

materialisierungen 1

**the medium of light in the context  
of the neo-avant-garde of the 1950s and 1960s**

Andrea von Hülsen-Esch and Dirk Pörschmann (eds.)

d|u|p

düsseldorf university press

## *The Proliferation of the Sun:*

### **Group ZERO and the Medium of Light in 1960s America**

*Tina Rivers*

*Light & Sound: The way to decorate for the 1970s.* That was the theme of the October 1969 issue of the magazine *American Home*, which featured advice on home lighting and stereo equipment, alongside recipes for ‘ten perfect apple desserts’. As one might expect from a publication devoted to middlebrow interior design, one of the main articles catalogued futuristic mass-produced lamps, whose bulbous shapes and smooth surfaces today are redolent of the space-race era. Yet the issue also introduced readers to a new type of art, then being popularized by museum exhibitions across the country, that bathed rooms in fluctuating light. In the article “Light Becomes the Medium”, the magazine claims these artworks surpass painting’s storied attempt to replicate light effects: While “Rembrandt, Vermeer, Monet and the Impressionists found the capturing of light on canvas the ultimate painter’s challenge”,

Now light itself is the medium in a lively new branch of kinetic art; the ‘paint’ and the ‘canvas’ are made of such unpainterly things as mini-motors and plastics, high-intensity bulbs and transistors. The result, as shown in the private collection of Mr. and Mrs. Malcolm Forbes, is an ever-changing light show of glowing tapestries, luminescent pictures and flickering sculptures.<sup>1</sup>

---

<sup>1</sup> John Zimmerman, *Light Becomes the Medium*, in: *American Home* (October 1969), p. 81. Though the magazine suggested a division between light objects acquired by art collectors and mass-manufactured lamps, the demarcation was fuzzy at best; for example, Otto Piene’s *Light Drum* was included, alongside other lamp-like and presumably editioned works, under the header “They

Several full-color photographs of the Forbes' collection illustrate the diversity of these artistic 'light shows', from the geometric patterns displayed on Thomas Tadlock's modified television set, to the wall-sized projection of colorful forms by Earl Reiback's 'Lumia' machine. Prominence is given, however, to a full-page photograph of Otto Piene's *Light Cocoon* (1965), a metallic, perforated orb housing rotating bulbs that cast ambling white lights around a darkened room (Fig. 4.1). In fact, Piene's work had been exhibited across the United States in the late 1960s, and had become an unofficial icon of the kinetic light art movement through its frequent reproduction in magazines such as *Time* and *Popular Photography*.<sup>2</sup>

Turning the pages of the same issue of *American Home*, the reader would encounter other articles on using light effects decoratively. One offers instructions on how to 'Toss a Light and Sound Party', as illustrated by a young couple's housewarming in Washington, D.C. (Fig. 4.2):

To decorate their bare, newly painted living room, the Moscosos simply bought crystal-clear blowup sofas and chairs, then hired Jeremy Sage [a graduate student from New York City] to fill the empty rooms with light and synchronized sound. [...] Below, [Sage] is projecting on the wall small colored plastic pill boxes that are glued to a Pyrex dish filled with oil and water. The projection on the ceiling originates under the clear coffee table. Sage has discovered

---

Call It Art?" in a *New York Times* special on home decorating, and was listed as being for sale through the *Howard Wise Gallery* (Barbara Plumb and Rita Reif, The Home, in: *New York Times Magazine* (September 25, 1966), p. 72–3). For a primary account of kinetic light art / luminism, see Willoughby Sharp, Luminism and Kineticism, in: *Minimal Art. A Critical Anthology*, ed. by Gregory Battcock, Berkeley 1995 [1968], p. 317–58.

<sup>2</sup> Many scholars have discussed the origins of *Light Cocoon* and other works of this period in Piene's earlier 'light ballets': While in the ballets, Piene performed a kind of duet with hand-held electric lights, in subsequent works, the human agent is supplanted by motors hidden inside sculptural bodies.



Fig. 4.1: Otto Piene, *Light Cocoon*, 1965. Illustration accompanying the article "Light Becomes the Medium", *American Home*, October 1969.



Fig. 4.2: Illustration accompanying the article "How to Toss a Light and Sound Party", *American Home*, October 1969.

the drama of projecting fizzing Alka Seltzer, magnified until it has the effect of a gigantic explosion. He uses alphabet noodles, baby oil, tropical fish, anything. Party planners and lighting designers such as Jeremy Sage can be found in many large cities. If you can't locate one, call a local discothèque. Perhaps they have light, will travel. Or ask some college students who thrive on mixed media.<sup>3</sup>

Though depicting the living room of an aspirational couple, the photographic illustration does resonate, as the article suggests, with the use of projected light to create the youthful 'far-out' environments of the late 1960s. Not coincidentally, it is notably similar to a photograph, in the same issue, of the famous *Electric Circus* discothèque, described by *American Home* as "an entertainment dimension that started the trend for projected images"<sup>4</sup>.

Taken together, these two articles – on light becoming a proper artistic "medium" and on the use of "mixed media" to throw parties – articulate two seemingly dissonant aesthetics of light in America in the late 1960s. On the one hand, there are the kinetic light works by artists such as Piene, sold by galleries to prominent art collectors like Mr. and Mrs. Forbes, who then display these objects in their home as they would any sculpture; and on the other, there is the visual style of a (literally) domesticated psychedelia that uses different media to create immersive environments of light and sound. The coexistence of

---

<sup>3</sup> John Zimmerman, Toss a Light-and-Sound Party, in: *American Home* (October 1969), p. 120–21.

<sup>4</sup> Elizabeth Bowen, New Waves of the Future, in: *American Home* (October 1969), p. 69. While *American Home* identifies the *Electric Circus* in this particular image as being located in New York City, a recent article has reproduced an almost identical photograph of *The Electric Circus* club located in Toronto. Regardless of city, the aesthetics of the *Electric Circus* were presumably quite constant. Cf. Robert J. Gluck, *Electric Circus, Electric Ear and the Intermedia Center in Late-1960s New York*, in: *Leonardo*, vol. 45, no. 1 (February 2012), p. 50–56.

these two aesthetics in the pages of a single issue of a popular magazine begs the question: What was the significance of the use of light by kinetic light artists in this particular historical context, when a work like Piene's *Light Cocoon* occupied the same discursive space as a 'light and sound party'? Put differently, in what ways were the production and reception of kinetic light works by artists such as Piene impacted by their proximity to the burgeoning use of light itself as a form of entertainment and spectacle in late-1960s America?

