



Safe & Sound proudly presents

THE THIRD DIMENSION

A JOURNEY FROM PAST REALITY
TO FUTURE IDEOLOGY

by Alona Rodah

epicenter

QUOTIDIAN LIFE
VORHANG AUF!

Introduction by / Vorwort von
Amaly Deiss

Without the generous support of Stiftung Kunstfonds, this project would not have been conceivable on this scale. We are very pleased and grateful for the honor, which the granting of this award implies.

In addition to the aforementioned, other important persons have made a significant contribution to the success of this project, both with regards to the exhibition and curating. Rüdiger Stark, for example, whom Stark describes as her homopage as a "master of technology" and who undoubtedly proved himself to be one during the setting-up of the exhibition here at the Kunstpalast. It is thanks to him and his Gemischt, the best exhibition technician imaginable and fortunately employed here with us, as well as to the entire highly committed team at the Kunstpalast, that Architecture of the Rights now radiates its light throughout the venue's completely blacked-out rooms.

And of course, first and foremost to the truly marvelous Alena Budic!
Many thanks and curtain up for *Solo & Sound: The Third Dimension*!

Ohne die großzügige Unterstützung durch die Stiftung Kunstfonds wäre das Projekt in diesem Umfang nicht denkbar gewesen. Wir freuen und bedanken uns sehr über und für die Auszeichnung, die die Gewährung dieser Förderung bedeutet.

Neben den genannten haben aber auch weitere wichtige Personen maßgeblich zum Gelingen dieses Projekts zur Ausführung und Katalog beigetragen: Rüdiger Stark, den Alena Budic auf ihrer Homepage als "Master of technology" bezeichnet und der sich beim Ausstellungskauf bei uns im Kunstpalast zweifelsfrei als solcher bewiesen hat. Dem, wie Gemischt, dem besten Ausstellungstechniker, den man sich vorstellen kann und der zum Glück bei uns am Haus angestellt ist, sowie dem gesamten hoch engagierten Team des Kunstpalast ist es zu verdanken, dass *Architecture of the Rights* bei uns in bestmöglicher Weise leuchtet und strahlt.

Und natürlich und vor allem der großartigen Alena Budic!
Vielen Dank- und Vorhang auf für *Solo & Sound: The Third Dimension*!

Janet Davis is director of the Kunstmuseum in Erlangen. From 2009 to 2013 she was senior at the Foundation of the Museum for Banking, Kunst und Design in Frankfurt and from 2011-2016 acting director of the Museum für Kunst und Kunst in Berlin, Heidelberg, and Bonn.

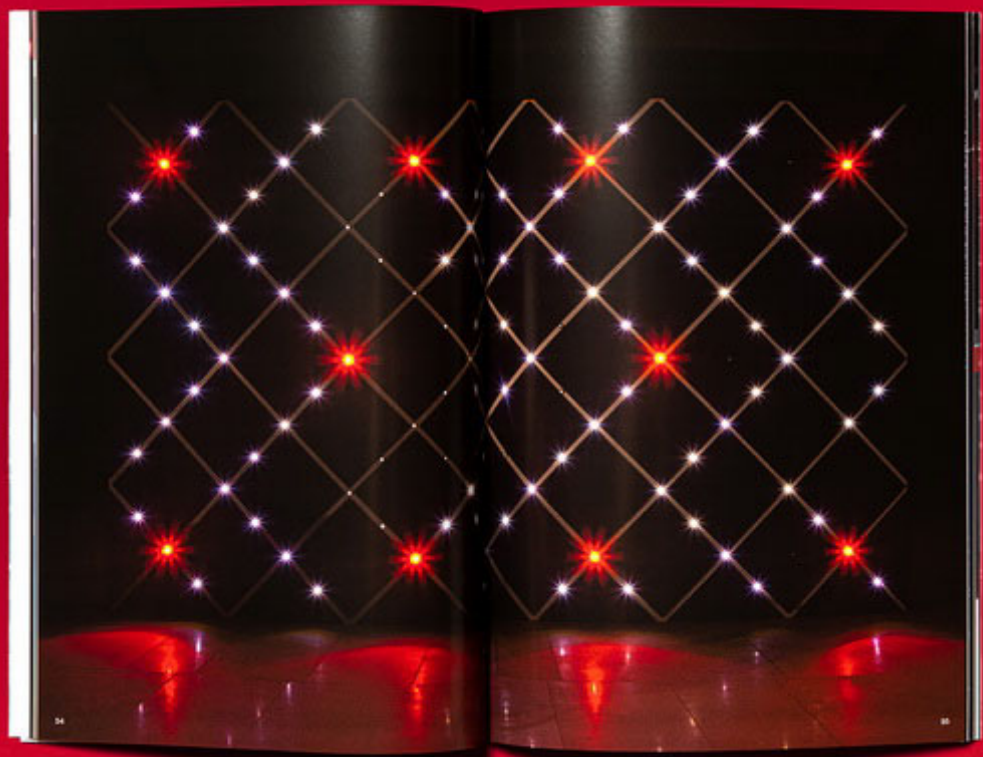
Janet Davis ist Leiterin des Kunstmuseums in Erlangen. Von 2009 bis 2013 war sie Kuratorin der Stiftung für Kunst und Kunst in Frankfurt und von 2011 bis 2016 stellvertretende Direktorin des Museums für Kunst und Kunst in Berlin, Heidelberg und Bonn.

