

Illuminating

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Illuminating

Natural Light in Residential Architecture

With an Essay by Gerhard Auer

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Introduction

During the first third of the twentieth century, residential architecture began an evolution that even today influences our idea of contemporary living far more than we realize. In the meanwhile we know that the ambition and the reality in architectural modernism were further apart than was acknowledged for a long time. If, however, we look at current residential architecture and pay attention to the images disseminated by the media, we are forced to acknowledge that many of the demands articulated at the time have lost nothing of their topicality. The idea of bright and open living spaces in particular, more than any other, has taken root in our minds as the epitome of modernity and zeitgeist. “Light-flooded” homes are being built everywhere to satisfy our seemingly insatiable hunger for natural light.

The present volume sets out from that trend and its immediately perceptible manifestations—from the fact that for some time now excessive total glazing has been the order of the day even in residential buildings. Something that until now has been limited to prestigious company headquarters, banks, office buildings, and a few single-family homes is now found in residential buildings constructed with communal or co-operative funding.

Tracing this phenomenon, bringing some of its general characteristics and subtle facets to light, and sorting the elements that remain practical for daily use from the surplus of technical know-how are the goals of this book. There are several reasons why the focus is on housing. First and foremost, previous studies on the theme of natural light have always been limited to the worlds of education and work and primarily addressed questions of ergonomics and hygienic conditions at work. But the question of light or rather natural light in the home has never been granted even remotely the importance it has in relation to the workplace outside the home. Moreover, the workplace is increasingly being shifted into the home—another reason more attention should be paid to natural light in the home. Last but not least, it deserves attention because living and working are moving closer and closer together, particularly in terms of lighting, but are subject to different demands.

It seems obvious that the approach to natural light in architecture cannot be described with absolute quantities and physical concepts. Nor can beautiful pictures hope to present trailblazing

MVRDV, Silodam housing complex, Amsterdam, 1995–2002. View from an apartment toward the harbor.

distributions of light and spectacular lighting situations as a thrilling experience. Rather, natural light—quite apart from its primary definition as electromagnetic radiation—must be understood as a quantity that is rooted in a particular culture and is implemented in building as a productive factor with commensurate competence. Design *and* planning factors are of equal importance; they are mutually dependent and, properly prioritized after careful consideration, are responsible for a convincing design.

We are convinced that, precisely with a topic as complex and ambitious as this one, solutions that are focused primarily on thorough consideration of the users' side will lead to not especially satisfying results. Questionnaires may well demonstrate that a “bright apartment” ranks at the top of the list of contemporary desiderata for a home. Yet a precise definition of that desire is doomed to fail simply because the notion of “bright” is extremely subjective and influenced by the circumstances in question. And considering specific standards is not much help either.

Furthermore, we think that a work concerned with the theme of natural light in residential buildings has to take into account both contemporary and historical lines of development. Analogous

Patrick Gmür Architekten, in cooperation with GMS Partner, James residential complex, Zurich-Albisrieden, 2003–7. Living room and balcony of an apartment in the Langhaus.