Importantly, before moving to the United States from his native Germany in 1964, Piene had co-founded the avant-garde Group ZERO, which advocated using real, and not merely depicted, light in the creation of aesthetic experiences. Most histories of ZERO focus on its connection to both historical and contemporaneous European avant-gardes, from the *Bauhaus* (exemplified by László Moholy-Nagy's own kinetic light sculptures) to *Art Informel*, *Tachisme*, *Spazialismo*, *Nul*, *Nove Tendencje*, *GRAV*, *gruppo N*, and *gruppo T*. In keeping with this Eurocentrism, when placing ZERO in the context of larger social issues, art historians have focused on ZERO's relation to Europe's experience of World War II and its economic aftermath.<sup>5</sup> While this scholarship covers the major period of ZERO's production, no-one has examined the arrival of the three main members of ZERO – Heinz Mack, Otto Piene, and Günther Uecker – in America in 1964, where they would reside periodically up through and beyond the group's dissolution around 1966–1967.<sup>6</sup> In other

---

<sup>5</sup> For example, see Eleanor Gibson, *The Media of Memory. History, Technology and Collectivity in the Work of the German Zero Group, 1957–1966* (PhD diss., Yale University, 2008). Albert Speer's 'cathedral of light' at Nuremberg is a major touchstone in the comparison between ZERO and the use of light in Germany in the historical period preceding ZERO's formation.

<sup>6</sup> Perhaps the earliest definitive statement of the core group's dissolution came from Mack, who in April 1966 told a reporter, "The Zero spirit is still alive.



words, no-one has examined the last days of ZERO, when ZERO entered the specific cultural milieu of late-1960s America and took on new concerns and dimensions, even as the core group began drifting apart. As I will argue, it is in ZERO's final moments that we witness a crucial transformation in the meaning of light in the group's works, one that speaks to changes in the use of light in art and culture more generally in the period.

ZERO reached America in the winter of 1964, in two near-simultaneous shows: a large group survey exhibited at Philadelphia's *Institute of Contemporary Art* and Washington, D.C.'s *Gallery of Modern Art*, and a smaller show devoted to the three core founders at the *Howard Wise Gallery* in New York City (Fig. 4.3). Up to that time, ZERO was a loose movement – or, as Piene termed it, a 'point of view' – centered around the concept of light: Though the ZERO artists utilized materials ranging from smoke to aluminum sheets and nails, working with light and shadow was the common denominator in their paintings, sculptures, and performances. Tellingly, the Italian artist Lucio Fontana, who experimented with the use of neon and ultraviolet light from the late 1940s, served as ZERO's "spiritual father", as Piene claimed in an essay on the group's history.<sup>7</sup> The art critic Grace Glueck, reviewing ZERO's show at the *Howard Wise Gallery* in the *New York Times*, explained that "by way of a credo, the three admit to 'a fascination with light.'"<sup>8</sup> And as Piene himself wrote in the catalog to the Philadelphia show,

---

But for me, no more collaboration. From now on, I take my own direction." (Grace Glueck, Art Notes. A Hanging Museum, in: *New York Times* (April 17, 1966), p. X16).

<sup>7</sup> Otto Piene, The Development of Group "Zero" (1964), in: Otto Piene / Heinz Mack, *Zero*, Cambridge 1973, p. xxiii–xxv, esp. p. xx. For more on Fontana, see Francesca Pola's essay in this book.

<sup>8</sup> Grace Glueck, Art Notes. How to Build an Indoor Patio, in: *New York Times* (November 29, 1964), p. X31.





Fig. 4.3: Installation photograph of the Group ZERO exhibition, *Howard Wise Gallery*, November–December 1964.

“There is one integrating power which is and will be reigning in our efforts: the fascinating attraction of light.”<sup>9</sup>

The artists’ collective statements, such as those made in the three magazines the group published between 1958 and 1961, reveal that their ‘attraction’ to real light was motivated not only by the avant-garde desire to overcome the gap between representation and reality, but also by light’s association with the ideals of energy and purity. For ZERO – a group named after the word that ignites a rocket launch, “indicating a zone of silence and of pure possibilities for a new beginning” – the physical properties of light embodied a utopian vision of the future.<sup>10</sup> Just as modernists heralded early 20<sup>th</sup> century abstract painting and

<sup>9</sup> Otto Piene, ZERO, in: *Group Zero*, exh. cat. Philadelphia Institute of Contemporary Art, ed. by Otto Piene, New York 1968, n.p.

<sup>10</sup> Piene, *Development* (see note 7), p. xx.

silent film as universally communicative modes of expression that would transcend barriers between languages and nationalities, ZERO looked to the velocity of light to escape the gravity of history. As Mack said of his metallic sculptures, “In my light reliefs, in which light itself becomes employed as the medium of color, the movement brings about besides the light vibration, a new, immaterial color and tonality, whose untouched and entirely distantly objective manner of appearance shows a possible reality, whose emanation and secret beauty we now already love.”<sup>11</sup> In this statement, light is both concrete and abstract, in that it is both an “untouched” (direct and unmediated) part of our physical reality, and a resonant symbol of another “possible” world (one in which politics and other mundanities are white-washed by a glaring light, leaving only the “secret beauty” of aesthetic experience). ZERO’s devotion to this metaphysics of light was articulated explicitly by Piene, who in 1960 made a distinction between ZERO’s “idealistic (occasionally romantic)” obsession with light and the Pop-oriented work of the New Realists, who emphasized elements of culture over nature in their own move from representation to reality.<sup>12</sup>

Despite its theoretical coherence, ZERO’s understanding of light was significantly transformed by the group’s move from

---

<sup>11</sup> Quoted in Samuel Adams Green, Forward, in: *Group Zero*, exh. cat. Philadelphia Institute of Contemporary Art, ed. by Otto Piene, New York 1968, n.p.

