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Hans-Christian Schink's Hour Images

DOROTHEA RITTER

What nature strives in vain for, artworks fulfill: they open the eyes.¹ THEODOR W. ADORNO

Anyone confronted with a photograph from the twenty-four-part cycle *1h* by Hans-Christian Schink risks more than just a single glance, for the viewer must ask the double question: should one believe one's own eyes, or should one believe the photograph, this image of an "hour of sun and landscape." If behind the title, *1h*, one understands the claim—the challenge, even—of a one-hour exposure time, has someone's eyesight been put at risk? What does the hour refer to? The time of light? The "passage of time?" Or is it an invitation to spend literally more than just an instant in front of the image?

Hans-Christian Schink's large black-and-white photographs challenge viewers and blind them without actually making them blind; instead, they sharpen the eye to the threshold. Still, how does this function without light, since one reason for this paradoxical provocation of our sight is that we are at first uncertain if it is day, night, or twilight in these metaphysical-looking landscapes. The light gray to ebony black, multitoned, gelatin-silver prints are enveloped in their own sort of clair-obscur, and, because their formal composition is reduced to just a few visual elements, they have extraordinary presence and density.

Very likely we are astonished when we begin to examine these photographs with their lucid vistas, whose distant, low horizons are at eye level. They are equally likely to arouse a disturbing feeling, which does not diminish the longer the eye lingers. The sight of these pictures can also startle us or trigger a sense of discomfort, for there is something wrong about these highly atmospheric, compositionally balanced, austere manifestations of landscapes. To be sure, their parameters of space and time are as clearly defined as their locations are defined by their coordinates, such as N78°13.370′ E015°40.024′ ^(fig. p. 12). Yet in these photographs of twenty-four places around the world-twelve in the northern hemisphere and twelve in the southern, from the extreme east to the extreme west of our planet Earth—neither darkness nor light dominate. Although we perceive reflections of light -some of which resemble the mirrored surface of the sea, while others simply shimmer beside deep black sections of parched earth—we do not recognize any source of direct light. A shadowy gray sky covers up to two-thirds of the surface of a print, and at the same time, it contains a considerable "disturbance," for the sky is divided by a black axis, a dark streak or post, something like a scorched current; it is generally set on the diagonal, but in some photographs, it is almost parallel or vertical to the horizon, dividing the sky. Regardless of how we describe this occasionally fragmented bar, it is unsettling. Is it about to fall from the sky, like Icarus, or is it an omen or herald of an event? Doubtless, it is "a phenomenological limbo,"² and one does not know what its next moment will bring: light or darkness?

"What is frightening is that *it happens* doesn't happen, that it stops happening."³ Juxtaposed to this interpretation and definition of the sublime, some might be reminded of 67 images of the apocalypse or of the fall of Babel.⁴ Others might recall Paul Celan's "Threadsuns/above the grayblack wastes,"⁵ while some, in turn, might imagine an extraterrestrial object as in science fiction. These suppositions are found among viewers' comments, along with the notion that we are dealing with a "fake," that digital manipulation has made these things randomly appear and disappear. However, these photographs are anything but manipulated; nor do they offer the kind of virtuosic layering and staging of artificial worlds exhibited in photography today.

I Visual Puzzle—Helios and the Power of the Sun

Hans-Christian Schink's series 1h confronts us with a whole list of paradoxes; it becomes a kind of visual puzzle that makes us wonder how light—or the whole world—is hidden, manifested, and disappears. For, as Franz Kafka noted on September 30, 1911,6 "something hidden in a visual puzzle is obvious to the person who has found what he has been told to look for, but it remains invisible to the person who has no idea that there is something to search for." This idea occurs, in a rather roundabout way, to Kafka's character Karl Rossmann as he is looking at the Statue of Liberty in New York while simultaneously thinking about various associations and iconographic, interpretive references; he finally links it to the Greek god of the sun, Helios, who according to myth, crosses the sky from east to west so that the eye of the sun perceives everything around the world. This all-seeing Helios is also equated with Apollo or Phoebus the bright-eyed, who uses sunbeams for arrows. If we pursue the concept of the visual puzzle, the rays or beams of light in Schink's photographs require special attention. First and foremost, Schink's one-hour photos doubtless allude to the component that creates the image: light. In this, the photographer proceeds in exactly the same way as with his other groups of works: even though the sun is hidden in his photographs, the theme of the pictures remains the elementary, light-giving power of the sun, as well as the threat to vision in a world that is at risk of losing its balance.

