how carefully posed his subject, the beholder feels an irresistible urge to search such a picture for the tiny spark of contingency, of the Here and Now, with which reality has so to speak seared the subject, to find the inconspicuous spot where in the immediacy of that long-forgotten moment the future subsists so eloquently that we, looking back, may rediscover it. *For it is another nature that speaks to the camera than to the eye: other in the sense that a space interwoven with human consciousness gives way to a space interwoven with the unconscious It is through photography that we first discover the existence of this optical unconscious, just as we discover the instinctual unconscious through psychoanalysis.* Details of structure, cellular tissue, with which technology and medicine are normally concerned – all this is in its origins more native to the camera than the atmospheric landscape or the soulful portrait. Yet at the same time photography reveals in this material the physiognomic aspects of visual worlds which dwell in the smallest things, meaningful yet covert enough to find a hiding place in waking dreams, but which, enlarged and capable of formulation, make the difference between technology and magic visible as a thoroughly historical value.²⁸

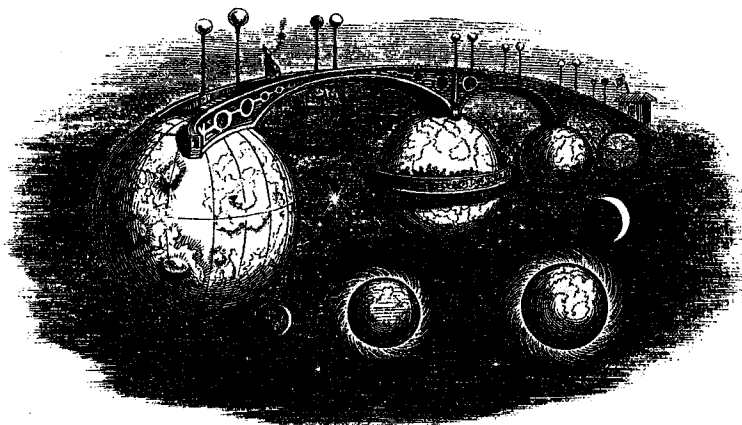
Adding yet a third image to this constellation, Benjamin turned to the "astounding" plant photographs of Professor Karl Blossfeldt, designer and teacher at the United States Schools of Free and Applied Art in Berlin. The images appeared in Blossfeldt's book of 1928, *Art Forms of Nature*,²⁹ together with an introduction by the gallerist Karl Nierendorf, whose thoughts share certain affinities with Benjamin's own – thoughts on the "unity of the creative will in nature and art;" their respective embodiment of a profound sublime secret; "joining the two poles of the Past and the Future;" how the modern techniques of photography and film as well as microscopes and astronomical observatories "bring us into closer touch with Nature than was ever possible before, and with the aid of scientific appliances we obtain glimpses into worlds which hitherto had been hidden from our senses."³⁰

Paraphrasing Nierendorf, Benjamin wrote that Blossfeldt's uncanny photographs,

... reveal the forms of ancient columns in horse willow, a bishop's crozier in the ostrich fern, totem poles in tenfold enlargements of chestnut and maple shoots, and gothic tracery in the fuller's thistle. Hill's subjects, too, were probably not far from the truth when they described 'the phenomenon of photography' as still being 'a great and mysterious experience'; even if for them this was no more than the consciousness of 'standing before a device which in the briefest time could produce a picture of the visible environment that seemed as real and alive as nature itself'.³¹

Karl Blossfeldt, *Fuller's Thistle*. From Karl Blossfeldt, *Kunstformen der Natur*, 1928.





J.J. Grandville, *An Interplanetary Bridge: Saturn's Ring is a Balcony*. From J.J. Grandville, *Un Autre Monde*, 1844.

At the risk of reduction, condensing Benjamin's eloquently woven thoughts may help to register more emphatically the link between these various ideas: that the most precise technology can give its products a magical value; that the photographic enlargement can reveal a secret within the physiognomic surface of things; that that secret is visible in a tiny spark of contingency with which reality has seared the subject, in inconspicuous spots where in the immediacy of that long-forgotten moment the future subsists so eloquently that we, looking back, may recognise it; and recognise it as another nature, one interwoven with unconsciousness. All of this makes possible a great and mysterious experience, an experience of the natural within the human and the human within the natural; an experience whereby the difference between technology and magic is seen to be strictly historical, implying not only their commonality, but also a future potentiality.

