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The Cinematic Imaginary after Film

Edited by Jeffrey Shaw and Peter Weibel

ZKM | Center for Art and Media Karlsruhe

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FUTURE CINEMA The Cinematic Imaginary after Film

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Ulrike Havemann and Dörte Zbikowski, editors

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Michael Bielicky

Prague – A Place of Illusionists

engraving for Jan Amos Comenius Didactica Magna 1657

"Thanks to the techno-imagination, it is possible to decipher technical images and thus to unmask the intended deception which is a component of our contemporary image civilization." [1]

Prague does not have a consistent historical development of either old or new media; but for this very reason, the city should be proud of several events that are of singular importance for the history of visual techno-media. Examples of such modern-sounding phenomena as "electronic art," "multimedia," "virtual reality," "interactive art" and "artificial intelligence" can actually be found in past times, even as far back as the Middle Ages. Of course, these phenomena had different names then. These events almost always had a particular relation to the time and to the atmosphere of the places in which they occurred. Not least, it was the special energy of the city of Prague that always drove people to search for an interface to the beyond. Linguists claim that the name "Prague" stems from the Czech "prah" which means "threshold." True to its name, there are places in Prague where, through various optical illusions, one has the curious sensation of finding oneself in a twilight zone. The visual impressions of my childhood were deeply influenced by experiences with the 360-degree panorama *The Battle of Lipany*, now over a hundred years old, and a Russian film-panorama in a Prague amusement park. A very old mirror-labyrinth left me with just as deep impressions as did Karel Zeman's fantastic films. Likewise, the experience with the magic lantern, which I will discuss in more detail below, had an enormous effect on me. When one speaks of Prague, one really must say that it has always been a Mecca of optical illusions.

In 1658, the Czech theologian and pedagogue Jan Amos Comenius published one of his first illustrated books for children: *Obris Sensualium Pictus* [The Visible World in Pictures]. This pioneer of media pedagogy is considered to be the forerunner of modern attempts at international cooperation in the fields

1 Vilém Flusser

Miroslav Kouril
Theatergraph, Wedekind's
The Awakening of Spring
1936
theatrical stage with
integrated projection
slides, 35mm film
b/w, sound
Prague

of education, science and culture. Many artists whose work was devoted to the experience of seeing and to the new pictorial arts were inspired by Comenius' ideas. Examples are Oskar Kokoschka's treatise *Das Bewußtsein des Bildes* and some of Roberto Rosselini's writings.

Juda Loew ben Bezalel, famed as High Rabbi Loew, also lived in Prague in the seventeenth century. A great scholar and mystic, the possessor of an encyclopedic knowledge, he was both the spiritual and the physical forefather of the great mathematician Theodor von Karman. Von Karman discerned in Rabbi Loew the first genius of applied mathematics. Rabbi Loew is credited not only with having invented the Golem; his experiments with the camera obscura and with the magic lantern so impressed Emperor Rudolf II that he was invited to join that circle of alchemists, artists, and astronomers whose members included Archimboldo, Johannes Keppler and Tycho de Brahe. Rabbi Loew is said to have accomplished a miracle when Rudolf II called upon him at home one night: The Rabbi transformed his house into a palace by using his magic lantern to project painted pictures of the interior of the Prague castle Hradschin onto his own walls. So it was that Rudolf II was given the impression that he was in a palace. One can, in this context, speak of medieval virtual reality.

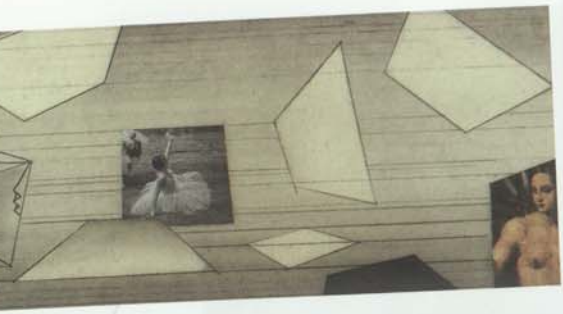
In his dissertation published in Prague in 1818, the natural scientist Jan Evangelista Purkyne was one of the first to realize that we continue to perceive objects for a fraction of a second after they have disappeared from our field of vision. In 1824, Peter Mark Roget went on to give a more detailed description of this perceptual phenomenon, naming it "the persistence of visual impressions." The discovery of this perceptual phenomenon provided the basis for numerous technical inventions and new equipment that could turn still images into moving ones and have transformed modern life, not only through cinema and television but also through digital and audiovisual techniques. Purkyne's insights make clear the fundamental relation between the birth of the neurological sciences and the triumph of technologies of the moving image. They serve as an important point of departure for reflections on the present-day development of electronic media and their influence on our lives. In 1865, Purkyne constructed the "kinesiscope," an instrument by means of which one can observe a pulsing heart or even one's own portrait as animated photography. Purkyne predicted that the time would come in which it would be possible to tell entire stories with the help of moving pictures.