From time immemorial, the visual iconography of the sun has referred to the power and warmth of the heavenly body. However, the sun can also seem to be an element hostile to life, especially in drought regions. A few Native American cultures, for instance, also regard the concept of a dark sun as a symbol of calamity or change. In early Christian art, the gold backgrounds reflected light and symbolized it as well. And in the visual arts and literature in particular, we occasionally encounter the black sun as a symbol for metaphysical fears or melancholy, in combination with the impending loss of light.⁷ In contemporary art, the sun is not used so much as a visual motif, but rather as material, a creative means, an independent object or projection, especially when it comes to questions concerning the dimension of time or the passage of time from dawn to dusk. Art from the nineteensixties and seventies helped turn light into an element of Land Art experiments, contemporary installations, and Light Art—a "sharpening of our senses through and for the natural elements."⁸ Often, these works were of an experimental character, since the focus was on the



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69 illuminating light or the question of intrinsic light. Reflection can indeed be about physical dimensions, but it is mainly about metaphysical dimensions. Using light as an ephemeral creative tool, however, also means staging it and thus reacting to questions concerning the existence, origin, and whereabouts of our planet.

In the history of photography, light is, without question, not simply a metaphor for a process that was considered to be magic or even divine in the early days of the medium—a process that developed through concepts such as "drawing/writing with light." Nowadays, considering the rapid changes in how we deal with images and especially in the ways they are perceived and appropriated, early photography's fascination and admiration for the analogue, negative-positive process and the relationship between time and space seems to be taking on a new quality. The inscription of light is an elementary component in creating a photograph, whose negative is made sensitive to light through a chemical process. In 1834, the English scientist and inventor of negative-positive processing William Henry Fox Talbot placed objects directly on top of light-sensitized paper, exposed them to sunlight, and later described the results as "photogenic drawings." These types of "light images," which do not require a camera, were popularized as photograms by László Moholy-Nagy in the nineteen-twenties. A little later, Raoul Hausmann called the process "melanography" and noted, "Writing with light? Light scorches the light-sensitive layer-which is the BLACK."⁹ Light turns the light-sensitive silver salts in the negative black, and it is only by printing a positive that the black becomes white again, and the negative, positive. Something of the melancholy-sounding melanography—where objects are inscribed as negatives into paper-echoes in the works of Hans-Christian Schink, even though it is not hard to see that Schink is presenting a view of the existing external world.

At first glance, we may associate the *1h* photographs with a reversal of the natural order, but actually, they represent a reversal of the light-to-dark process involved in making a photo—not from a negative to a positive, but, in a certain way, from a positive negative to a negative positive. This refers to a technical phenomenon long regarded to be a side effect or categorized as a mistake or accident throughout the history of photography: that is, solarization. It cannot be separated from the chemical processes of photography, but it also cannot be regarded as separate from the category of time, which is so very elementary to photography. Film that is overexposed will, after a certain period of time, lose its density as it blackens. The silver salts "overreact" to a certain degree, the process "flips," and the silver salts begin to fade. The result is that the overexposed sections of a negative will, after a while, begin to lighten, so that later, when the positive is made, the same sections become "negative," or black areas. Schink has been intensively exploring this phenomenon for many years.

A unique, early document of this accidental product is a solarization made in 1888 by Hermann Krone, "who used a solarization process he developed himself in order to depict geometric data of heavenly bodies," according to the explanation of this image ^(p.82, fig.2).¹⁰ Krone (1827–1916), one of the great pioneers of photography, established himself as a photographer, natural scientist, and, later, in 1852, as a professor in Dresden. His photographs of the Elbe Sandstone Mountains set standards for landscape photography, and as early as 1851, he made a daguerreotype of a partial eclipse of the sun.¹¹

II The Experiment: Creating a Unique Atlas of Sunlight

Galvanized by Krone's solarization, Schink decided to begin working on the topic in 1999, in preparation for a competition ^(p. 82, fig. 1). Schink always took pictures in the morning or evening, when the sun was not at its zenith. The light would "burn" into the film according to the weather conditions—windy or cloudy, or how strong and even the sunlight was at the time the picture was taken. In some of the photos, the sunlight appears fragmented, and in almost all of them, the sun is surrounded by a corona that heightens the light and dark contrasts and seems to isolate the streak in the sky.

