UDC 792.02(450):621.397
621.397:792.02(450)

In this article, the author aims to provide a brief overview of the relationship between theatre and media, starting from the period of the "Theatre of Images" to the present day, with a particular focus on video theatre in Italy during the 1980s, that is, the rise of the alleged "second wave" of the experimental theatre and its protagonists (Barberio Corsetti/ Studio Azzurro, Mario Martone). She explores the implementation of projected moving images in theatre from the film-theatre of Josef Svoboda to the recent experiments with video mapping and techno-immersion on stage. In the continuation, she examines the role of technology and communication via computers, in reference to their influence in society and their effects on social interactions. Through important political examples given by The Builders Association, she notes what is interesting in their works: the extraordinary capacity to dramatise some concepts that until now have been dealt with in essays on the sociology of media, that is, the New Public Space, the Panoptic, the New Connective Subjectivity, the Culture of "Real Virtuality". Key concepts, such as dislocation and deterritorialisation, presence and ubiquity, take, in fact, the shape of a powerful "mediaturgy". The ancient style scene, inhabited by backdrop videos projected on a mechanical stage with mobile platforms, is characteristic of the theatre of Robert Lepage, director, actor and filmmaker from Canada, to whom she dedicates a paragraph as the undisputed protagonist of the multimedia theatre. His concept of a flexible, mechanised performance space is similar to Gordon Craig's idea of using neutral, mobile, non-representational screens as a staging device.

Keywords: video theatre, Theatre of Images, video mapping, Giorgio Barberio Corsetti, Motus, The Builders Association, Robert Lepage, Dumb Type

Anna Maria Monteverdi is an associate professor of History of Theatre at the Department of Cultural Heritage, University of Milan. As an expert in Digital Performance, she was a teacher of Multimedia Dramaturgy at the Academy of Fine Arts of Brera. She has published: *Le arti multimediali digitali* (2005); *Nuovi media nuovo teatro* (2011); *Memoria maschera e macchina nel teatro di Robert Lepage* (2018); *Leggere uno spettacolo multimediale* (2020). She is a member of the International Theatre Networks EASTAP and IFTR. She is the director of the academic journal *Connessioni Remote*.

Anna.Monteverdi@unimi.it

The New Formats of the Multimedia Theatre

Anna Maria Monteverdi
Department of Cultural and Environment Heritage, University of Milan

From the Theatre of Images to video theatre

The precursor of the multimedia scene is undoubtedly the Czechoslovakian set designer Josef Svoboda (1920–2002), who had pioneered a scene that combined kinetic images and live show within the Lanterna Magika; the projections would start to occupy various shapes and three-dimensional objects in his theatre of light. Svoboda (who was defined by Italian critic Franco Quadri as "the scientist-scenographer") made experiments using multi-screen projections with the *poliécran* presented at the Brussels Expo in 1958: it included eight trapezoidal screens positioned on a black backdrop and a projection of films and slides synchronised with the music. The *polidiaécran*, made for the Montreal Expo (1967), had 112 moving cubes that contained images from a Kodak Carousel in different combinations. The advanced movement of the cubes gave a three-dimensional effect. In *Intolleranza 60*, which debuted in Venice in 1961, there was a stage action for choir and orchestra containing a strong political component (with texts by Brecht, Ripellino, Majakovsky, Sartre and music by Luigi Nono) and screens of various formats with paintings by Emilio Vedova. In the next version directed by Sarah Caldwell in Boston, which was much more elaborate, Svoboda was free to use even the most innovative technologies thanks to the collaboration with the prestigious MIT Institute: on stage, there were, in fact, still projections on screens, but the peculiarity was the presence of two *eidophores* (devices for live television projections) that broadcast live footage of a choir located outside the theatre. Svoboda explained: "The main purpose was to draw the viewer unexpectedly and very deeply into the show."

The work on the image, the relationship with the visual arts and new dance is the hallmark of American experimental theatre of the 1970s. We owe the definition of the "Theatre of Images" to the American critic Bonnie Marranca: this term identifies a new image-based theatre that the founder of *Performing Arts Journal* connects to directors such as Lee Breuer, Richard Foreman and Robert Wilson and, for the second generation, the Mabou Mines and the Wooster Group of Elizabeth LeCompte. The productions by the Wooster Group ("multimedia performances" or "hyperkinetic environments", as they are variously defined) involve the use of a large number of

monitors and microphones that double voice and image, creating a sort of ironic rivalry with the actors for the priority on stage. Robert Wilson is the personality who has most contributed to the definition of the Theatre of Images: the domination of the image is combined with the evocative use of lights and the exaggerated slow motion of characters in his major productions: *Deafman Glance, Einstein on the Beach, The Civil Wars*.

The panorama of the Italian experimental theatre, which has been enriched by the presence of the media on stage, owes a great debt to the "national" Theatre of Images (among the protagonists: Carlo Quartucci, Memé Perlini, Mario Ricci, Leo De Berardinis) which is helped in its definition by experiences of theatre, visual arts and video-performative events. The theorist Giuseppe Bartolucci, one of the "militant" critics who made significant contributions to the fostering and promotion of the Italian theatre, was the organiser of events and director of some of the reviews that produced the Manifesto and sanctioned the principles of the "New Theatre" (from the 1970s to the beginning of the 1980s), which was officially born at the Ivrea Convention (1967). This prevalence of the image was officially recognised at the Salerno Meeting / New Trends (1973). The different methods of composition and expression experimented, in the common refusal of the dramatic text, suggest the development of an innovative "performance text" that privileged, as Bartolucci recalled (10–12), the three elements of space, image and movement, themes that also lead back to the founders of the contemporary scenography and direction: the kinetic scenic environments of Gordon Craig and the space-image of Adolphe Appia.