<sup>12</sup> Piene, Development (see note 7), p. xxi. This distinction is reiterated in the press release for ZERO’s 1964 Howard Wise show: “Under the Zero sign, the ‘inner circle’ of New Idealists (Mack, Piene, Uecker) was frequently joined in both exhibitions and publications by New Realists (Arman, Spoerri, Tinguely, et alii [sic]). [...] While the New Realists have been familiar in the States for some years, the New Idealists of Zero will make their initial appearance here on their own in the Wise show” (Howard Wise Gallery press release, Group Zero, 1964, Howard Wise Gallery Records, Archives of American Art, Smithsonian Institution).

the Old World to the New, and specifically to the *Howard Wise Gallery*, which was the premier gallery for kinetic light art in America up until its closing in 1970. (Its identity as such may be attributed in part to ZERO's loyalty: In the five years between 1964 and 1969, Mack, Piene, and Uecker would show at the gallery five, eight, and five times, respectively, typically in group shows, though each had at least one solo show.<sup>13</sup>) In fact, the works depicted in the article "Light Becomes the Medium" were all purchased by Mr. and Mrs. Forbes from Howard Wise, and Wise himself contributed an article to the same 1969 issue of *American Home*, called "Kinetic Light Art", in which he restates the opposition between depicted and actual light:

Ever since the days of Rembrandt painters have used the representation of light in their work. The Futurists tried to depict movement on canvas – these were paintings of movement, not actual movement. Today, some artists are using "real" light and movement in their work. These are the kinetic light artists. It used to be that the artist was interested in the beauty of his natural environment: the rosy glow of the sunset, the majesty of the forest, the peace of the landscape, the glory of the flower. The artist "created order out of nature's chaos" and by his work enabled man to see nature through his eyes. In life today, our surroundings are mostly of our own making and it is the function of the artist to discover their beauty, to transform it, to order it, so that we may enjoy it. You sense it in the lights of a city seen from a descending plane; the flashing,

---

<sup>13</sup> The depth and length of their involvement with the gallery, which was located on 57<sup>th</sup> Street in one of New York's major art districts, indicates the amount of exposure these artists had within the New York art world, as well as the degree to which the reception of their works was tied to the reception of works by Wise's other artists. Though these artists included many young, white, American men (many with scientific or technological backgrounds), the gallery also countered the nativist tendency of post-war American art by exhibiting a wide range of international artists aside from ZERO, including the Paris-based Julio Le Parc, the Argentinian Marta Minujin, the Chinese-born Tsai, the Greece-born Takis, and the Italian Bruno Munari, among others.

## *The Proliferation of the Sun*

colored lights of Broadway or Main Street; the racing reflections of a tunnel on the hood of a car. These are the inspiration which the kinetic artist uses as the subject matter of his works.<sup>14</sup>

In an attempt to justify kinetic light art, Wise identifies the built environment as its “inspiration”, continuing the tradition of legitimizing abstract art by claiming it illustrates either an aspect of reality or a particular idea (e.g., the claim that Cubism demonstrates the relativity of space and time). That said, the deployment of abstraction in ZERO’s later works does seem to embody a response to an urban context, and specifically, to the context of New York City, where all three artists would live and work at some point in the mid- to late-1960s. This response first manifested in Mack’s April 1966 solo show *Lights of Silver*, in which abstract metallic sculptures echoed both the city’s skyscrapers, with their shimmering surfaces and towering heights, and also the busy lights of Broadway’s theatre district (Fig. 4.4). Though Mack initially thought the city’s skyscrapers “didn’t seem high enough” and paled in comparison with the cathedrals of Europe, the press release for this show states: “The concept of this exhibition is inspired by Mack’s confrontation with the City of New York. Using polished aluminum and stainless steel as his materials and light reflections as his medium, Mack’s exhibition is a dazzling constellation of ‘Lights of Silver.’”<sup>15</sup> Writing in the same vein, Grace Glueck, the same critic who had reviewed ZERO’s 1964 New York show, noted that

by the evidence now visible at the Howard Wise Gallery, [Mack] has opted for the New World [over the Old]. The exhibition is a kind of New York homage [...] His “silver dynamos,” giant rotating

<sup>14</sup> Howard Wise, Kinetic Light Art, in: *American Home* (October 1969), p. 26.

<sup>15</sup> Glueck, A Hanging Museum (see note 6); *Lights of Silver* exhibition pamphlet, Howard Wise Gallery Records, Archives of American Art, Smithsonian Institution.



Fig. 4.4: Installation photograph of the Heinz Mack: Lights of Silver exhibition, Howard Wise Gallery, 1966.

spangles of embossed aluminum mounted in wall boxes, suggest the shimmering light patterns of the Great White Way [a nickname for Broadway]. A cluster of glittering pylons, arranged in skyscraper ranks, make ingenious use of stainless steel, Plexiglass, polished aluminum, mirrors, and – yes, diffraction lenses. And they could be a backdrop for “42nd Street”.<sup>16</sup>

Mack’s engagement with the built environment of New York would continue in collages like *Die unerwartete Begegnung* (*The Unexpected Encounter*) (1963–73) and *Licht-Steile* (1974–9): Both are mock-ups depicting rigorously abstract, gleaming monuments inserted into the city’s waterfront landscape, including a 70-meter tall structure at the United Nations complex (*Figs. 4.5, 4.6*). The proposed monuments mimic New York’s buildings with their blinking lights, rectilinear shape, and extreme height, respec-

<sup>16</sup> Glueck, *A Hanging Museum* (see note 6). In addition to being a synecdoche for the Broadway theatre district, the phrase ‘42nd Street’ refers to a popular 1933 film, based on a novel, about the mounting of a Broadway musical.



Fig. 4.5: Heinz Mack, *Die unerwartete Begegnung, New York* (*The Unexpected Encounter, New York*), 1963–73.

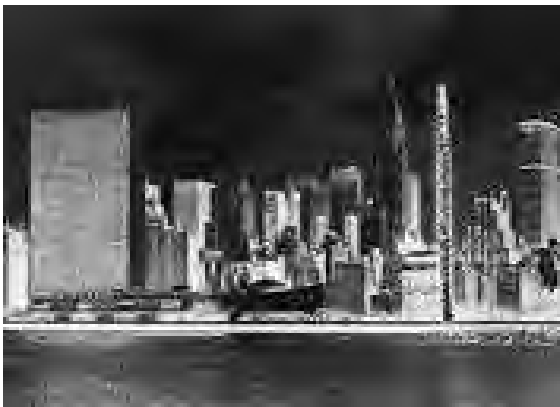


Fig. 4.6: Heinz Mack, *Peace Stele*, 1974.

tively; they also elegantly complement the city's distinctive skyline, occupying negative spaces and creating visual consonances, especially in the *Licht-Stele's* visual rhyming with the Chrysler building. That said, the forms, which hover in mid-air and seem to lack windows, are wholly fanciful, and therefore suggest a certain resistance to the actual architecture of the city; like their counterparts from antiquity, these sleek icons from the future are potent symbolic structures, in that they implicitly question the efficient capitalist logic undergirding New York's real estate market.