We should keep in mind that when Schink was a teenager, he wanted to be a paleontologist, that is, a researcher into things inscribed by time—something analogous to the process of photographic recording; if we add this to Schink's eye for geometrical structure and shapes in landscape, then we have a few clues about his notions of time and space. Considering, too, the resonance that planetary research and surveying has had throughout the history of science, as well as within contemporary society, then Schink's precise, observant investigation of nature is a seismographic intervention in this contemporary discourse, as well as a measurement of how much time the sun takes to run its course.

Here, the "planetary" theme represents the globalization debates of the twentieth and twenty-first centuries revolving around the state of the "global village" and the analysis of cultural identities. This figure of thought can be described in topological terms as "meandering, wandering through distances and differences."¹² A network of new communications technologies blankets the world, trespassing over boundaries as it measures spaces. In recent times, the search for other, new images and worlds has led to remarkable photographic explorations of Earth and space. Whether we are talking about Thomas Ruff's early (1989) interest in starry skies full of galaxies, Milky Ways, and cosmic clouds; Wolfgang Tillmans's latest works, *in flight astro (ii)*; or Andreas Gursky's series Ocean *I–VI*, containing satellite images from various Internet photos, artificially generated and aesthetically altered to produce views of the earth's oceans and of Antarctica from a great distance—all of these works reflect this interest.

Daniel Kehlmann's bestseller Measuring the World (2005) takes a historical view of this interest; the novel, set in the early nineteenth century, is about the natural scientists Alexander von Humboldt and Karl Friedrich Gauss.¹³ This novel enjoyed surprisingly great success precisely at the moment Google Earth's world-and-cosmos-spanning navigation program permanently made obsolete the manual and analogue techniques and practices of measurement, navigation, and cartography that Kehlmann describes through Humboldt and Gauss. Schink, in turn, is simultaneously a user and observer of the



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newest technologies as well as of historical ones. Ultimately, he oscillates between the poles of appropriation, critical processing, and reversal by using Google Earth to research a coordinate system for the *1h* project, in which he fixes upon an area of the world according to its location and its angle toward the sun.

We could say that the presence of Schink's camera on site catapults us out of the array of images inside Google Earth's coordinate system, stopping the gaze that usually sweeps across the Internet's wide-ranging, excessive assortment of pictures of the world. It is a chance "to curb this exorbitant exploitation of the optical density of physically perceptible reality, to see it differently."¹⁴

III Zeno and the Paradoxes: Movement at a Standstill

Zeno of Elea, a pre-Socratic philosopher born around 490 BCE, is known for, among other things, his paradoxes concerning space, time, and motion, which were probably originally intended to provoke debate.

One of Zeno's paradoxes is his arrow paradox, in which he contemplates the reality of motion. An arrow in flight occupies an exact place at any given moment. Since it cannot move to where it is, because it is already there, it must be at rest. Since the arrow is at rest in every position it occupies, it must, therefore, not be moving at all. We assume, however, that an arrow flies through the air and is not still.

As a philosophical concept, Zeno's paradox also seems to apply to Schink's "arrows of light." One of the disturbing things about his one-hour photos is that we can see motion that we are not normally capable of perceiving. At most, we can only look straight at the sun momentarily, for an instant-in one place, so to speak-since even if we were not blinded by longer observation, we would still not be able to perceive the sun's continual motion. This streak of light, which is also a negative—is thus a double paradox. The theme of time in a visual image has always been of immense importance to the question of presence and absence, reality, the present moment, the past, and imagination. Of primary interest today, apparently, are the pauses, the "voids" between stillness and motion, acceleration and deceleration-two tempi are one and the same phenomenon. Regardless of whether it is the relationship between a linear process and a simultaneous one-of acceleration, stopping, moving forward, or staying in one place—it seems as if we treat the experiences of the world traveler in a way that is similar to the way we treat the experiences of producing and perceiving images. Photography theorists have developed a whole series of perceptual methods to track the actual paradox, the "true hallucination," as André Bazin called it: the issue of presence and absence in a picture. Everyone agrees that the photographic image is not the same thing as a copy of reality; it is neither a faithful reproduction of the external world, nor an apparently reliable document of evidence. It is and was, however, a trace, an index, a sign; it is highly subjective, a simulacrum, a referent, a lie, and much more.