That magic – the correspondence between the natural and human – has a history and that this was subsumed into the history of technology was most explicitly treated by Benjamin through the concept of similarity in his essays "Doctrine of the Similar" and "On the Mimetic Faculty", both of 1933.³² There he described how humanity's special gift for seeing and producing similarities between the human and non-human has a history that is both phylogenetic and ontogenetic – that is, a history within the species that parallels its history within the life of each of its members. In other words, this faculty changes over the course of historical development as it does over the life of each person. Just as "children's play is everywhere permeated by mimetic modes of behaviour ... the child plays at being not only a shopkeeper or teacher but also a windmill and a train," so in other essays Benjamin characterised the proletariat as the new-born children of the emerging industrial age, whose games always try to begin again at the beginning.³³ While it appears that the mimetic faculty has decayed over time, that "the observable world of modern man contains only minimal residues of the magical correspondences and analogies that were familiar to ancient peoples," Benjamin suggested that this faculty

has, rather, been transformed into a *non*-sensuous similarity, now borne exclusively by language. "The coherence of words and sentences (the semiotic aspect of language) is the bearer through which, like a flash, similarity appears."³⁴

But Benjamin's apparent exclusion of the sensuous here needs to be qualified by the dependence of language on the sensuous media of speech and script, just as flames rely on substances that burn. Notwithstanding his emphasis on modern semiotic language, Benjamin also treated modern technologies of mechanical production and reproduction – photography and film, glass and iron – as bearers of correspondences between the human and the non-human. Benjamin's concept of similarity concerned the effects of things as much as their attributes. As technical forms that had been reduced to the limit of their objectification, these media (like the sober technical language that Benjamin admired in Bertolt Brecht and Paul Scheerbart) held the special potential of not only materialising similarity in their elemental form, but bringing the similarity hidden in other things into momentary visibility. They were instruments capable of producing glimpses, which the snap of the shutter, the dynamite of the tenth-of-a-second, was able to rip from the flesh of history and preserve.³⁵

Believing that every epoch dreams its successor, Benjamin was especially attentive to utopian schemes. One of his earliest versions of the Arcades project was even named after an image by the French humorist J.J. Grandville, from his 1843 satire of modernist utopias, *Another World*.³⁶ In his précis of 1928–1929 "The Ring of Saturn or Something about Iron Construction", Benjamin suggested that a small cosmic vignette by Grandville might demonstrate, in the form of a grotesque, the infinite opportunities that the nineteenth-century saw opened up with construction in iron. Focusing on the adventures of a small goblin trying to find his way around in space, Grandville's story was accompanied by an etching that depicts an iron bridge with gas lanterns springing from planet to planet in an indefinite perspective, an unending passage into the infinite depths of space. The 333,000th

pillar, we are told, rests on Saturn, where the goblin sees that the ring of this planet is nothing but an iron balcony on which the inhabitants of the planet take the evening air. Preceding Bötticher's text on iron by two years, and the Crystal Palace by nine, the bridge and balcony are remarkably modern and free of historical stylisation. Later, in the exposé of 1935, Benjamin still included this image in the section on "Grandville, or the World Exhibitions", calling it a "graphic utopia."

To be able to commune with the cosmos, to link the past and future, to produce similarities between representation and alterity without restriction – such could be the opportunities of technology and industrialisation pursued rationally to their ultimate potential beyond the exploitation of nature under capitalism. But let us remember that this image of absolute unity and openness was a satire of utopians like Fourier and the Saint Simonians, that Benjamin admired the caricatures of Karl Kraus for "creeping into those he impersonates in order to annihilate them" and that he concluded his tribute to the utopian fantasist Paul Scheerbart, written in the final months of his life, by recalling that "art is not the forum of utopia Of that greater (some)thing – the fulfilment of Utopia – one cannot speak, only bear witness."

An earlier version of this essay was published under the title "Walter Benjamin's 'Tectonic' Unconscious", in ANY, 14.