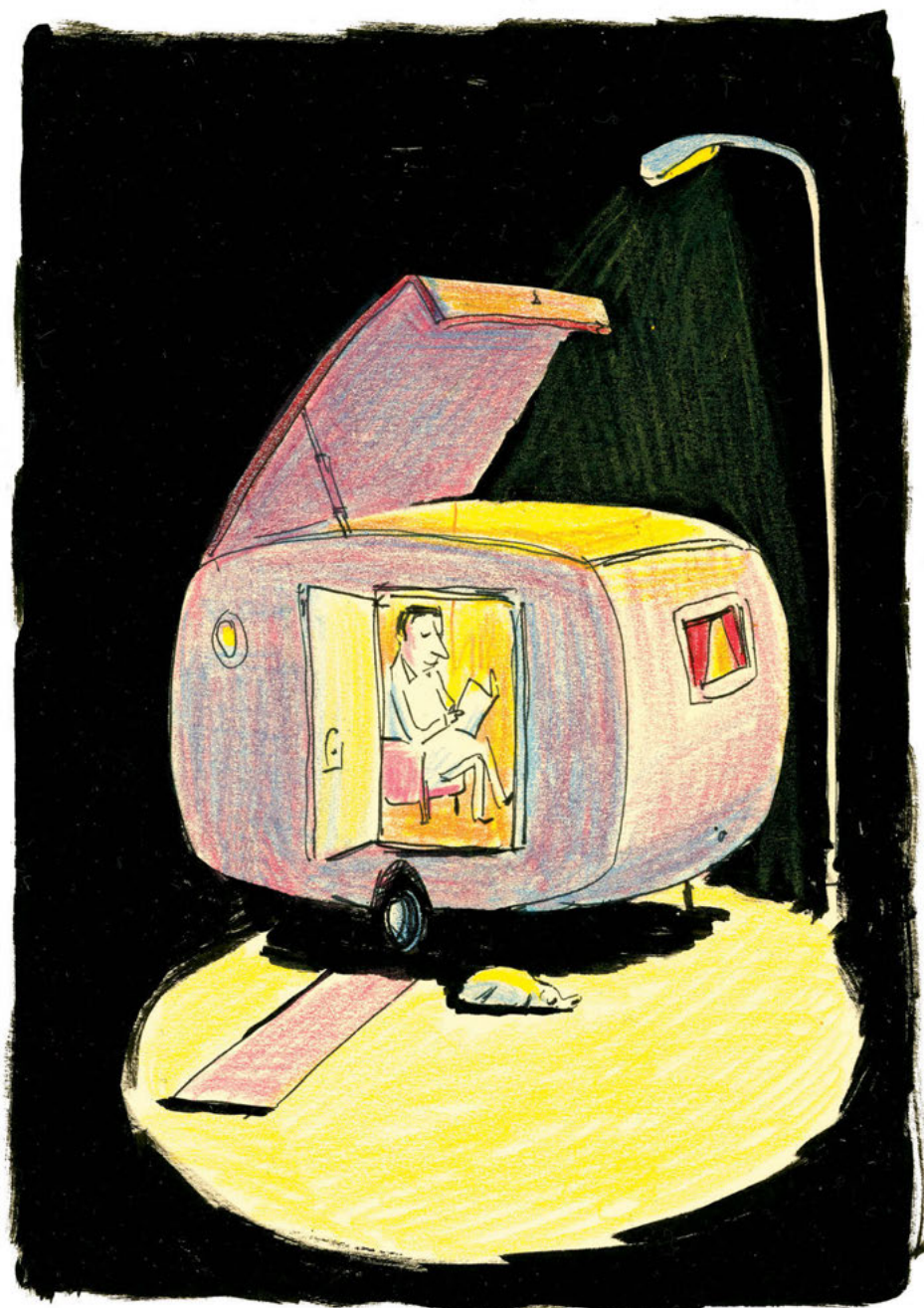
explanations and expositions are thus an essential component of the present volume, for that is the only way to investigate the complex relationship between living space, human beings, and natural light in a sensible way and to open up our eyes to the connections that exist between the various areas.

We are aware that the selection and weighting of individual thematic focuses are based on a certain subjective view of things. The selection made ultimately reflects our conviction that natural light in residential buildings is very important primarily where it concerns space and its moods, transformations, and effects. For that is precisely what constitutes the genuine quality of an architecture design: when the sensory, atmospheric, and haptic qualities of natural light can be experienced in a spatial atmosphere for people.

The first three chapters shed light on various essential aspects of the theme of natural light and modern living; the fourth chapter presents the fundamentals of lighting technology and shows how it can influence the planning to achieve good, diverse lighting conditions in living spaces. The fifth chapter treats such categories as coziness, comfort, and the experience of space against the backdrop of the question of lighting. Finally, the sixth chapter presents eleven architects who share a pronounced awareness of lighting in order to give a better sense of different approaches to natural light.

We would like to thank here all those who contributed to the success of this project—above all the Velux Stiftung and the 4B Fenster AG, without whose generous financial support the present publication would not have been possible. In addition, we are grateful to Gerhard Auer for his stimulating contribution, to the many individuals and institutions who provided illustrations, and to Birkhäuser Publishers whose well-coordinated team has helped to make this third volume in the Living Concepts series a reality.

Michelle Corrodi and Klaus Spechtenhauser
June 2008



Darker Living

How Artificial Light Teaches Us to Love Daylight

Two Prologues

You are not likely to find the term “*living light*” in the dictionary, much less in a textbook, and not even in the title of a seminar on architecture or design. Residential design and lighting design are fields of study, but the lighting designer is just as marginal in the residential world as the question of light is to the home builder. The two of them will meet in the following essay.