The history of technical developments in photography has always been mainly

concerned with progressive development, marked by such things as more light-sensitive 73 lenses, shorter exposure times, ease of handling, practicability, and, for a long while now, the rapid, constant assimilation of digital photography. Hans-Christian Schink does not unquestioningly inscribe his pictures into this continually progress-oriented history. Having always used a large-format camera of the kind favored by architectural photographers, he is interested in a kind of deceleration that affects the equipment, the process applied, the time-intensive realization of an image, and the understanding of space. One could say that his way of dealing with time explores, on various levels, another period's sense of time; the visual aesthetics and use of analogue processes tend to recall the nineteenth century rather than the twentieth or twenty-first. In all of the photographs from the 1h series, Schink cites an exact period of time, but we see the photos outside of their time. They are standpoints with precise geographical locations, but they do not depict any sort of canonized landscape. They testify to "the way it is," but they are something else-an "essence," if you will. The photographs do not represent anything, but many of them shed light on things that can be said about photography: they are pictures that have captured the time of light as much as the physical laws of optics and the chemical processes that cause the reaction of the silver salts. Above all, this photographer's pictures have a characteristic signature entirely their own.

Schink researched the precise path of the sun and its relation to the earth's rotation, and hence, to time as well. He used the angle of the earth's axis and the position of the sun in the sky as the basis for selecting the sites he would photograph. His preparations and method of carrying out his various journeys resemble, in some ways, those made for expeditions undertaken in the eighteenth and nineteenth centuries. The visual coordinates he selected take us all over the globe, from the northern Arctic Circle, near Svalbard ^(fig. p. 12), to Tierra del Fuego; from Los Angeles to the East Cape of New Zealand, the easternmost point where the light of the sun touches the earth ^(fig. p. 38). We are just below the equator in Zanzibar (figs. p. 60 and 73) and can see the track of the sun rising steeply into the sky above the Hoggar Mountains in Algeria, along the Tropic of Cancer, around the time of the summer solstice on June 20, 2007 ^(fig. p. 14). Three weeks later, Schink is in northernmost Norway, on the sixty-ninth parallel, capturing the path of the no-longer-setting sun in an hour-long exposure sometime after midnight. In all of these pictures, a strange ambivalence is visible: the long exposure time-an hour-brings the landscape to a "standstill." This "streak of time" in the sky excludes any sort of movement, yet creates an extreme counter-movement, a special kind of tension. Part of the paradox is the idea that Zeno conveyed: it is about a fixed movement, but only because in the meantime, we have understood that here light has moved, movement has occurred, which is otherwise only visible as the paths of the shadows that appear during particularly long exposure times. Another part of the paradox is that we can only recognize this movement in its negative form, as a kind of negative landscape.



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75 IV Landscapes of Positive Melanographs

The path of the sun at midsummer, which is almost parallel to the horizon, ultimately demonstrates the strenath of Schink's interest in the abstract aualities of this streak of liaht as a visual component. In each of these pictures, the streaks of time between barren, remarkable, strongly contrasting still landscapes are quite special. This kind of landscape is meant to represent the act of deliberately seeing a manifestation that is different from nature, something that is "made" and always culturally construed, and which-within the history of aesthetic depictions of landscape—is first expressed through its difference from nature, from which man himself is also alienated.¹⁵ We realize that the relationship among light, landscape, and time makes up Schink's real coordinates, while the selection of a certain site is actually secondary. However, research also results in analogies to relatively familiar tourist sites, such as we encounter in the tuffaceous rock formations of Göreme in Cappadocia, Turkey, the bizarre quiver trees in the deserts of Namibia, the Three Sisters rock formations in New Zealand, or the Tassili n'Ajjer in southern Algeria. We are dealing with a mixture of familiar tourist landscapes and "accidental sites," such as a green areas near Leipzig or in Tokyo; a drive-in movie theater in Coober Pedy, a small opal mining town in southern Australia; a neighborhood of bungalows surrounded by palm trees in Zanzibar; a parking lot in Los Angeles; or paths in the countryside of northwestern Argentina. Some of these are like "non-places,"¹⁶ as Marc Augé called the unidentifiable, faceless, transitional sites of globalized society—a theme Schink examined in his series Verkehrsprojekte Deutsche Einheit (Traffic Projects German Unity).¹⁷ Globalized spaces and their various cultural movements are also encompassed by Arjun Appadurai's categories of "scapes" that can mutually influence each other and be part of the same network.¹⁸ In the "scapes" of a planetary society, the concept of space is in flux. If one researches the sites Schink selected, one discovers hints that the project deals with subjects that are particularly interesting for photographers. Schink, however, does not really follow these "directions for viewing geography profitably,"¹⁹ but rather, he establishes the state of the sun as an elementary category, comparing it to the increasingly unstable notions of space prior to or beyond cultural coding. As regards their relationship to the sun streaks, the features of the various "scapes" are of interest; interest also arises from the extreme tension that results from, say, the sun being embedded between the two cliffs that fill the photograph taken along the southern edge of the Erongo Mountains in Namibia ^(fig. p. 56) or in between similar formations in Argenting. The streak of light emanating from the setting sun in the southern hemisphere is like some sort of force driving the rocks apart. Similar contrasts characterize all of the photos in which remarkable landscapes rise up into the broad planes of the sky. In many cases, there is dynamic, geometrical interplay of various tangents, lines, and angular dimensions—for instance, in the relationship between the dominant black vertical shape of a telegraph pole in the middle of Argentina and the diagonal path of the sun, breaking away from it at a forty-five-degree angle (fig. p. 65). This reflects Schink's keen sense of planes, volumes, and lines, as well as the power of his imagination,