The same deliberate response to the landscape of New York – a landscape very different from the old Düsseldorf streets, open fields, or waterfront piers around which ZERO had planned some of its earliest projects – also marks Piene's oeuvre in this period. In one image from a series of lithographs, he imagines *New York City on a Hill* (1969), playing with the contrast between the city's flat, gridded topography and its forest of skyscrapers by funneling the city's entire mass vertically, into a sharply pointed hill (*Fig. 4.7*). As the scribbled caption of the work suggests ("New York City on a Hill with Mirage of New York City on a Hill"), the point of the hill touches that of another hill that points downwards, as in the meeting of stalagmites and stalactites in a wet cave. The result is that the city appears to be doubled across the lithograph's horizontal axis, creating an hourglass shape; given the work's content, the hourglass becomes a metaphor for the city's perpetual energy, set in relief by two dark voids traced by the shapes of the hills. Thus, ZERO's quintessential strategies of playing with reflections and the contrast between light and dark, as seen in Mack's metallic sculptures and Piene's *Light Cocoon*, take on new urban and social connotations. (Though not a necessary condition of this shift, it is notable that Piene here regresses from working with real light





Fig. 4.7: Otto Piene, *New York City on a Hill*, 1969.

and shadows to working with mere metaphors or representations of lightness and darkness.) The same explicit invocation of mundane reality marks Piene's 1966 play, *The Light Auction Or New York is Dark*, staged at Frankfurt's Municipal Theater: The title, like the play itself, was a topical reference to New York's infamous blackout of 1965.<sup>17</sup> Finally, one may cite Piene's mul-

---

<sup>17</sup> The blackout occurred during *Light Ballet*, Piene's solo show at the *Howard Wise Gallery* in November 1965. Piene recalls that the gallery's neighbors initially thought his sculptures had caused the power to go out in their building,



Fig. 4.8: Installation photograph of Otto Piene, *New York, New York*, 1967, Museum am Ostwall, Dortmund, Germany.

timedia installation *New York, New York*, which was staged in 1967 at his retrospective at the Museum am Ostwall in Dortmund, Germany, and attempted to use projected photos, such as the image of a taxi cab, and recorded ambient sounds to convey the experience of being in the city (Fig. 4.8). In all of these works, ZERO's typically abstract use of light to suggest universal ideals becomes allusive and historically specific; one might say *New York* transformed ZERO's aestheticized and utopian light into something relatively crude and quotidian.<sup>18</sup>

---

anecdotally suggesting the novelty of art works with electric light (conversation with the author, June 6, 2012).

<sup>18</sup> One may also mention one work by Uecker in this context: his *New York Dancer* (1966), a motorized sculpture of nails embedded in a loose fabric attached to a vertical pole, which expanded in volume as the pole turned with increasing velocity. The work was included in Uecker's November 1966 solo

It is important to note that, especially for Piene, New York City's light did not emanate solely from skyscrapers and Broadway theaters: It was also generated by the city's proliferating 'intermedia' events, in which images (including film, overhead, and slide projections), live and recorded amplified music and sounds, theatrical performances, and even kinetic light sculptures were combined to create a multi-sensory aesthetic experience. Unfortunately, a thorough history of intermedia in New York, encompassing the movement's different offshoots and considering primary accounts, has yet to be written, but the following paragraphs will sketch its outline.

The term 'intermedia' was first popularized by *Fluxus* artist Dick Higgins. In a 1965 article, Higgins defined intermedia as the conceptual fusion of distinct media by avant-garde artists, musicians, and poets, and defended its status as both the rightful heir of 1950s abstract expressionism (by way of Allan Kaprow's Happenings) and the natural symptom of a supposed "dawn of a classless society, to which separation into rigid categories is absolutely irrelevant."<sup>19</sup> Five years later, Los-Angeles based critic Gene Youngblood – an unabashed techno-utopianist and advocate of new media – devoted a chapter of his seminal 1970 book *Expanded Cinema* to intermedia, and, like Higgins, linked the art form to nascent social trends. After the widespread rise of a new ecological consciousness, "the action of creation for the new

---

show at the *Howard Wise Gallery*, and lent ZERO's interest in the properties of vibration and energy a new association: The kinetic, anthropomorphized figure (a departure from his very literal use of nails on blank canvases and other surfaces to create plays of light and shadow) is not just any figure, but a New Yorker – the stereotypical example of the human body in perpetual motion.

<sup>19</sup> Dick Higgins, *Intermedia* (1965), in: *Leonardo*, vol. 34, no. 1 (February 2001), p. 49. Also reprinted in Dick Higgins, *Horizons. The Poetics and Theory of the Intermedia*, Carbondale 1984.

artist is not so much the invention of new objects”, he claimed, “as the revelation of previously unrecognized relationships between existing phenomena, both physical and metaphysical.”<sup>20</sup> These “relationships” (between media, audience members, etc.) were fundamental to the work, as Youngblood implied in stating his preference for the term ‘intermedia’ over ‘mixed media’: “An environment in which the organisms are merely mixed is not the same as an environment whose elements are suffused in metamorphosis”, he complained, while praising the works of artists like Carolee Schneemann and Robert Whitman, both of whom imbricated live performance with projected film.<sup>21</sup> This distinction between ‘intermedia’ and ‘mixed media’ persists: Yvonne Spielmann argues that in ‘multimedia’ (a variant of ‘mixed media’) a viewer can identify disparate media as distinct components of a single work, whereas ‘intermedia’ refers to a work that sits more profoundly, even self-reflexively, in a liminal zone between the articulated boundaries of two or more media.<sup>22</sup>

---

<sup>20</sup> Gene Youngblood, *Expanded Cinema*, New York 1970, p. 346. Artist and critic Jud Yalkut’s own article on intermedia, like Youngblood’s text, does not shy away from the association of intermedia with the new rhetoric of psychedelic experience; see Jud Yalkut, Understanding Intermedia, in: *Arts Magazine*, vol. 41, no. 7 (May 1967), p. 18–19. For recent scholarship on expanded cinema (defined as an artistic practice that excludes the kinds of entertainment collected under the more capacious umbrella of intermedia), see A.L. Rees et al. (eds.), *Expanded Cinema. Art, Performance, Film*, London 2011, and Matthias Michalka (ed.), *X-Screen. Film Installations and Actions in the 1960s and 1970s*, exh. cat. Museum Moderner Kunst Stiftung Ludwig Köln, Cologne 2004.