On the Subject of Light

It suffices to take note of the lighting events of an ordinary day to be surprised by their quantity and diversity: On the one hand, there are natural lights—more precisely, the changing natural or cosmic variants of light that we encounter in sunshine, under bright or gray clouds, in the twilight of sunrise and sunset, and in exceptional cases as lightning or polar lights. On the other hand, we are exposed to countless artificial lights, all the interior lighting, street lamps, floodlights, traffic signals, advertisements, and urban decorations; last but not least, we have displays and monitors that have spread in our daily lives as light sources happy to conquer, even pressing right up next to our eyes.

The light of the worlds we live in is thus more than lamps, more than windows and lightbulbs. It accompanies us inside and out, is a medium of our work and our moods. Artificial lights have only been turning night into day for a hundred and fifty years, and when the day begins, more of them are turned on than turned off. Although until very recently people still spoke of a hunger for light, *light pollution* is today’s most common light metaphor. Has it already entered our homes?

On the Subject of Dwelling

The very verb poses difficulties: What exactly constitutes the activity of dwelling? Since everyone dwells, it ought to be easy to describe it or at least illustrate it. There is agreement about the necessities of bed and table, stove, toilet and faucet. One need only enter a mobile home—the ultimate primitive hut—to have the least common denominator of dwelling before one. That this dwelling demands a protection consisting of roof and wall, door and window, also numbers among its minimum requirements. But opinion is divided on everything beyond that, and the options,



functions, and constructions quickly ramify into the infinite. Every study of dwelling falls apart owing to this chaos of criteria.

In the recent past—roughly speaking, the first half of the twentieth century—residential construction was an important topic in Europe for masses of home seekers, and consequently for politicians, scholars of the human sciences, and architects. No matter whether they were discussing the problem of the minimal dwelling, the single-family home, or satellite cities, there was no lack of ideas, and they were realized more quickly than their effectiveness was reviewed. Today—after the second, saturated half of the same century—residential construction has declined noticeably, and with it the discourses about it. Little wonder, given that the average Central European has more than forty square meters of living space. Although new construction is stagnating, moving and renovating are all the more common. Although the debates over styles—villa versus urban apartment block—continue, the focus in the housing question is no longer primarily

patterns of developments, forms of stacking units, or typologies for laying out the given real estate but rather reshaping and updating. Is that still the job of architects, or are we already in the hour of interior design, the furniture industry, and the self-appointed TV advisers? Is the maxim “my home is my castle” still valid, or is an obligation that everyone exhibits his or her dwelling simply part of any lifestyle?

Housing and Lighting: An Outline of an Evolution

The constant switching between sunlight and electric light over the course of the day—which has become a matter of course these days—is a very recent way of experiencing light. The primal hut, no matter whether its origin was a cave or a wooden frame, a tent or an igloo, always had a door but no windows. The archaic shelter needs no daylight. It has to offer security—to bodies, to possessions, to the fire—but not a workplace. The workplace as interior space only became common in urban cultures and the first peep-holes—still with bars—were only ventured where the palisade or city wall offered cover to the residence.

There is no written evidence, but not a little architectural evidence, for a history of light in architecture (something that has yet to be written). It would reveal two peculiarities: Until the twentieth century, no residential building would be mentioned in it, and the light source for all the others would be the sun alone. All the early architectural ideas for lighting are in fact found solely in the monumental architecture of church and empire, and most of them reflect cosmic light phenomena: the solar geometry of the Egyptian and Central American pyramids, the transparency to color of Gothic cathedrals, shadow-modulated Baroque churches, and the somnambulistic palaces of India and Japan. Perhaps because it leaves no last remnants, the house—already disparaged with the term “secular building”—has never been a priority for art historians. We can learn more about it from paleoanthropologists or ethnologists and perhaps even from myths and legends of our origins. According to one Chinese myth, human beings derive from a combination of two races: cave dwellers and tree dwellers, fire worshippers and sun worshippers—and all desires for housing right up to the present have moved between cave and tower, between hiding and survey. Sun and fire cults can be traced back well before the beginning of architectural history, and it was the profane hearths and campfires that gave human beings their first experiences with light. If the sun, as creator of the day, was a gift from nature, the hearths and campfires gave off a natural light they could control—half a million years before the invention of houses and cities.