Footnotes

- 1 Walter Benjamin, "Paris, Capital of the Nineteenth Century", *Reflections*, Harcourt Brace Jovanovich, 1978, pp. 146-162/"Paris, die Hauptsadt des XIX Jahrhunderts", *Gesammelte Schriften*, Suhrkamp, Frankfurt, 1974-1982, V, 1, pp. 45-59. Notes given in the text in square brackets refer not to page numbers but to the classification of items, which are the research notes for the unwritten book *Passagenwerk*, Walter Benjamin, *Gesammelte Schriften*, vol. v, Suhrkamp, 1982.
- 2 Georg Lukács, *History and Class Consciousness*, trans., Rodney Livingstone, MIT Press, 1971.
- 3 Jeffrey Mehlman, *Walter Benjamin for Children: An Essay on the Radio Years*, University of Chicago Press, 1993, p. 80.
- 4 Mitchell Schwarzer, "Ontology and Representation in Karl Botticher's Theory of Tectonics", *Journal of the Society of Architectural Historians*, Vol. 53, September 1993, pp. 267-280.
- 5 Benjamin, "Capital", p. 147.
- 6 Walter Benjamin, "Erfahrung und Armut", *GS*, II, 1, pp. 213-219.
- 7 Benjamin, "Capital", p. 161-162.
- 8 Karl Botticher, "Das Prinzip der hellenischen und germanischen Bauweise hinsichtlich der Übertragung in die Bauweise unserer Tage", *Allgemeine Bauzeitung*, vol. 11, 1846, pp. 111-125; Carl Gottlieb Wilhelm Botticher, "The Principles of the Hellenic and German Ways of Building", *In What Style Should We Build? The German Debate on Architectural Style*, trans., Wolfgang Herrmann, The Getty Centre for the History of Art and Humanities, 1992, pp. 147-167.
- 9 Translation taken from Botticher, "Principles".
- 10 Alfred Gothold Meyer, *Eisenbauten*, Paul Neff, 1907.
- 11 In his introduction to the English translation of Sigfried Giedion's *Bauen in Frankreich*, Sokratis Georgiadis observed that "What Meyer experienced as non-aesthetic, he actually described in terms of an aesthetic of the sublime." See note 12.
- 12 Sigfried Giedion, *Bauen in Frankreich: Bauen in Eisen - Bauen in Eisenbeton*, Klinkhardt and Biermann, 1928/*Building in France: Building in Iron - Building in Ferro-Concrete*, trans., J. Duncan Berry, The Getty Centre for the Study of Art and the Humanities, 1995.
- 13 For a more detailed treatment of Benjamin's reading of Giedion and Meyer, see Detlef Mertins, "The Threatening and Enticing Face of Prehistory: Walter Benjamin and the Utopia of Glass", *Assemblage* 29, pp. 7-23.
- 14 Sigmund Freud, *The Psychopathology of Everyday Life*, trans., Alan Tyson, W.W. Norton, 1960.
- 15 I have altered Harry Zohn's well known translation of this passage to render Benjamin's use of "durchwirken" as "interweaving" rather than "exploring" and "penetrating".

- 16 Walter Benjamin, "Traumkitsch", *GS* II, pp. 620-622
- 17 Walter Benjamin, "Ursprung der deutschen Trauerspiel", *GS* I, 1, p. 211/*The Origin of German Tragic Drama*, trans., John Osborne, Verso, 1977, p. 31.
- 18 Walter Benjamin, "Benjamin an Kraft. Paris, 28.10.1935", *Das Passagenwerk*, *GS* V, 2, p. 1151.
- 19 Eduardo Cadava has given a more precise reading of this in "Words of Light: Theses on the Photography of History", *Diacritics* 22, 3-4, Fall-Winter 1992, pp. 84-114.
- 20 Walter Benjamin, "Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit", *GS* I, 2, pp. 471-508/"The Work of Art in the Age of Mechanical Reproduction", *Illuminations*, trans., Harry Zohn, Schocken Books, 1968, pp. 217-251.
- 21 The significance of these notes was first recognised by Susan Buck-Morss in *The Dialectics of Seeing: Walter Benjamin and the Arcades Project*, MIT Press, 1989.
- 22 See exhibition catalogue, *Le pont Transbordeur et la Vision Moderniste*, Musées de Marseille, 1991.
- 23 Giedion, *Building*, p. 147.
- 24 See Walter Benjamin, *Das Passagenwerk*, *GS* V, 1, p. 223.
- 25 Benjamin, "Reproduction", p. 236.
- 26 Walter Benjamin, "A Small History of Photography", *One Way Street*, trans., Edmund Jephcott and Kingsley Shorter, NLB/Verso, 1979, pp. 240-257/"Kleine Geschichte der Photographie", *GS* II, 1, pp. 368-385.
- 27 Benjamin, "Photography", p. 246.
- 28 I have altered the translation by Edmund Jephcott and Kingsley Shorter by using the more palpable phrase "interwoven with consciousness" instead of their "informed by."
- 29 Karl Blossfeldt, *Kunstformen der Natur*, Ernst Wasmuth, 1928/*Art Forms in Nature*, E. Weyhe, 1929.
- 30 Karl Nierendorf in Blossfeldt, *Nature*.
- 31 Benjamin, "Photography", p. 224.
- 32 Walter Benjamin, "Doctrine of the Similar", trans., Knut Tarnowski, *New German Critique* 17, Spring 1979, pp. 65-96/"Lehre vom Anlichen", *GS* II, 1, pp. 204-210.
- 33 See Detlef Mertins, "Playing at Modernity", *Toys and the Modernist Tradition*, Canadian Centre for Architecture, 1993, pp. 7-16.
- 34 Walter Benjamin, "The Mimetic Faculty", *One Way Street*, p. 335.
- 35 See Benjamin, "Doctrine", p. 68.
- 36 J.J. Grandville, "Une Autre Monde", *Bizarreries and Fantasies of Grandville*, Dover Press, 1978.