Perception & Lighting as Formgivers for Architecture



Extracts from *Geometry of Curves: Terms* by William M.O. Lam, 1977





THE MODERN DISCOTHEQUE

RE-CODING TECHNOLOGY FOR TECHNO-EMANCIPATION

Pat Estève

In 1976, the Greater London Council passed a code to regulate a new architectural genre: the discotheque. This code is the first known text describing a discotheque for legal purposes. The resulting GLC-published booklet, titled *Class A Rules GL*, explained the legal dimensions of the code and gave recommendations on how to run a discotheque at the beginning of the booklet, a definition of the discotheque in legal language appeared:

"For the purposes of this Code, discos are defined as events characterised by hourly amplified music, dancing, flashing lights, and usually serving people under the age of 30."

Beyond the broadest legal terms of the document, the text itself described both the specific methods that constituted the discotheque. Clearly, it listed the discotheque with the rest of "licensed" activities, defined the discotheque as well with "licensed music" and "flashing light". It is worth noting how it defined the "flashing light" of its time: "intensive and intermittent" light, but through its intensity and its relationship with and the use of specific technologies. Concretely, it identified two kinds of "flashing" technologies: those involving "strobe and three projecting light. The code regulated their working dimensions, specifying the frequency for strobe and UV lights, specifying the kind of laser lights that could be used and specifying the appropriate levels of sound intensity.

Despite the legal dimensions of the code that exclusively legislated these two families of technologies, a warning appeared in the introduction booklet regarding a third kind of technology. In order to avoid eventual trouble, it was advised that entrepreneurs be especially careful when it came to people who were under the effects of psychotropic technologies, or in other words, drugs. The text doesn't explicitly acknowledge or seek to regulate drugs as a constitutive part of the discotheque, but they are nevertheless mentioned about tangentially and in a few peripheral articles that refer to "control of psychotropic substances" when addressing the "discotheque phenomenon". It is not surprising that the psychotropic were not included in the text of the code. The law of licencing is responsible for the early 1970s, security agencies, before had assumed authority for different kinds of technologies: the administrative control of drugs was in fact subsidiary of a number of national agencies, rather than monitored by local building regulations. In fact, in 1971, a few years before the legal regulation of discotheques in London, the UK had held a convention on Psychotropic Substances in Vienna. In this meeting an agreement was made to internationally ban the commercialisation and consumption of systems of drugs, particularly for recreational use.