for Schink, of course, always has to "devise" the thing that has not yet appeared when the chemical reaction starts but will later become manifest as a black object in the sky, and thus create a crucial contrast in the print. In the process, the coincidental motion of clouds makes the bar of light look like a dotted line; at other times, it mysteriously breaks through the crown of a tree.

Even though none of the *1h* photos have people in them, so that we wonder if they depict a pre- or post-paradisiacal state of existence, five of the pictures are of geographical "borderline situations" at the Arctic Circle or near the equator (figs. pp. 12, 34, 46, and 60); there is also a photograph that captures the first rays of sunlight cast upon the earth from above the Pacific Ocean (fig. p. 38). These studies of stillness and motion also creatively reveal an extremely condensed, empty plane, as can be seen in the view of the ocean from Zanzibar, which culminates in a meeting of the horizon, sea, and the vertical line of the sun.

Schink takes us back to a radical questioning of our visual experiences. Which sites or landscapes do we allow ourselves to perceive—and to what purpose? And what are the visual conditions in places where direct vision is apparently no longer possible, but is, instead, shaped by the optics of very diverse media? Since Schink seems to make time "collapse" in these photographs, we might interpret the period of sunlight as a time to contemplate, as well as question, the state of our climate. Reducing the elements to their basics can bring about the extreme impressions alluded to at the beginning of this essay. Somewhere between blinding our vision and closing our eyes against the strong light, between contemplation and disturbance, arises a kind of interim experience that keeps our eyes open by making sight hold its breath.

In the early nineteenth century, empty space with a metaphysical quality, such as that in Caspar David Friedrich's painting Mönch am Meer (Monk by the Sea, 1808–1810), was described by Heinrich von Kleist as radically painful—"as if one's eyelids had been cut away."²⁰ It was regarded as the expression of a visual experience of a new, paradoxical, space-time construct, which could not be classified. Today, it is difficult to even imagine this. Yet Schink's works contain parallels to this and to other works by Friedrich, most of which lie in the reduction of their visual elements and the emphasis on eye-level horizontal lines. Admittedly, the horror vacui has lost its power to determine the sublime as it did at the end of the eighteenth century. Yet, the concept of the sublime also proves to be of value in analyzing the experience of art in the late twentieth century. "That the here and now is the image, and not, on the contrary, nothing-that is the sublime."²¹ With this observation, Lyotard retains key elements of the concept as it was conceived by Edmund Burke and Immanuel Kant.²² The sublime leads to a kind of intensification of the ability to understand, a kind of experience that Lyotard distinguishes from the attraction to the innovative, to the event, which always needs to be consumed over and over. It is the "inconsumable," a "kind of gap, a breach in the given situation itself."²³

Today, the horror vacui tends to entail the constant arrangement of (visual) events in order to fill a void created by the excess of images and our consumption of them, and, ultimately, by the flickering visual continuum that "is channeled by abusing the mobilization 77 of the public space."²⁴ At the same time, there is a noticeable yearning to confront the self-evident, irretrievably vanishing visual excess of the twenty-first century in a different way, and to put the "landscape image" up for renegotiation, as Schink does.