At the beginning of the twentieth century, Franz Kafka suggested that a cinema for the blind be established in Prague. Many Kafka specialists are convinced that much of his writing was influenced by his experiences with the then extremely young medium of film.

Even before the First World War, the Czech cabaret performer Karel Hasler had a film projected on the stage that showed him running through the city, approaching the cabaret, and going through the door. At the end, the scene continues uninterrupted as he himself runs onto the stage.

In 1930, Alexander Hackenschmidt set new standards for cinematic expression with his experimental film *Aimless Walk*. The filmmaker, who had emigrated to the USA before the war (he had changed his name to Sasha Hammit), not only influenced his later wife Maya Deren, but he also inspired an entire generation of American experimental filmmakers who came together to form a new film movement.

In collaboration with Miroslav Kouril, the theater director E.F. Burian developed the "Theatergraph," a theatrical stage with integrated projection screens, on which films and slides directly relating to the events on the stage were projected during a theatrical performance. This technology was first put into practice for a production of Wedekind's *The Awakening of Spring* in 1936 and then later for Pushkin's *Eugen Onegin*. Denis Bablet, in his book *Revolutions in Stage Design in the 20th Century*, confirms that Burian and Kouril's experiments, along with Piscator Traugott Müller's research, were instrumental in paving the



top left
Josef Svoboda
sketch for Diakran for the Brussels Expo in 1958
© Sarka Hejnova

top right
Josef Svoboda
Laterna Magika
1962
multiple-screen projection with live performance on stage
Laterna Magika Theater, Prague
© Sarka Hejnova

below left
Josef Svoboda, Alfréd Radok
Laterna Magika,
Hostess Program
1958
multiple-screen projection with live performance on stage
35mm film
b/w, sound
Czechoslovak Pavilion, Brussels Expo
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below right
Josef Svoboda, Milos Forman
Laterna Magika
1958
multiple-screen projection with live performance on stage
Czechoslovak Pavilion, Brussels Expo
© Sarka Hejnova

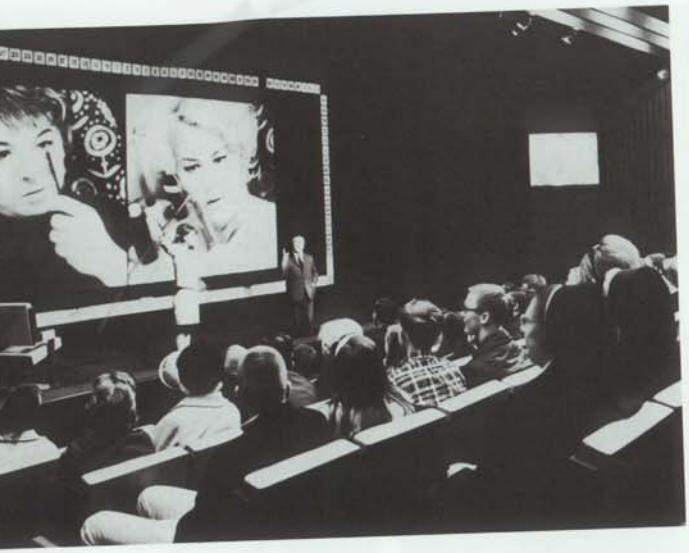
way for the development of new theatrical forms. Set design, which had been characterized by screen and color up until then, was being replaced by architectural structures, light, and projected images. A new civilization of audiovisual communication had come into being.