As is customary, the GLC's regulatory language came in after the use of advanced optical technologies had already been deployed. In effect, the legal text officially legitimated the existence

of this architectural genre: the discotheque as a new form of spatial practice that introduced a new use for a series of technologies that had already existed for a long time. It was only at the end of the 1980s that this code was passed, yet the discotheque phenomenon had been already present for almost two decades. Furthermore, the lighting, sound and psychotropic applications that produced the experience of the discotheque were invented many decades before the 1973 Convention and the 1979 Code. By the end of the 19th Century, electricity, the fueling energy for most of the technical devices composing the discotheque started to be spread. In 1881, the International Exhibition of Electricity was held in Paris, while Thomas Edison built the first public electricity distribution system in London a year later. This widespread expansion of electricity used propelled experimentation with electronic devices at the same time that pharmaceutical industry was beginning to test synthetically produced chemical substances and their effects on the body. Between the end of the 19th Century and the first decades of the 20th, most of the electronic devices and drugs that were to define the discotheque had already been invented. Later, the investment in research during

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the World Wars focused further scientific research and testing. Finally, such devices were harnessed for completely different purposes than "having fun" because it was only in the post-war period that these technologies acquired a new dimension and were introduced into a spatial design context.

Meanwhile, technologies to create new forms of light had long been historically sought,



Thomas Edison sitting at his desk with a typewriter, 1879. Photo: The Edison Papers Project, Columbia University.

yet were similarly boosted when, during the 19th Century, discoveries relating to the material sources of light exponentially increased. Initially, these inventions were largely tied to the aesthetic expression of light, such as when breakthroughs in chemistry made it possible to widen the color range of fireworks—before the 1820s, only orange and white fireworks existed. Later though, following the first incandescent bulb patent by Frederick Halcyon in 1841, most developments in the field of lighting were done by purposes other than illuminating "existing" or creating a pleasing aesthetic effect. Most of the forms of lighting that would become common in discotheque design were invented between 1890 and the 1930s. As laboratories, with the exception of the laser—which would not become a reality until 1960—

At the turn of the century, in 1858, William Henry and Thomas Edison discovered how to light-generate with vacuum tube lights, which was produced by one of the earliest forms of cold cathode lamps, was initially used for wireless telegraphy. A few years later, in 1901, ultraviolet light was produced for the first time. This type of light, achieved by lamps that emit long-wave and therefore very little visible light—hence why

it is sometimes referred to as "black light"—was initially used in medicine, particularly in the field of dermatology and also made generally as a means of sterilizing medical equipment. In the 1920s, another type of cold cathode lamp was discovered when Osram, a lighting company



The glowing filament is the first incandescent light bulb, designed by Thomas Edison in 1879.

that a still operational lamp, designed the fluorescent tube in 1926. This creation would soon become a ubiquitous and popular form of white lighting for industrial spaces, yet with the use of slurs of a tube with colored glass it also later became a playful element in the discotheque. Then, in 1930, Johannes Ostermeyer invented the flash bulb. Until then, a flash powder was used to create a flash effect for photography used to physics research on moving bodies. The bulb permitted the neutralization of the device and the concentration of flashes, thus facilitating the production of a flashing light lamp—initially still used to study moving bodies for engineering purposes.

With this last invention, by 1930, most of the types of light that would be later integrated in the discotheque were already technically available. The last form of light belonging to the realm of the discotheque would become a reality three decades later, around the same time that the first discotheque designs began to be built in Europe. Although theoretical speculations are to produce a laser light had been formulated since the early 20th Century, the translation into a working physical device would only meet success in 1960 at Hughes Research Laboratories in California. By then, the sum of available lasers, strobes, blacklights, neons and colorful spots, would become the visual vocabulary of the discotheque. When used in combination, these elements produced a type of visual effects that evoked the perception of "blinking" color sequences. Both within the technical structures of lighting, it was the experimental and mutating dynamics of light that became the main aesthetic and material.