<sup>21</sup> Youngblood, *Expanded Cinema* (see note 20), p. 347; on mixed media, see, for example, Richard Kostelanetz, *The Theatre of Mixed Means. An introduction to Happenings, Kinetic Environments, and Other Mixed-Means Performances*, New York 1968.

<sup>22</sup> For example, see Higgins’ 1981 addendum to his 1965 essay (see note 19), and Yvonne Spielmann’s essay (which immediately follows the reprinted version of Higgins’s essay in the same issue of *Leonardo*, and picks up some of the

Despite its thoughtful parsing by critics, the term almost immediately turned into a popular buzzword denoting an amorphous body of new free-form entertainments. Colloquially, ‘intermedia’ referred to a heterogeneous agglomeration of Happenings, film screenings, and music and theater performances, muddled together in the substrate of electronic technology and presented in a way that deemphasized active participation in favor of passive immersion. A typical description is offered by Elenore Lester in her September 1966 *New York Times* article, “So What Happens after Happenings?”:

This is a humming electronic world, in which multiple films, tapes, amplifiers, kinetic sculpture, lights and live dancers or actors are combined to Involve Audiences in a Total Theater Experience. Unlike Happenings, which often involve audiences in complicated relationships with plastics, bottles, sacks, ropes and other objects, Intermedia Kinetic Experiences permit audiences simply to sit, stand, walk or lie down and allow their senses to be Saturated by Media.<sup>23</sup>

As this breathless passage illustrates, the use of the word ‘intermedia’ in the mainstream press indicated not an ontological hybridity *between* media (as it would for Higgins and Youngblood), but rather, the simultaneous use of *multiple forms* of technological media.<sup>24</sup>

---

same concerns), Intermedia in Electronic Images, in: *Leonardo*, vol. 34, no. 1 (February 2001), p. 55–66.

<sup>23</sup> Elenore Lester, So What Happens After Happenings?, in: *New York Times* (September 4, 1966), p. D9.

<sup>24</sup> In fact, in a 1968 update on the movement, Lester would explicitly claim that “Intermedia, multimedia, mixed-media, or total theater may broadly be translated as a cross-fertilization of all of the traditional arts-music, dance, theater, painting, sculpture, poetry with film and other technology by-products, such as electronically amplified music, light diffraction, video tape and various battery-operated devices. Its goal is to involve audiences or participants in an experience on a direct, even visceral level. [...] The variety of these Things is suggested by the names [artists] give them – kinetic theater, action theater,

The first New York manifestation of Lester's popularized form of intermedia was arguably *The World*, a discothèque for teenagers in Long Island's Garden City. Located in a 16 000 square-foot former airplane hanger, its artistic direction was spearheaded by a small group of artists working under the name *Us Company*, or *USCO* (which also exhibited at the *Howard Wise Gallery*). This "first multi-channel night club", as they called it, which opened in April 1966, was the first entertainment space to utilize a multi-channel stereo system, supplemented by eighteen slide projectors (each with eighty-one slides, of both abstract imagery and close-ups of Old Master paintings), two 16mm film projectors (showing segments of current television shows and old horror films, as well as new avant-garde works by *USCO*-affiliated filmmaker Jud Yalkut), and a video projector that originally offered live images of the audience.<sup>25</sup> Similar venues quickly sprung up in the New York area, and were often catalogued together as examples of a nascent cultural phenomenon. One example is the *Cheetah* nightclub in midtown Manhattan (opened in May 1966), which amplified bass from the music through speakers under the

---

expanded cinema, theater pieces, sound-dance constructions, kinetic environments. On the other hand, one should not be deceived by the multiplicity of names. There are no boundaries to intermedia art, and one man's intermedia kinetic environment is likely to be another man's happening or expanded cinema event" (Elenore Lester, *Intermedia. Tune In, Turn On – And Walk Out?*, in: *New York Times Magazine* (May 12, 1968), p. 30, 66).

<sup>25</sup> The description here is collated from Richard Kostelanetz, *The Theatre of Mixed Means. An introduction to Happenings, Kinetic Environments, and Other Mixed-Means Performances*, New York 1968, p. 268; Robert Christgau, *Filmtheques*, in: *Popular Photography*, vol. 60, no. 1 (January 1967), p. 82; and Michel Oren, *USCO. 'Getting Out of Your Mind to Use Your Head,'* in: *Art Journal* 69 (Winter 2010), p. 86. While Kostelanetz claims twenty-one slide projectors were used, and Oren claims eighteen slide projectors were used, Christgau explains that there were twenty-one screens, eighteen of which were for slide projectors and two of which were for films (with the remaining screen presumably the one used for video).

floor and, in addition to using projected images and reflective sheets of metal to create a funhouse atmosphere, boasted a contraption of 3 000 sound-modulated colored lights suspended over the dance floor.<sup>26</sup> One might also consider the *Electric Circus* (opened in mid-1967, and the last of the major East Village multimedia spaces to shut down, in 1971), which served, as *American Home* claimed, as a template for a spate of media venues across the country. As the *Village Voice* humorously reported, the gala opening of “the latest total environment, McLuhanist discothèque” was itself a circus: “Its owners spent \$300 000 for the flashing strobes, films, music, astrodome-style turf, and circus acts – but neglected to include air conditioning. So, the whole gala event was like a mixed-media happening on the [subway] rush hour.”<sup>27</sup> As a retort to these and other commercial uses of media as spectacle, producer John Brockman organized the event “Intermedia ’68”, a touring exhibition of works by artists including Kaprow and Schneemann, funded by the New York State and National Councils on the Arts. “Discothèques are O.K.,” said Brockman, “but they just offer what people expect. [...] Without this kind of work we are stymied by technology. This gives us a chance for feedback, a chance to do something to the environment. Next time we meet a light bulb, we really know what it is.”<sup>28</sup>

---

<sup>26</sup> Christgau, *Filmotheques* (see note 25), p. 80, 82.