From the very beginning, the city—which was founded on three pillars: the temple, the market, and the wall—has offered a protective light that can be seen as the first street lighting: the torches of its gatekeepers. When later other “official” illuminations joined it, residential neighborhoods were the last to follow: there it was enough to have a night watchman who loudly reminded people to extinguish the fires they used for lighting until electric light replaced it in the nineteenth century. Just like in the village farmhouse, the fire of the hearth was the primary source of light in urban homes since antiquity, which ensured for a short evening and early bedtimes.

For all the wealth of variety in housing typologies we can look back on since the invention of the city around five thousand years ago, the constancy of its natural and artificial light is astonishing. Window reveals were reframed according to the style of the epoch, and the lamp wicks given new decorative shades, but the hole in the wall and open flames—ultimately in the form of wax candles and oil lamps—remained the same well into the nineteenth century. Adolf von Menzel's painting *The Flute Concert of Frederick the Great in Sanssouci* (1852) shows us the maximum lighting of an exclusive night gathering under the supreme luxury of a chandelier. If Shakespeare performed outdoors, then Faust and Mephisto had to declaim from the forward edge of the stage in order to be seen; Goethe commented: "I can think of no greater invention than candles that would burn without being trimmed."

Until the middle of the nineteenth century, the evolution of natural and artificial light in secular buildings saw no highlights or innovations, and for that reason were not mentioned in any architectural treatises. Everything would change for both forms of lighting in the second half of the century: the engineers of steel-and-glass halls with no walls and the technicians of incandescent lighting joined to invent new miracles of lighting. Like the transparency of London's Crystal Palace (1851) by day, the unsuspected brightness of artificial white heat excited not only the public but also architects, though they treated both with skepticism. The steel-and-glass skeleton was at first refused entry into the art of architecture, and initially a practical significance but no aesthetic importance was attributed to electric light. Glazing and lighting revolutionized urban transportation and department stores, factories, and nightlife. In homes, by contrast, at first all that happened was the candles were replaced by gas flames or lightbulbs, but the candelabras and chandeliers in the middle of the room remained what they were: decorative spotlights. The situation was no different with daylight. Whereas train stations, markets, and photographers' studios put up glass facades and roofs to welcome it in, home decorators still draped the heavy curtains around the slit windows. Even the boulevards of Paris owe their balconies not to a desire to look out but to the fire-prevention authorities.

The turbulent innovations of the first era of artificial light were never stimulated by housing construction but rather by the motors of the industrial revolution, none of which wanted nighttime to pass unexploited: the military, the factories, the public space, and the variety theater. Their spotlights, floodlights, and garlands of lights were of little use, of course, in the home, and so only one light source had a career there: the lightbulb. It was not invented by Edison, but he adapted it to mass production—in order to utilize his power plants to the full. Sewers and gas and water pipes had already put into practice the network principle that would make it possible to pack homes even more closely together and make their residents dependent on others—as they remain today. Electricity, initially a luxury product for which customers had to be courted, only became successful with the housing and hygiene crises of the turn of the century. *Die Wohnungsfrage* (*The Housing Question*), Friedrich Engels's political polemic of 1872 (rev. 1887), made it the leitmotif of a humanitarian construction



effort. Bourgeois reformers saw urban rear buildings—in comparison with the large rooms in their own front buildings—as sources of illness owing to the cramped spaces and physical proximity. As it seemed impossible to change that, the promise of good health took the form of opening them to light, air, and sun (all inexpensive gifts from nature). The opening of apartments to light became popular in bourgeois apartments at the same time, from whose salons people had never before looked through the curtained windows. A new “back to nature”—which gave wing first to the youth movement and then to Jugendstil—brought the lesson of the Crystal Palace, fifty years later, to housing construction: windows, balconies, roof and winter gardens soon formed part of the lifestyle of a higher-income elite. In model housing developments, such as the Mathildenhöhe in Darmstadt, the *Art nouveau* of housing was presenting the first aesthetic wedding of window decoration and lighting design, a short-lived marriage of natural and artificial lighting design that would only find parallels in recent times.

For ornamental lighting design was soon confronted with a functional design that brought a lighting rationale that had been tested in factories into the rooms and kitchens of ordinary people. The discovery of the socially motivated avant-garde that transparency and electricity could compensate for a shortage of space provided inspiration and set standards for the *housing modernism* that followed. And the spring cleaning of styles did its part: smoothed and skeletonized furniture took up less space; prefabricated, standardized, and unornamented windows were cheaper than craft products.