Since the nineteenth century, the sublime has played a special role in the grand depictions of American landscape painting as well as in photography. Depictions of "sublime" landscapes were distinguished by—for example—the interplay of massive mountains and canyons or by untouched, vast landscapes with great depth of field, which often appeared in strong, contrasting backlighting. Even today, Robert Adams combines, in paradoxical ways, the critique and beauty of this kind of "wilderness," much of which has been destroyed throughout the world, and it is no wonder that his last large group of works, *Turning Back* (2005), struck at the heart of the debate about the destruction of nature.

Another critical perspective of the future, not entirely unlike Friedrich Schlegel's view of the historian as a "backward-looking prophet," is reflected in the very diverse artistic practices of Schink and other artists who have studied nineteenth-century visual concepts. The spectacularly empty seascapes or the infinite detail of unidentifiable, near or distant landscapes by Hiroshi Sugimoto or Axel Hütte make it possible to see these kinds of connections in their works. Here, as in various paintings by Caspar David Friedrich, paradoxical constructs of space and time play a special role, heralding the dissolution of image and reality, or more precisely, the temporalization of the space inside the image. It was a hallmark of the altered aesthetic approach toward the landscape, which began before 1800, and refers to both the internal and external order of nature. In an era of new findings in the natural sciences and the discovery of landscape as space that can be measured and recorded, "'the magic wand of analogy,' that basic rhetorical figure of similarity in difference . . . became a means of knowledge"²⁵ for the early Romantics, and these artists of the present day are also dealing with it.

A few visual analogies to Romantic categories emerge in Schink's body of work. They range from the poeticizing of the world—as reflected in paradoxical images of longing—to eerie or symbolically charged alternate worlds. Besides the Romantic interest in magic and alchemy, these analogies include the motif of night and darkness, as well as metaphors for the infinite, parallel to specific explorations of visions of limitless space and time. Regardless of whether the early Romantic, utopian concept of time is the "full center" (Schlegel) or the "perfect present" (Novalis), the question of linking past and future in a kind of earthly present is interesting. An analogy that should at least be mentioned in this context can be seen in the work of Philipp Otto Runge, at the center of which is his cycle *Die Vier Zeiten* (The Times, 1803–1807). Directly associated with it is *Der Kleine Morgen* (The Brief Morning, 1808), the first version of which contains a black sun beneath the (painted) frame, in its own layer of time—a kind of antithesis to the floating aurora.

And if Novalis's concept of poetry allows that natural scientific knowledge or technical processes can be distorted in order to romanticize the world, then associations to Hans-Christian Schink's poetic impressions are not far off the mark. Yet, Schink does not romanticize on the basis of optical/chemical knowledge, but rather he frees his landscapes



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- 79 from glare. Admittedly, he does so only to view works of art in the paradoxical way characteristic of the Romantics, which, according to Adorno, is the only way to view art. Not only do these works open the eyes, but art, like a critical observer, is the "only thing faithful to the manifestations of nature, where it envisions landscape in the expression of its own negativity."²⁶
 - Theodor W. Adorno, "Ästhetische Theorie," in Gesammelte Schriften 7 (Frankfurt am Main, 1973), p. 104. Published in English as Aesthetic Theory, trans. Robert Hullot-Kentor (Minneapolis, 1997), p. 86.
 - 2 Jean Baudrillard, "Das perfekte Verbrechen," in Theorie der Fotografie IV: 1980–1995, ed. Hubertus von Amelunxen (Munich, 2000), pp. 256–60, here p. 260. Published in English as The Perfect Crime (London and New York, 1996).
 - Jean-François Lyotard, "Das Erhabene und die Avantgarde," in Verabschiedung der (Post-)Moderne? Eine interdisziplinäre Debatte, ed. Jacques Le Rider and Gérard Raulet (Tübingen, 1987), pp. 251–69, here p. 261). Published in English as "The Sublime and the Avant-Garde," trans. Lisa Liebmann, in Artforum 22, no. 8 (April 1984), pp. 36–43.
 - 4 "But in those days, after that tribulation, the sun shall be darkened, and the moon shall not give her light, and the stars of heaven shall fall, and the powers that are in heaven shall be shaken" (Mark 13:24–25); from the fall of Babel: "For the stars of heaven and the constellations thereof shall not give their light: the sun shall be darkened in his going forth, and the moon shall not cause her light to shine" (Isaiah 13:10).
 - ⁵ "Fadensonnen / Über der grauschwarzen Ödnis / Ein baum- / hoher Gedanke / greift sich den Lichtton: es sind / noch Lieder zu singen jenseits / der Menschen." Paul Celan, Die Gedichte: Kommentierte Gesamtausgabe in einem Band, ed. Barbara Wiedemann (Frankfurt am Main, 2003). Translated into English in Paul Celan, Breathturn, trans. Pierre Joris (Los Angeles, 1995), p. 84. "Threadsuns / above the greyblack wastes. / A tree -/ high thought / grasps the light-tone: there are / still songs to sing beyond / mankind."
 - <u>6</u> Franz Kafka, Kritische Ausgabe: Tagebücher, text vol., ed. Hans-Gerd Koch et al. (Frankfurt am Main, 1990), p. 47. This idea can be found again in his tale The Stoker (1913), which became the first chapter in his unfinished, posthumously published novel Amerika: The Man Who Disappeared [1927], trans. Michael Hofmann (London and New York, 2007).
 - <u>7</u> See "The Sun in the Sign-Language of Alchemy: Die Sonne in der Bildersprache der Alchemie," in Graphis: International Journal for Graphic and Applied Art 18, no. 100 (1962), pp. 138ff., and "The Sun in Contemporary Painting and Sculpture: Sonnendarstellungen in der modernen Malerei und Plastik," ibid., pp. 228ff.