In the 1930s, the Prague-based artist Zdenek Pesanek wrote his book *Kinetismus*, in which he investigated the potential of multimedia performance as a new form of visual expression – regardless of whether it involved an installation, a film, a fireworks display, or the aesthetics of anti-aircraft defense. He himself built light kinetic objects that had multimedia qualities. They moved; they changed color; they produced sounds.

Karel Zeman was a great poet of the new cinematic expression. This master of special effects developed a kind of physical "Virtual Set" for his films of the 1950s. A unique animated-film technique enabled actors to be placed in unreal surroundings that roused associations with old etchings, for instance.

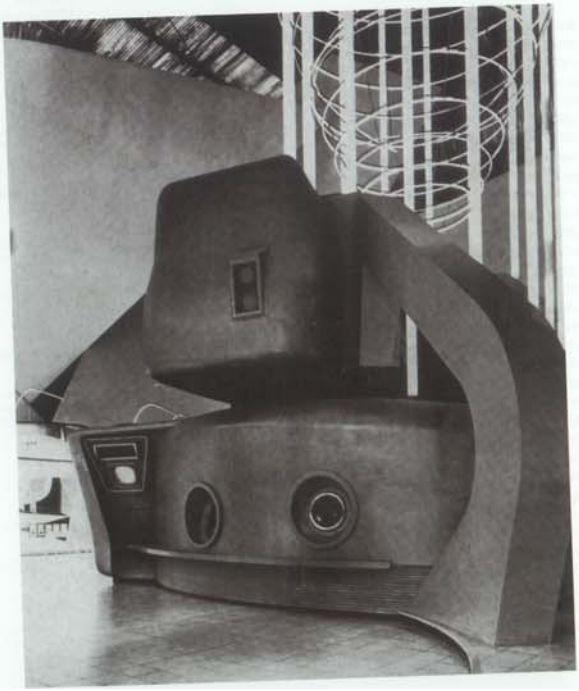
In the period after the Second World War, Czech film experimentation attained a phenomenal and unique dimension. Josef Svoboda, the master of set design, set completely new standards with inventions like Laterna Magika as well as polyscreen and polyvision techniques. Moreover, Radúz Çinçera, the father of the first interactive film, made a quantum leap with his "Kinoautomat" [cinema-automat] project. It is considered groundbreaking both because of its use of the new non-linear narrative-form and because of its inclusion of the spectator as an active participant in the film action. Although these inventors lived under a totalitarian regime, they enjoyed more freedom of experimentation than they would have in some Western countries. In his long and international career, Svoboda created more than seven hundred sets, most of which contained multiple projections of film and slides in combination with architecture and light.

In 1951, Svoboda began to deploy several sets at once in his theatrical productions. Through the development of his concept for Expo 1958 in Brussels, his idea for a polyphonic theater became reality. This is how his Laterna Magika project came into being – a synthesis of theater and film. By then, he was already wondering whether the spectator was even capable of simultaneously perceiving parallel film projections. The director Alfréd Radok, collaborator on the Laterna Magika for the past fifteen years and, in the ensuing decades, chief writer of the film narratives in Svoboda's Laterna Magika, made a crucial contribution to the realization of this interface between theater and cinema. Other film directors like Milos Forman or Jan Svankmajer were also involved in Laterna Magika productions. The magical moment of this system is above all the fluid transition between the stage and the projected film: the action begun on the stage continues in the film and vice versa. Actors from several projection screens appear on stage then disappear again into the film projection. It was not always easy for the spectator to distinguish between the real action on the stage and the virtual action in the film. Real and filmic worlds combine with each other to form a unity. The technical principle is based on three projection cabins, more than twenty light projectors, and a back projection over an anamorphic lens. If necessary, the projection screens could be moved. Given that films could be projected onto any conceivable form, a further dimension was added to the dynamic of the on-stage action. The