By the end of the 1920s, the defining experiences of housing and lighting had already been made that would continue, in more or less varied form, into the postwar period. The visions of the reformers had been fulfilled without question. When the issue of housing dominated the discourse on architecture for the first time, residential construction became a model collection of the best designs of the most talented architects: Antoni Gaudí and Charles Rennie Mackintosh designed total works of art as translucent spatial sculptures; Frank Lloyd Wright exploded the walled-in box, designing houses as enormous hearths surrounded by light wall and ceiling screens. The European master schools exported the flowing daylight of their white cube model homes as far as the ultimate all-glass transparency of Californian villas. While at home in Europe, the utopia of a housing provided by the welfare state that was suited to families and could be mass produced multiplied to the point of monotony. The brilliance of individual masterpieces, the seductive construction boom of the postwar economic miracle, and a faith in the science of functionality worked together to blind people to a fundamental principle of housing: it escapes any attempt to idealize it and hence any standardization, every mass production, every social optimization. That is even more true of interior than exterior design.

A panorama of the highlights of late-modern housing reveals the metamorphoses of the window from hole to transparent skeleton; the metamorphoses of electric light from the lightbulb to the elimination of every trace of shadow. Yet its light hygiene was even less a success with the public than its weight-loss programs for form. The self-critical finale in the 1980s was not a sobering up but an intoxication: in a brief span, not only were the historical pleasures of architectural decoration rediscovered, but a utopia was buried: the possibility that the planning of life and the planning of architecture could be united. Postmodern and posthistorical, pluralistic and individualistic—not only were architectural styles ubiquitous, so was a lifestyle that pretended to reject every dictate of style. Never before was there so much simultaneity and indifference in tastes and fashions, and residential lighting today shows, with the porthole next to the all-glass display case, with the fireplace next to the wall-length plasma screen, new ecstasies rather than anything that could still the appetite for light, but we are also discovering new spaces of refuge from light.

Close and Open, Hide and Display

Höhlenausgänge (Exits from the cave) was Hans Blumenberg's title for a study of the cultural history of the modern age, which can be described as a continued striving for knowledge and enlightenment. Designers of space should recognize philosophers as their most inventive source of keywords. For it is not just Plato's parable of the cave that deals with light and space: from Empedocles to Plotinus, from Lao-tzu to Alhazen, from Grosseteste to Descartes, from Newton to Hegel, from Heidegger to Wittgenstein, from Bachelard to Baudrillard, from Lyotard to Deleuze, we are at least enlightened about the error that spaces are stable or that the truth is manifested in brightness and transparency. By contrast, in the work of E.T.A. Hoffmann we encounter a cave opener of practical intelligence: Councilor Krespel, who has a house built for

himself. Rather than engaging a planner, he thoroughly paces off his property, walking around the property line and back to the center, where he finally marks out the position of his four walls in situ. Then he hires workers and has them build walls, without any openings, to a height that pleases him. Only at the end does he order his masons to punch out the holes for the windows, large and small, high and low, however the sunshine and prospect inspire him. What an architect! At a time when architects were concerned with symmetries and historical styles, he not only practiced a functionalism *avant la lettre* but also gave a new direction to the expert's gaze: outward. If architecture since antiquity had given priority to the view from outside, so that designing a space consisted in the composition of Euclidean solids and planes, then our diplomat (!) Krespel anticipated the lived, tempered, physically experienced space of phenomenology. Around the middle of the twentieth century, the first media theorist, Marshall McLuhan, will suggest grasping visual space as auditory space: as unlimited directionlessness; Gaston Bachelard had earlier called it an experience and all new definitions of it ever since agree that light and space are dynamic phenomena that require synesthetic perception and a performative approach. Panes of glass alone, which joined the window hole in the form of the bourgeois winter gardens of the turn to the twentieth century, do not alter the perception of space; initially, they were just sun catchers for bay windows and winter gardens that occupied an entire floor. Not until the panorama window of early modernism—after ferroconcrete had made the horizontal slit window possible—would the pleasure of seeing step in and frame prospects. Japanese gardeners call the panorama beyond the garden wall a “borrowed landscape” and build it into their designs for the foreground. Krespel's unconventional annexation of the outdoors extends the feeling of the dwelling—once synonymous with experiences nearby and introspection—to the borrowed horizon. Even the full transparency of the glass living boxes can no longer open space wider. On the contrary, the completely transparent villa is either compelled to veil itself or damned to isolation behind its own park walls or hedges to prevent unwanted gazes—but also prospects.