<sup>27</sup> Jack Newfield, *Electric Circus Opens: Hippies & New Frontier On ‘Desolation Row’*, in: *Village Voice* (July 6, 1967), p. 1. Other popular multimedia spaces in New York included Arthur and the Lightworks.

<sup>28</sup> Lester, *Intermedia* (see note 24), p. 68. Ironically, it was Brockman who perhaps did the most to bring intermedia to the mainstream masses by opening a company that produced multimedia events for the corporate world, such as a presentation to the salesforce of the *Scott Paper Company* that reportedly increased sales by eleven percent (Grace Glueck, *For the TV Generation, Multimedia Techniques Bombard and Overload the Senses – Multimedia: Messaging Senses for the Message*, in: *New York Times* (September 16, 1967), p. 35.)



It was in this particular cultural context that Otto Piene and fellow artist Aldo Tambellini co-founded the *Black Gate Theater*, a space devoted to ‘electromedia’ art and located above Tambellini’s avant-garde cinemathèque, *The Gate Theater*, in New York’s East Village.<sup>29</sup> (At around the same time, Piene’s main ZERO collaborators, Heinz Mack and Günther Uecker, co-designed the Düsseldorf venue *Creamcheese*; inspired by the *Dom* in New York, it became one of the first media discothèques in Germany.)<sup>30</sup> Though the *Black Gate* would eventually host a range of practices – from a ‘projection environment’ by USCO to a screening of videotapes by Nam June Paik and a performance by Yayoi Kusama – the two founders inaugurated the space in March 1967 themselves, with a double-bill featuring the first performance of Tambellini’s *Blackout* and a repeat performance of Piene’s *The Proliferation of the Sun* (Fig. 4.9). The opening has been recounted by Tambellini:

The first Black Gate Program showcased Otto’s and my work. My piece was called *Blackout*, the simultaneous showing of my hand-painted film, projected slightly out of synch, and four carousel projectors zooming lumagrams of concentric circles continuously onto the environment, covering the entire wall. Otto Piene’s *The Proliferations* [sic] of *the Sun* was a series of hand-painted slides projected

<sup>29</sup> For a history of Aldo Tambellini’s experiments with media, including the *Black Gate Theater*, see Joseph D. Ketner II, Electromedia, in: *Aldo Tambellini. Black Zero*, exh. cat. Chelsea Art Museum, ed. by John Wronoski et al., New York 2011, p. 35–47. The founding of the *Black Gate* is also mentioned by Youngblood, *Expanded Cinema* (see note 20), p. 381–83.

<sup>30</sup> Gerda Wendermann, *Die Filme von Günther Uecker*, in: “...zum Raum wird hier die Zeit”. *Günther Uecker. Bühnenskulpturen und optische Partituren*, ed. by Ulrike Bestgen, exh. cat. Neues Museum Weimar, Weimar 2001, p. 230. My thanks to Tiziana Caianiello for bringing this to my attention. For the longest English-language discussion of *Creamcheese*, see Tiziana Caianiello, *Creamcheese*. From disco to museum installation, in: *Art, Conservation and Authenticities. Material, Concept, Context*, ed. by Erma Hermens and Tina Fiske, London 2009, p. 155–64.

## *The Proliferation of the Sun*



Fig. 4.9: Otto Piene, *The Proliferation of the Sun*, March 1967, *Black Gate Theatre*, New York City. © Estate of Peter Moore / VAGA NYC 2013.

around the room as the audience sat on the floor. The program notes given to the audience included Otto's description of his presentation, and I wrote a series of philosophical statements such as "blackout – man does not need his eyes but to function with 13 billion cells in his brain."<sup>31</sup>

*The Proliferation of the Sun* – a roughly thirty-five minute performance with five slide projectors loaded, as Tambellini remembers, with hand-painted slides, and accompanied by Piene's written text – is one of the most notable examples of intermedia (as opposed to multimedia) performance. The sequential projection of still images animates them with the spirit of cinema (perhaps in a manner comparable to Stan VanDerBeek's well-known in-

<sup>31</sup> Aldo Tambellini, *An Autobiography*, in: *Aldo Tambellini. Black Zero*, ed. by John Wronoski et al., exh. cat. Chelsea Art Museum, New York 2011, p. 67.

termedia project, the *Movie-Drome*), while the visual elements interface with the written program notes. In retrospect, the project appears to have functioned as a prelude to *Black Gate Cologne* (1968), a collaboration by the two artists that integrated film, video, poetry, and Piene's kinetic inflatable sculptures, and was one of the first art projects intended for television broadcast.

Within the same intermedia framework, Piene reformatted *The Proliferation of the Sun* as an article that appeared in the Summer 1967 issue of *Arts Magazine*. Each section of the essay begins by intoning its readers to "imagine or look at" a series of images, while a line of photographs representing a selection of those images runs around the perimeter of the text, inviting the viewer to perform a hybrid of reading, imagining, and looking that differs from the normative reception of illustrated essays. (In this sense, it is reminiscent of conceptualism's experiments with the text / image format, such as Dan Graham's *Homes for America*, which appeared in the December 1966 issue of the same magazine.) The images the reader should imagine are eclectic, and only loosely correspond to Piene's essay, requiring the reader to perform a kind of labor (whether analytical or associative) to make sense of their combination. These include the "face of a clock", "man swimming", "Jackson Pollock", "interior of an art gallery", "Nike of Samothrace", and "Leonardo da Vinci, self-portrait", as well as many historical and contemporary works of kinetic art, and other seemingly random nouns (the final list ends with the post-apocalyptic "mushroom cloud / cloud formation / space man / rainbow", foreshadowing Piene's own move into what he named "sky art").<sup>32</sup> At its most straight-forward, the article is a loose collection of observations on contemporary art, including the regressiveness of art at mid-century; the

---

<sup>32</sup> Otto Piene, *The Proliferation of the Sun*, in: *Arts Magazine*, vol. 41, no. 8 (Summer 1967), p. 24–31.