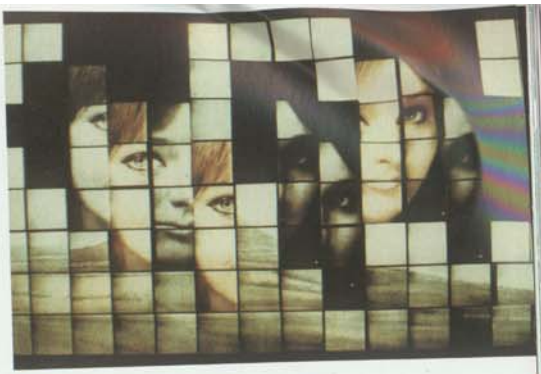


left:
Radúz Činčera
Kinoautomat
1967
interactive film with live performance on stage
electronic polling system,
35mm film
b/w, sound
duration variable
Montreal Expo

right:
presentation of
Radúz Činčera's Cinelabyrinth
for the Osaka Expo in 1990



Audiovisual Object
1958
Czechoslovak Pavilion,
Brussels Expo



right
Josef Svoboda
Polyekran,
Creation of the World of Man
1967
112 moveable cubes with
slide projection, 15.000 slides
color, sound
11 min
Montreal Expo
© Sarka Hejnova

left
Josef Svoboda, Jaroslav Fric
Polyvision
1967
multi-projection cinema set-up
35mm film and slides projected
on moveable geometrical
objects, projection screen
color, sound
8 min
Montreal Expo
© Sarka Hejnova

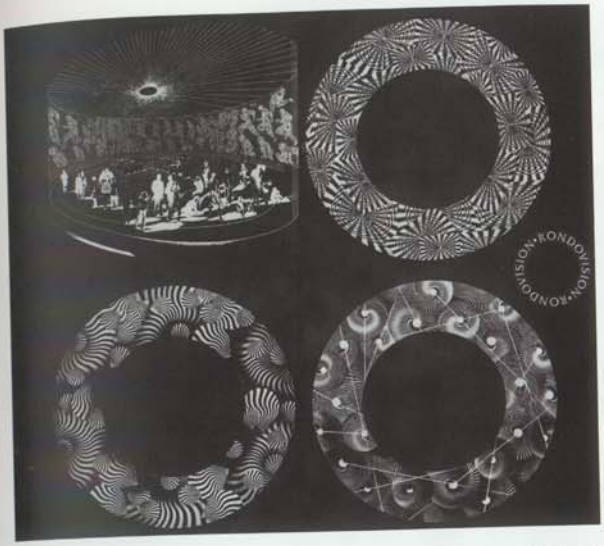
variability of space (dynamic architecture of the screen), of time (the film editing), and of the actor's identity on the stage and in the film allowed for the development of a convincing optical illusion. In addition, the sound was designed in such a way as to produce a highly spatial experience for the spectators. This flowing movement between the material and the immaterial worlds, the back and forth between reality and dream, has continued to enchant Prague audiences up until the present day.

Polyvision, another Svoboda invention, presented a panorama of Czech industrial life in an eight-minute film that used twenty slide projectors, ten ordinary motion picture screens and five rotating projection screens. While the subjects were usual industrial operations like hydro-electric power plants, steel rolling mills and textile mills, the visual material was presented in an unusual way. The screens were unconventional in that during the show they would move around: backwards, forwards, even sideways. Then there were other projection surfaces formed by steel hoops that spun around so rapidly that they seemed to constitute solid spheres and yet they were not solid. One could partially look through the image at what was in the room beyond. The presentation was completely controlled by electronic memory circuits that controlled the projectors and moved the screens around in a cinematic ballet.

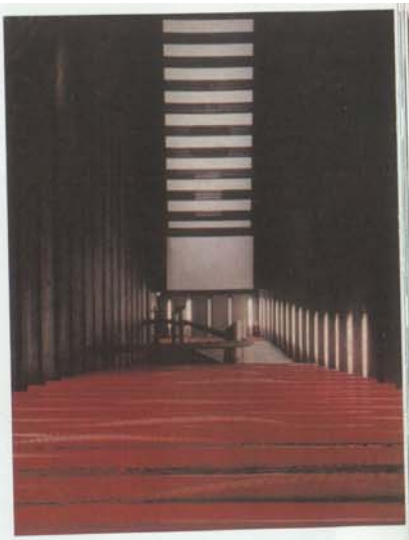
Svoboda's Polyekran was a very fascinating audio-visual experience presented during the 1967 Expo in Montreal. One entered a large room and sat on the carpeted floor to watch a wall of 112 cubes whose ever shifting and changing images moved backwards and forwards. Inside each cube were two Kodak Carousel slide projectors that projected stills onto the front of the cubes. In all, there were 15,000 slides in the eleven-minute show. Since each cube could slide into three separate positions within a two foot range, the cubes produced the effect of a flat surface turning into a three-dimensional surface and back again. It was completely controlled by 240 miles of memory circuitry which was encoded onto a filmstrip with 756,000 separate instructions.