At the dawn of the discotheque, the visual world was intimately linked to the auditory. In combination with the light, and marking the rhythm of the musical-melancholic, there were music produced by sound technologies. Here, since in the discotheque, music was not performed live, but was abstractly reproduced. The technologies required to produce sound on the audible spectrum had been developed over the preceding century, originating in the attempt to capture and reproduce speech. The first rudimentary components to reproduce sound about were developed in the second half of the 19th Century, but efforts to enhance telecommunication systems, in 1878 Alexander Graham Bell patented what has been

considered the first telephonator as part of his telephone mechanism. One year later, Thomas Edison's phonograph became commercially available, a device that allowed the recording and playback of sound. Almost half a century later, around 1926, a series of devices for sound recording and reproduction developed by Western Electric in New York included electronic solutions for sound amplification linked to their telephone industry. In addition, Western Electric commercialized horn speakers for cinema spaces that reproduced sound using a 3-watt amplifier. The 1920s also saw the emergence of the first mechanisms that not only al-

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lowed the reproduction of sound, but also the possibility to play a combination of different musical pieces in an automated manner: one of the world's first jukeboxes was commercialized by AMI, the Automatable Musical Instrument Company, in 1927.

During the following decades, audio technologies would evolve to include other elements for enhanced sound recording and playback: better sound quality. Alan Blumlein patented a stereophonic sound protocol in 1933 under the name of "improvements in and relating to sound-transmission. Sound-recording and sound-reproducing systems," which included



Outside the home, the blackout provided a space for mischief and crime. People's fears of being attacked or robbed in the dark were unfounded, and those who did rob or snatch, too, faced the severest penalties, and sometimes execution. There was almost a moral equivalence between the enemy that exploded the dark to attack from the sky, and the enemies within the "Volksgemeinschaft" who exploited it for their own gain. For a system of civil defense that exulted in the community above the individual, these sorts of crimes were deeply troubling. So too was the exceptional rise in

Juvenile street gangs roamed the darkened streets and set themselves against the Nazi state, some dressing in the fashions of the enemy, and listening to their music

juvenile crime, a phenomenon that seemed to affect all blacked-out societies. Juvenile street gangs roamed the darkened streets and set themselves against the Nazi state, some dressing in the fashions of the enemy, and listening to their music. These photos of resistance were troubling to the authorities as any light in the blackout, since they showed the limits of state authority and the ability of the blackout to destitute wartime life. If living with the blackout meant discipline, then it also meant freedom to challenge and undermine it.

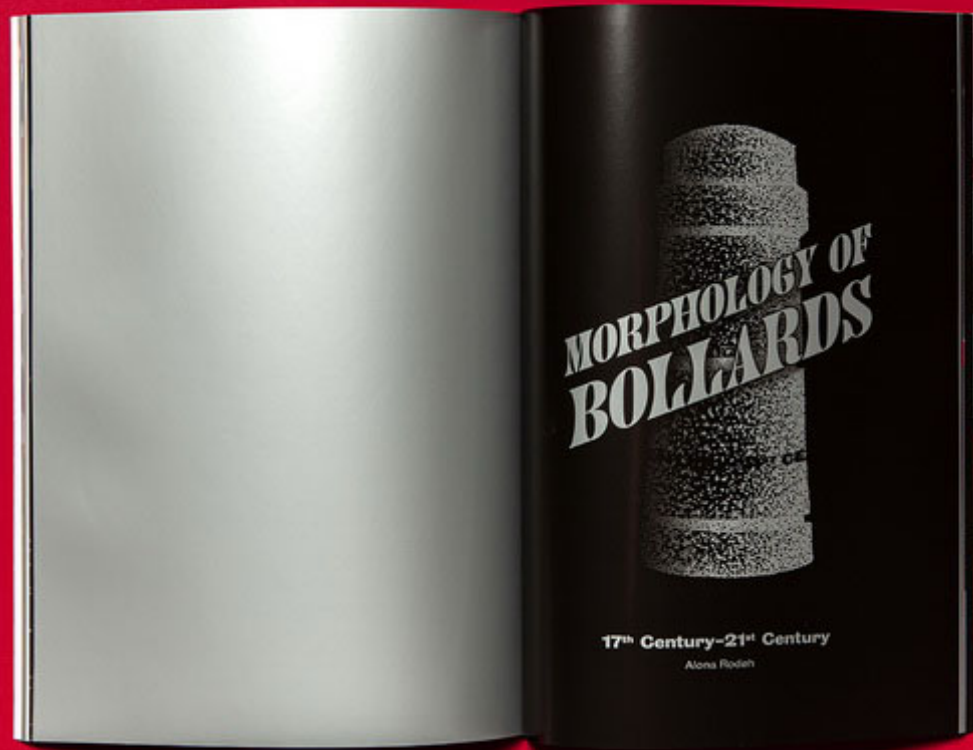
Learning to deal with the dark was mainly an urban problem, and people who lived in the countryside were sometimes bemused by the way urban dwellers made of it. In rural areas darkness was part of the everyday, and the only real problems were of the needs of the urban population and infrastructure now extending into the countryside. In a way the tables were turned. Even now, urban visitors to the countryside are often struck by the strange and transient character that the rural dark can have. If we really manage to escape the distant strange glow of urban life, then it can seem as we are in another time and place entirely. The blackout brought that quality to the heart of the city. It