- See, for example, Annelie Lütgens, "Lichtkunst im 20. Jahrhundert," in Olafur Eliasson: Your Lighthouse; Arbeiten mit Licht 1991–2004, exh. cat. Kunstmuseum Wolfsburg (Ostfildern, 2004), pp. 32–40; Michael Schwarz, ed., Licht und Raum: Elektrisches Licht im 20. Jahrhundert (Cologne, 1998); the entry on "light" in Monika Wagner et al., eds., Lexikon des künstlerischen Materials: Werkstoffe der modernen Kunst von Abfall bis Zinn (Munich, 2010).
- 9 Raoul Hausmann, "Melanographie," in Floris M. Neusüss in collaboration with Renate Heyne, Das Fotogramm in der Kunst des 20. Jahrhunderts (Ostfildern, 1990), p. 320.
- 10 Medium Fotografie, exh. cat. Staatliche Galerie Moritzburg and VEB Fotokinoverlag Leipzig, Hallesche Galerie Roter Turm 1977 (Leipzig, 1982), p. 22. The photo is titled Die Sonne in ihrer scheinbaren Bewegung gegen den Horizont (The Sun Apparently Moving toward the Horizon). The photograph was probably made for Krone's Historisches Lehrmuseum für Photographie, a kind of visual atlas for applied photoaraphy from the second half of the nineteenth century, containing more than 1,100 photographs. See Wolfgang Hesse and Timm Starl, eds., Der Photopionier Hermann Krone: Photographie und Apparatur: Bildkultur und Phototechnik im 19. Jahrhundert. exh. cat. Kupferstich-Kabinett der Staatlichen Kunstsammlungen Dresden, Technische Universität Dresden (Marburg, 1998). In Krone's personal bibliography there are references to his essays on solarization in the Deutsche Photographen-Zeitung (1891) and his solarizations in Jahrbuch für Photographie und Reproduktionstechnik (1895).
- He was especially interested in astrological photography and the use and significance of light in general. His primary reference here was a natural philosopher and physicist from Leipzig, Gustav Theodor Fechner. Whether his psychophysical statements on the so-called threshold situation of light can be translated into a suitable metaphor for the one-hour photos of the sun is anyone's guess. See Cornelia Kemp, "Im Dienste des Lichtes: Hermann Krones theoretische Beschäftigung mit der Natur des Lichts," in Leipzig 1982 (see note 10), pp. 159–66.
- 12 Ulrike Bergemann et al., eds., Das Planetarische: Kultur-Technik-Medien im postglobalen Zeitalter (Munich and Paderborn, 2010); see also SFB/FK 427 conference, "Medien und kulturelle Kommunikation," University of Cologne, http://www.fk-427.de/ DasPlanetarische (accessed July 3, 2010).