## *The Proliferation of the Sun*

need for public as well as private aesthetic experience; art's role in shaping, not just reflecting, the human condition; and the importance of collaborations between art and science. In the penultimate section, he mentions *The Black Gate Theatre*: "The range of performing sculptures, performing devices and actual performances goes from the display of a simple imperative (Indiana) over discothèques to elaborately planned and rehearsed light events. The Black Gate, upstairs at the New York Gate Theater, is the first experimental light theater that is devoted to ELECTRO MEDIA and their incorporation into other kinetic media of technical or natural kind."<sup>33</sup>

The intermedia spirit of the *Black Gate*, and of *The Proliferation of the Sun* more specifically, is preserved not only by Piene's article, but also by a brief manifesto, with eccentric syntax and typography, that appeared on a broadsheet issued by the newly-formed *Black Gate Publications* in April 1967:

The explosion of visual styles indicates the end of that struggle: brainless connoisseurs halo the last chunks, compulsive objectivations [sic] of meaninglessness, matter for matter's sake, power symbols for the galleries. We are glad to announce that we are leaving the dead objects to the aesthetes (who never cared about meanings anyway) and to the possession chasers (who want their souvenirs of a process that ceases to count). Materiality to the materialists. Painting does not light itself; motionless sculptures are in the way; objects inhibit travelling [sic]. Contrary to chunks Movement expresses life Light is energizing Light expands Light reaches far and reaches many Light is immaterial THE BLACK GATE IS OPEN to ride on a light beam to hurt, heal and dematerialize to dive in the light din

THE PROLIFERATION OF THE SUN New York 111-21-67.<sup>34</sup>

<sup>33</sup> Ibid., p. 30. "Indiana" is a reference to Robert Indiana's *EAT* series, as indicated by one of the essay's illustrations.

<sup>34</sup> Black Gate Publication, Aldo Tambellini Archives, Salem, MA. Presumably, "111-21-67" refers to the date March 21, 1967.

At stake in this manifesto is the status of *The Proliferation of the Sun* as art (intermedia), and not mere entertainment (multimedia). In its valorization of real movement and light as universal signs (“light reaches far and reaches many”), the text recalls ZERO’s metaphysics of light; in this regard, there is a logical progression from the creation of *Light Cocoon* to the unlimited “proliferating” of suns. Furthermore, in the time-honored tradition of the avant-garde, the vitriolic but opaque prose “announces” “the end” of a period of “struggle” and the dawning of a new era. Finally, the manifesto assumes an opposition between the commercial demands of the art market and the anti-commercial ethics of pure art, articulated through the derision of “brainless connoisseurs”, “possession chasers”, and “materialists” who pursue “power symbols for the galleries.” In this light, the art market and the world of entertainment become homologous – both pursue financial gain above the needs of art – and we are left to presume that *The Proliferation of the Sun* resides squarely on the correct side of a sharp line.

While one wants to agree with Piene and other intermedia artists that the “elaborately planned and rehearsed light events” of intermedia constituted a new art form distinct from the discothèques, the reality is that the popular imagination of the period confused the two, such that the *Cheetah* and *Electric Circus* could be included on the same list of venues as Toronto’s 1967 World’s Fair (known as ‘Expo ’67’), the Intermedia program at New York University’s School of the Arts, and the Boston Opera Company.<sup>35</sup> In fact, Youngblood had noted “an imminent trend that simultaneously will transform and unite

---

<sup>35</sup> Examples of venues that towed the line between intermedia and multimedia included *The Trips Discothèque* (co-organized by Tambellini), *Cerebrum*, and even the *Electric Circus*, which was co-designed by avant-garde musician Morton Subotnick and artist Tony Martin, and hosted its own regular series of experimental music events called the *Electric Ear*.

those disparate experiences characterized by ‘nightclubs’ on the one hand and ‘art galleries’ on the other”, portending a “not-too-distant day when ‘nightclubs’ will be operated by art dealers who commission artist-guides to create ecological-experience places.”<sup>36</sup>

It is likely that this confusion stems from the fact that intermedia and multimedia in late-1960s New York shared one crucial, determining attribute: the use of light generated by technological media. Artist, critic, and curator Jack Burnham made this same point obliquely, when he claimed in 1968 that “much that has recently passed in the United States for so-called ‘psychedelic art’ – using environmental projectors – has its modern beginnings in the *Light Ballet* of the German artist Otto Piene.”<sup>37</sup> Despite Burnham’s implication, I have no desire to claim that ZERO’s ethos, as typified by the work of Piene, ultimately informed or dove-tailed with that of the American psychedelic counterculture. The more important claim is that the environments created within multimedia discothèques and by “electromedia” or intermedia works like *The Proliferation of the Sun* contributed to and shared in a particular experience of light then permeating American culture. Works like *Peace Stele* and *New York City on a Hill* reveal that ZERO’s conception of light was transformed by its encounter with America: Light became allusive, reminding the viewer of the kinetic lights of New York; but that same urban space was also filled with the light of intermedia, a particular kind of light that functioned, above all, to subsume the viewer’s body within fully immersive media environments. The light reflected or generated by ZERO’s earlier works already tended to reject the disembodied visuality of high

---

<sup>36</sup> Youngblood, *Expanded Cinema* (see note 20), p. 359, 363, 364.

<sup>37</sup> Jack Burnham, *Beyond Modern Sculpture. The Effects of Science and Technology on the Sculpture of This Century*, New York 1968, p. 294.

modernism by offering varied images as the viewer perambulated the area in front of or around the work; of course, this activation of space (as seen in a work like Piene's *Light Cocoon*) recalls the terms by which Michael Fried famously condemned the "theatricality" of minimalist objects, which demand a phenomenological response. Yet the intermedia environment of *The Proliferation of the Sun* takes ZERO's experimentation with phenomenology in a new direction: Instead of simply directing the viewer to move, the work traps the viewer (physically and physiologically) within a space suffused with the medium of artificial light by acting, as all media do, upon the senses.

The latent triangulation between light, media, and the body was repeatedly staged by ZERO's works in America, whether they appeared alongside mannequins advertising women's clothing in the window of a Manhattan department store, or as an installation inviting viewers to become cyborg-like operators of media technology (*Fig. 4.10*). In these moments, we see ZERO's light – the light of 'Romantic idealism', in the grand European tradition – become *domesticated*; note the importance of the *feminine* body in both of these scenarios.<sup>38</sup> As it becomes domestic, this light indicates not a future ideal utopia, but the real technological world already emerging.