was a kind of dark that hadn't been seen or felt in urban European cities since before the middle ages. In the absence of light was a new kind of urban space. Some were able to explore this. The German-British photographer Bill Bruce captured this new strangeness in his mobile photos of blacked-out Britain—at once mysterious, timeless, always pushing at the edge of what was being "seen". His images are eerie, probing gracelessness by dimmed headlights of a car, a couple caught as the beams sweep over them, moonlit, cobble streets with dark houses standing over them like monoliths. It was as though the dark in these spaces allowed for a kind of revelation, a way of looking into the past, or an imagined present, that was free of ordinary ways of seeing. This was darkness as a liberation from society, from ordinariness, from present troubles. If light stood for order and reason, then for many the dark stood for freedom.

When the war ended and the lights were switched on again, it was mostly a time for celebration. Few things symbolized the return of peace better than the freedom to show a light in the dark again. It represented the end of the wartime order, and the return of the faint light of progress that had been extinguished six years ago. Yet some people found the return of this freedom a little overwhelming, and resistance to the light was not uncommon. It was difficult to give up the belief in the dark as protection. People would struggle with relearning, damaged infrastructure, and intermittent electricity for several years after the war. But the nation outside their homes gradually returned to its normal state. The lights were free to glow again.

Mary Wiggan is a researcher and the author of *The Blackout in Britain and Germany, 1939-1945* (Progress, 2018). She lives in Oslo.

- Notes
- 1 Douglas Leonard, "Blackout" *Harper's*, London, 1940, p. 71.
 - 2 *Blackout in Germany*, *Optima* 404, November 1942, p. 30.
 - 3 *Harper's*, March, 1940, p. 100.



**MORPHOLOGY OF
BOLLARDS**

17th Century-21st Century
Alona Rodich

Fig. 10. The "Belt" Assembly.

The belt assembly is a complex mechanical component consisting of a series of interlocking parts. The main body is a rectangular block with a series of raised, parallel ridges along its length. A central shaft or rod passes through the block, secured by a nut and washer. The assembly is designed to provide a secure, adjustable connection between two surfaces.

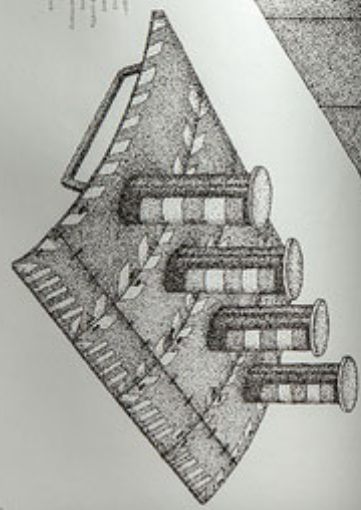


Fig. 11. The "Belt" Assembly.



Fig. 12. The "Belt" Assembly.



Fig. 13. The "Belt" Assembly.