- 13 An innuendo-laced reference to the research of natural phenomena and the significance of America in the development of the natural sciences and technology is offered at the end of the novel. Here, for example, the protagonist is Eugen Gauss (the son), who, unlike his father, is relatively uniterested: "He stuffed his pipe with the last tobacco, went to the bow, and stood there, eyes watering in the wind, until something began to delineate itself in the evening haze, at first transparent and not quite real, but then gradually becoming clearer, and the captain laughed as he replied that no, this time it was no chimera and no summer lightning, it was America." In Daniel Kehlmann, Measuring the World, trans. Carol Brown Janeway (New York, 2006), p. 257.
- 14 "If the desire to get to know the world does not carry as much weight today as the need to exploit it, shouldn't we then at least try to do in this field what we do in others, such as ecology—to curb the excessive exploitation of the optical density of physically perceptible reality? Sometimes all we have to do is see differently, in order to see well." Paul Virilio, "Das Privileg des Auges," in Bildstörung: Gedanken zu einer Ethik der Wahrnehmung, ed. Jean-Pierre Dubost (Leipzig, 1994), p. 64.
- 15 See, for instance, Joachim Ritter, "Landschaft: Zur Funktion des Ästhetischen in der modernen Gesellschaft," in Subjektivität: 6 Aufsätze, ed. Joachim Ritter (Frankfurt am Main, 1974), pp. 141–90; Manfred Smuda, ed., Landschaft (Frankfurt am Main, 1986); for a current discussion of the topic, see also Donata Valentien, ed., Wiederkehr der Landschaft, exh. cat. Akademie der Künste Berlin (Berlin, 2010).
- 16 Marc Augé, Orte und Nicht-Orte: Vorüberlegungen zu einer Ethnologie der Einsamkeit (Frankfurt am Main, 1994) Published in English as Non-Places: An Introduction to Supermodernity (New York, 1995). Today, however, we should probably say that "non-places" themselves are always changing, because we believe that the spaces of globalized society—which are increasingly marked by waves of migration—are in a state of constant change. Appadurai's concept of "scapes" seems to describe transnational and global movements more accurately.
- 17 Hans-Christian Schink: Verkehrsprojekte; Traffic Projects, exh. cat. Martin Gropius Bau, Berlin; ACE Gallery, New York; ACE Gallery, Los Angeles; Kunsthalle Erfurt (Ostfildern, 2004).
- 18 In the "cultural flow" there is no longer a difference between center and periphery—a perspectival approach to visual perception, somewhat comparable to the views opened up by Google Earth. According to Appadurai, cultures are no longer found in specific places, but, rather, they manifest as cultural movements or flows that express transnational or global movements. See Arjun Appadurai, Modernity at Large: Cultural Dimensions of Globalization (Minneapolis, 1996), pp. 33–34.

- 19Brigitte Wormbs, "Was soll hier Landschaft heissen?" in
Berlin 2010 (see note 17), pp. 52-61, here p. 58.
- 20 Heinrich von Kleist, "Empfindungen vor Friedrichs Seelandschaft," in Sämtliche Werke und Briefe 2, ed. Helmut Sembdner (Munich, 1961), p. 327.
- 21 Lyotard 1987 (see note 3), p. 255.
- 22 "Thus, the sublime is nature in its manifestations, the viewing of which conveys the idea of the infinite." In Immanuel Kant, Kritik der Urteilskraft, ed. Wilhelm Weischedel (Frankfurt am Main, 1974), p. 178; see also Hans-Werner Schmidt and Ute Riese, eds., Landschaft: Die Spur des Sublimen, exh. cat. Kunsthalle Kiel (Bielefeld, 1998); and Andreas Hapkemeyer, ed., Die Wahrnehmung der Horizontale, exh. cat. Museion: Museum für moderne und zeitgenössische Kunst Bozen (Bolzano, 2005).
- 23 "Das Undarstellbare: Wider das Vergessen; Ein Gespräch zwischen Jean-François Lyotard und Christine Pries," in Christine Pries, ed., Das Erhabene: Zwischen Grenzerfahrung und Grössenwahn (Weinheim, 1989), pp. 319–47, here p. 321.
- 24 "'No longer believing one's own eyes' is, in fact, no longer a sign of astonishment or surprise, but rather, a 'conscientious objection,' which then continues to resist the power of the objective image, the image that is channeled by the media, not just via live or slightly time-delayed broadcast, but also by abusing the mobilization of the public space." Virilio 1994 (see note 14), p. 56.
- 25 Helmut Schanze, Romantik-Handbuch (Stuttgart, 1994), pp. 3–4.
- 26 Adorno 1973 (see note 1), p. 106.