The protective function of housing fulfills a need for security, not only of body and soul but also of goods and assets. In uncertain times, the home has to be a bunker and a hiding place: then its openings are closed and traitorous lights are extinguished. Only in the secured city and at times of peace can people live in illuminated skeletons.

Philosophy's liberation of the awareness of the self stirred up in everyone the same desires for the status symbols that had first been available only to kings and priests and later to the rich bourgeoisie but that today any participant in a talk show can have. Andy Warhol predicted that in the future everyone would be famous for fifteen minutes. As courtly and bourgeois lifestyles had done earlier, democratized housing became an opportunity to gain prestige or even celebrated as what Thorstein Veblen called “conspicuous consumption.” The Biedermeier salon may have ended up as a caricature of philistinism, but the catch phrase “Show me how you live, and I'll tell you who you are” was an advertising slo-

gan in a furniture industry that wanted to equal the turnover rate in clothing fashions. With similar ideas in the back of their minds—“Are you still just dwelling or are you already living?”—some are slandering the wall-to-wall shelving of yesterday in favor of a lifestyle of rapid exchange. Supposedly those TV shows are popular in which a new home decor is imposed on clueless bunglers that in the end always looks as refreshing as the salesrooms at IKEA. But all the exhibitionism of the have-nots is futile: where there is nothing desirable to conceal, there is nothing worth seeing to display. Jacques Tati’s films—from *Mon Oncle* to *Traffic*—describe more accurately than any sociological critique could the tragicomedy of demonstrative living. Showy ambience is ultimately only an obligation for celebrities, who are, of course, not to be seen, admired, or robbed in reality and in situ. Protected at home by bodyguards, they present their lifestyles in glossy magazines or on talk shows. The attitudes of hiding and exhibiting that now influence the media no longer establish the style or act as a role model for a sustained architectural culture that today only reaches a large audience when it offers sensations to curious viewers. All in all, these findings



are not worth complaining about, as they merely locate the theme of housing in a less public niche, where it can be reflected on without the frenzy.

With television, the limits to visibility fall away: the final, most space-consuming opening brings a new source of light into the home, the televisions and computer screens and their anticipated successors, which are turning into a new genre of lighting, with a surprising consequence: whereas the first artificial light made night day, the final one compels darkening, making day, if not night, then at least perpetual twilight. The facade has already reacted. It veils its transparency in various ways: the familiar curtains for privacy or venetian blinds against the sun have been followed by slat blinds, perforated sheet metal, glass bricks, frosted glass, and printed panes. They recall the grilles for Arab harems or Japanese paper sliding doors, rehabilitated decorative glass and muntins. For all their aestheticizing, however, they have the same prosaic goal: dimming the day to a background for virtual reality that is easy on the eyes.

Reception and Manipulation: The Four Lights of Living Space

Light, whether from natural or artificial sources, seems to reach people only via one entrance: the eye. But our brain immediately distributes it to several sectors: these are the levels on which designers of space should work, and they need to distinguish between a *functional*, an *aesthetic*, an *emotional*, and a *somatic* level. If the present book is to be dedicated to manipulations of daylight—that is, to an architecture of windows—the following four sketches should include the manipulations of artificial light.

First and foremost, we owe our vision to brightness, to a useful light that makes our perceptions and activities possible and is therefore vital. In its natural form (or force), we can only encounter it receptively (or defensively): architects turn their floor plans toward the proper light: wall openings and windows have to respond to the whims of the sun.

Lighting with artificial light, by contrast, can be more aggressively controlled and precisely planned. The open fire was its first instrument: the oil flame, lightbulb, and all the other hot lighting technologies are derived from it. Artificial lighting, because it can be measured and tested, is treated more extensively in textbooks and standards than natural light is, which has to manipulate a dynamic and unreliable supply of brightness. Nevertheless, windows and daylight should also be designed with utility in mind. For the reliable paths of the sun make it possible to plan shade precisely and result in an arithmetic based on experiences of the direction of the sky, the dimensions and position of a window, and the depth of the space.

Orientation and information signals with no lighting function should also be counted as useful light: signs, pictograms, last but not least the screen as the new star of light sources.