The show was *The Creation of the World of Man*. On the 112-part screen, the Earth came awake, flowers bloomed, tigers suddenly appeared, the first men walked the earth, then machinery was invented. Sometimes the image sequences would appear complete at first, then be broken up into an abstract modern-art composition. It was pure multivisual technique that enchanted the viewer.

Radúz Činčera's Kinoautomat was introduced at Expo 1967 in Montreal. Among Činčera's team-members were the directors Jan Rohac and Vladimir Svitacek, the set designer Josef Svoboda as well as Jaroslav Fric and Bohumil Mika, the technical masterminds behind the system. The world's first interactive cinema, the Kinoautomat, confronted spectators with a film that would keep stopping. Two principle actors in the film appeared on stage and asked the audience how the film should be continued. The spectators voted, using either of the two buttons that had been installed in their seats. Afterwards, the version that received more votes was played. The film narrated extremely turbulent relationships between the inhabitants of a "completely normal house." In one of the scenes, a young inhabitant slams the door shut upon seeing who is ringing. Since she has come directly out of the bath, she appears wrapped only in a towel. In



Jaroslav Fric
Rondovision
1984
New Orleans



Jaroslav Fric
Vertical Cinemascope
1970
British Columbia Pavilion,
Osaka Expo

her panic, she rings her neighbor's doorbell and asks for help. There the film stops, and the spectators are asked if the neighbor should let her into his apartment. The audience inevitably voted "Yes," apart from once, at the Expo, when the "No" vote was due to the presence of a large group of nuns.

The inclusion of the spectators in the film action represented a completely novel situation. Through their participation, the spectators were actively involved in a non-linear film narrative. After the Expo, the Kinoautomat was presented in Prague. In 1968, however, shortly after the invasion of the Warsaw Pact troops, the unique venture was closed down. Perhaps the powers of the time were afraid that the Kinoautomat might heighten democratic awareness. After all, during the performance votes were cast according to democratic principles.

In the years following, Çinçera developed different cinema-systems that had a non-linear, and often also interactive, character. In 1990, the Cinelabyrinth was introduced in Osaka. In this ambitious project, the spectators could follow the action in the film by moving through various spaces and, depending on which room they had decided upon, the narrative adopted another development. Unlike in the Kinoautomat, the spectator of the cine-labyrinth could therefore make individual decisions. In 1998, a new version of Cinelabyrinth was presented in Prague on the occasion of the exhibition "100 Years of Czech Film." Visitors to the exhibition had the possibility of experiencing the history of Czech film as a non-linear narrative.

In the mid-1990s, Czech television staged an experiment with the interactive film presented at the Expo in 1967. Two different versions of the film were played on two different television stations: spectators could switch back and forth between the two stations, and thus between the two films.

In the 1960s, a group came into being in association with SCARS (Science Art Sense) that specialized in the development of multimedia presentations for various international occasions. The host countries were located on every continent in the world since it had become widely known that the former-Czechoslovakia possessed a great deal of competence in the field of innovative and often complex multimedia performances. The technical head of the group was Jaroslav Fric, whom I have already mentioned in connection with the Kinoautomat. Besides numerous other systems, Fric developed the Spherorama and the Vertical Cinemascope for the British Columbia pavilion at Expo in Osaka in 1970. The Spherorama was a slide projector that could produce a 360-degree dome projection using only one lens. Although Jaroslav Fric was responsible for innumerable inventions, there is very little documentation regarding his projects.

The backgrounds and the historical development of these unusual film formats possess a unique diversity and originality, yet it is nonetheless difficult to find adequate material about them, either in writing or in film. The phenomena described here certainly deserve a longer treatment, particularly the visual culture of moving images that served to produce so many great artists in Prague. Both the animated films (by Trnka, Svankmajer, Barta, and others) and the feature films (by directors including Forman, Chytilova, Juracek, Menzel, Zeman) beautifully reflected the magical, surreal, absurd, and fantastical atmosphere of Prague, which can still be experienced everywhere in that city.

Translated from the German by Sarah Clift

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