This is why multimedia discothèques are important for our understanding of ZERO's new light: not because they affect some kind of psychedelic disintegration of the subject, but because they immerse the subject in a mediated space that is, most profoundly, not an *image* space but a *technological* space.<sup>39</sup> If

---

<sup>38</sup> Art historian Pamela Lee has argued for a strong relationship between technology and the feminine in 1960s art, one that produced a great anxiety in popular culture. See Pamela Lee, *Chronophobia. On Time in the Art of the 1960s*, Cambridge 2006.

<sup>39</sup> For a study of the space of intermedia in the early 20<sup>th</sup> century, see Noam M. Elcott, *Rooms of our time. László Moholy-Nagy and the stillbirth of*





Fig. 4.10: Installation photograph of Otto Piene’s “party room” at the exhibition “Light/Motion/Space”, Walker Art Center, 1967.

one of ZERO’s original aims – as Piene claimed in 1964 – was to “[reharmonize] the relation between man and nature... using means of actual technical invention as well as those of nature,” by 1967, the world of “technical inventions” had begun to colonize “nature”, so that ZERO ultimately harmonized man with technology itself. (Recall Wise’s article in *American Home*: “In life today, our surroundings are mostly of our own making and it is the function of the artist to discover their beauty, to transform it, to order it, so that we may enjoy it.”) More than capturing the mere *image* of luminous New York, ZERO’s final works prepare us to “enjoy” the city’s media-saturated, thoroughly technolo-

---

multi-media museums, in: *Screen/Space. The projected image in contemporary art*, ed. by Tamara Trodd, Manchester 2011, p. 25–52.

gized future. *The Proliferation of the Sun* and other intermedia works show us that light – by which is meant, technology – is both around and within us, and more so every day.

To note that ZERO harmonized man with technology through the ambient light of intermedia risks recapitulating the familiar rhetorical contrast between “critical” and “complicit” works of art – a hackneyed binary that David Joselit has argued art historians should retire.<sup>40</sup> When considering artworks utilizing advanced technology, this binary typically hinges on the question of *control*. Writing of the work done at MIT’s Center for Advanced Visual Studies under Piene’s direction, John G. Hanhardt has claimed that

Artists came to understand that technology was something they could control, and did not control them. Further, they realized that the imprint of the human hand and imagination would need to be felt in and through the artwork in order for it to give expression to the delicate balance of natural resources and the infinite possibilities of the human imagination.<sup>41</sup>

Hanhardt echoes the claims made much earlier by the critic Richard Kostelanetz, who concluded his 1971 essay “Artistic Machines” with an appeal for the creation of objects that, instead of being programmed to act erratically, beyond our control (i.e., like another human being), would be controlled by an artist’s idea: “The function of machines in art is ultimately not to imitate or supersede human action...but to provide artistically creative man with the means to extend his creative ideas, as well as his limbs; so that even the most autonomous

---

<sup>40</sup> See David Joselit, *Feedback. Television Against Democracy*, Cambridge 2007.

<sup>41</sup> John G. Hanhardt, A Great Experiment. Otto Piene and the Center for Advanced Visual Studies, in: *Otto Piene Retrospektive 1952–1996*, exh. cat. Kunstmuseum Düsseldorf, ed. by Stephan von Wiese and Susanne Rennert, Cologne 1996, p. 39–45, esp. p. 44.

artistic machine invariably reveals the ingenuity of the imaginative mind.”<sup>42</sup> Tellingly, both authors invoke “imagination” – the principal brain function that intelligent machines are supposed to lack – as the guarantee of the aesthetic value of art made with advanced technologies. This prescriptive call for “imaginative” artists to exert their “control” over technology amounts to a retrograde humanism, predicated on a Hegelian master/slave binary. According to this binary, humans must control technology, or technology will control or annihilate us. However, this binary was rendered obsolete precisely in the 1960s, with the emergence of “high tech”, described by theorist R. L. Rutsky as a form of technology so sophisticated that it escapes our understanding and seems to develop according to its own internal logic.<sup>43</sup> As with the fetishes that Freud observed in “primitive” cultures, this fetishized technology seems to act of its own agency, inhabiting our space more profoundly than any mere gadget, and inviting us to engage and coexist with it, rather than to dominate or be dominated by it. Taking this view, ZERO’s final works did not offer viewers a “quiet withdrawal” from the increasingly rapid pace of technologically-mediated life; nor did it abet the formation of new identities opposed to the homogenizing forces of Marshall McLuhan’s “global village.”<sup>44</sup> Rather, it allowed viewers to avoid being “stymied” by technology (to deploy Brockman’s term) by offering a preview of a posthuman-

---

<sup>42</sup> Richard Kostelanetz, Artistic Machines, in: *Chicago Review*, vol. 23, no. 1 (Summer 1971), p. 133.

<sup>43</sup> See R. L. Rutsky, *High Technē. Art and Technology from the Machine Aesthetic to the Posthuman*, Minneapolis 1999.

<sup>44</sup> For these two positions on artists using technology in the 1960s, see Michelle Y. Kuo, Specters, in: *Otto Piene, Lichtballett*, exh. cat. MIT List Visual Arts Center, ed. by João Ribas, Cambridge 2011, p. 58–77, and Branden W. Joseph, ‘My Mind Split Open’. Andy Warhol’s Exploding Plastic Inevitable, in: *Grey Room 8* (Summer 2002), p. 80–107.

ist society, one in which humans and technology are bound together in a complex rhizomatic ecology. Neither critical nor complicit, ZERO offered something like Walter Benjamin's fabled training ground in new perceptual realities.<sup>45</sup> As Brockman prophesied, now, when we meet a light bulb, we really know what it is.

*The author would like to thank Otto Piene, Aldo Tambellini and Anna Salamone, the ZERO foundation, the Harvard University Art Museums Archives, and the Archives of American Art at the Smithsonian Institution for graciously sharing the information and materials that made this essay possible. She would also like to thank the ZERO foundation and the Graduiertenkolleg Materialität und Produktion at the Heinrich-Heine-Universität for extending the invitation to present her research in Düsseldorf.*

---

<sup>45</sup> See Walter Benjamin, Art in the Age of Its Technological Reproducibility [1936], in: *Walter Benjamin. Selected Writings, Volume 3, 1935–1938*, ed. by Howard Eiland and Michael W. Jennings, transl. by Edmund Jephcott, Howard Eiland, et al., Cambridge 2002, p. 101–33.