An instruction manual for the useful lights in a home can be simply formulated and easily satisfied: Give each activity its own light and only the necessary amount! Do not light rooms but rather workplaces! Avoid flooding with uniform brightness: do not drown every pleasure of living! The nocturnal ambience should be like a landscape of scattered campfires, not an open-plan office.



The fact that functional use of light is inevitably perceived as aesthetic or emotional as well, lies in the ambiguity of our connotation of light and in the ambiguity of all light's manifestations.

In its second role, light appears as an agent of an *aesthetics of light*, which also emerges from conscious design but transcends the pure visual aid: shadow sculptures emerge beneath spotlights or highlights; figure and ground can be separated by contrasts in luminance; the decoration of a facade is improved by means of ornamental, colored, or moving illuminations in artificial light. Aesthetic light design can make use of qualities of daylight, choreograph the course of shadows and variations in brightness, vitalize a static space, combine with water, materials, and colors to form a synesthetic poetry like that of a rainbow over a fountain or in Gothic church windows. The aesthetic of artificial light has a tradition in nighttime rituals and fireworks; its most beautiful tasks are those on the stage in a theater; and since electrification its diversity in facade decorations, entertainment, and housing is all but unbeatable.

In residential spaces, where an aesthetic use of daylight demands special refinement of architects, interior designers step in; they prefer to work with lamps and hence with artificial light, which is, without question, a decorative medium par excellence. Every lamp that wants to be more than an aid to seeing belongs in this second genre, for religion or display of status, as symbolic or narrative, as decoration or advertising sign in light, and the less it has to illuminate, the more it can retreat into semidarkness, where magic has its place.

As a rule of thumb for aesthetic, decorative lights in the home, there is only the warning against excess, which, if consumed daily, quickly leads to surfeit. As a precise counterpart to the aesthetic refinement of the twilight boundary, wasteful festive lighting belongs to the same family. There is no need to fear exaggeration, to shy from any kitsch. For sumptuousness cannot ruin anything here, since the spice is the brevity of the performance.

The third power of light, this time a suggestive one, works on the edge of consciousness: there where our emotions are stimulated by phenomena of light such as sunsets, cities on fire, or disco lights.



There is a lot of talk about *atmospheric* or *mood lighting* these days—particularly effusively in advertising brochures from the lighting industry, which now promises to enrich our emotional lives—but there is virtually no scientific information about atmospherically tempered space. Ever since “atmosphere” (global breathing space), a technical term borrowed from meteorology, became a metaphor—first in poetry from around the turn to the twentieth century, then in Heideggerian philosophy of “tempered space”—it has been haunting, not without reason, the jargon of designers of space: who would not like to acquire a hold on the unpredictable phenomena of light in nature and art that trigger our moods? In a sense, any layperson can do that: a candle on the dining table is the tiniest example of a lighting mood that always succeeds. But what are its ingredients? First, there is often a real fire in play, and the domestic hearth also proves itself as an atmosphere-inducing medium par excellence. Often what we describe as atmospheric are natural experiences (a lightning storm or sheet of rain, a volcano eruption or moonlight, marine phosphorescence or the polar lights), and the idea suggests itself that all artificial mood lighting should be interpreted as attempts to imitate natural events. According to another interpretation, however, the multi-purpose metaphor should not be attributed solely to large-scale natural phenomena, but rather emanates from every event, every space, and even every object as a kind of suggestion of an aura. Then every situation and every moment would be characterized by a specific atmosphere, including the mood of the recipient—which would ultimately make it impossible to reconstruct. The most far-reaching analysis of the atmospheric is that of Gernot Böhme, who has equated it with the “character” of a space that we are in the habit of describing with attributes such as narrow or wide, burdening or uplifting, serious or festive, sublime or petty, stimulating or boring, cozy or elegant, masterful or petit bourgeois, and so on. He notes—and this seems to me useful as advice to designers of space—that these moods cannot be objectified architecturally and can only be experienced in physical presences, because they “communicate between the objective qualities of an environment and our sense of being.” In his view, light, color, and sound, but also materials, geometries, and proportions, can be employed in a conscious production of atmospheres, which would bring the designer close to the stage designer or interior designer. It is understandable that, because they want to stimulate their atmosphere, the theater, a party, or large circus events strive for imitation atmospheres. That can indeed be achieved by employing fire, smoke, lighting, veils of water, and Wagnerian sound can cer-