Italian post-avant-garde theatre (inaugurated at the 1976 Salerno Convention) would further accentuate the anti-narrative and visual approach, the visionary and dreamlike characteristics inaugurated by the Theatre of Images, the protagonists being: the Gaia Science, founded by Giorgio Barberio Corsetti; the Carrozzone (the first nucleus of the Magazzini Criminali, now Compagnia Lombardi-Tiezzi); Mario Martone's Falso Movimento (born in 1977 with the name of Nobili di Rosa); Giancarlo Cauteruccio's Krypton. These, together with Tam Teatromusica founded by Michele Sambin and Pierangela Allegro in Padova, would create the premises for the phenomenon of the so-called "media-theatre" or "video-theatre", once again inaugurated during a conference in Rome, Nuova Spettacolarità, in 1981.

Video theatre is a term that has generically defined both videographic productions inspired by a specific show and completely autonomous creations (video documentations, video-artistic biographies, TV productions). Yet, above all, video theatre refers to technological performances that use electronics on stage, and experiment the relationship between the real body on stage and the virtual one on screen. The contemporary experience of the metropolis, the cinematic universe,

comics, rock music and electronic technologies clearly contaminate the work.

In Martone, the use of electronic machines is certainly more limited, but the focus is on the assimilation of the language of cinema in theatre and its technological expressiveness. With *Glacial Tango* (1982), Mario Martone opened up to the languages of pop, video clips, cinema, comics, and graphics: the actors-dancers, literally thrown into the space of a house recreated through dia-slides projected in the form of comics, became coloured figures inside a completely "two-dimensional" scenography.

It was 1980 when Michele Sambin, Pierangela Allegro and Laurent Dupont combined their expertise in the field of performing arts, music and experimental video art and gave life to the theatre company Tam Teatromusica, based in Padova; Sambin between 1976 and 1979 started experiencing conceptual works at the International University of Art in Venice and the Galleria del Cavallino using an AKAI videotape. In these years, he invented the technique of the *open reel video loop* (created by joining together the ends of the two recording and playback tapes, so that image and sound are cyclically repeated); he systematically applied it to vocal and music video performances generating an electronic self that split endlessly, talking to itself.

The early video recordings and video installations went in the direction of the natural development of performance, tending increasingly to explode beyond the frame-screen-gallery and become pure events, real-time happenings. The aesthetic orientation inspired by the image-sound relationship for video installations and video performances proved to be of fundamental importance in defining the new scenic composition by Tam Teatromusica.

Barberio Corsetti, the absolute protagonist of this video-theatre season, introduces a complex structure of dialogue between body and environment, light and space, video image and actors in three shows, of which it is worth remembering *Camera astratta* (The abstract room, 1987), with the technological group Studio Azzurro, presented at *documenta* Kassel, winner of the Ubu prize, the highest award for experimental theatre in Italy. Paolo Rosa, a founder of Studio Azzurro, defined it as a sort of "theatrical expansion" of their video installations. In *Camera Astratta*, there is a double scene, a material one and an immaterial one, a visible one and an invisible one, a stage and an unseen backstage, in which the actors are filmed by cameras; the images are reproduced live on monitors, in front of the audience. The "electronic doubles" are imprisoned in the monitors, crawling inside them, in a game of illusions that gives a third dimension to the luminous surface of the screens: the actors are perfectly suited to this exchange between real and virtual space. The monitors, which slide on tracks or are hung in the air and in a complex articulation of movements, split and break up the actor's body: the electronic presence strengthens the potential of the theatrical action, acts as a new linguistic and dramaturgical element in a theatrical context.

According to Hans-Thies Lehman, Barberio Corsetti is "one of the most distinguished minds of the Italian avant-garde theatre" (146), and he remembers that the Italian director does not at all leave out the dramaturgical text for the benefit of the image. In fact, having exhausted the possibilities of the specific research field of the relationship between theatre and video, for the first time in 1988 Corsetti opens up to the work of Franz Kafka: he staged three stories in *Description of Struggle*. The textual and narrative elements once again become part of the theatrical writing because "the theatre needs the text as a foreign body" and because "theatre increasingly extends its borders with the help of optical tricks and the combination of video, projections and live presence, according to Corsetti, it must not get lost in the permanent self-thematization of the 'opsis' (visual presentation)" (Lehmann 146).

Screens as a layer of memory and as an interior landscape

In the 1990s and 2000s theatre becomes more and more "screeny": screens expanded to such a size as to double the stage, or they maintained a panoramic shape like a cyclorama; they were also spread and multiplied variously in the space, placed to cover the backdrop or integrated into the scenography, while the projected images could be pre-recorded or managed live. They could become introspective psychological devices, giving an unspeakable interiority back to the viewer's gaze: it was the past or elsewhere, the hidden and the uncanny, memory and experience.

The best example of the integration of multi-screen on stage during these years is represented by Robert Lepage's *The Seven Streams of the River Ota* (1995), his first work created with the multidisciplinary team Ex Machina[1].

In the piece, in a period of fifty years, various stories intersect, beginning with the catastrophic event of the bomb on Hiroshima, moving forward to 1995 and then going back again to 1945, following a non-linear narrative. Over this half-century, stories of people who experienced the tragedy of Hiroshima, either directly or indirectly, are repeatedly interwoven. This dramaturgical "mosaic" finds its parallel in a multilayered scenographic structure made of screens where images from memory are deposited; the symbol of the show is represented by the flashlight from the camera used by the protagonist, an American photographer hired to document the collateral damage to the population.

The link between the actions and the images that are back-projected or multiplied to infinity by mirrors, together with the integration of video devices on stage, is evidently

1 Robert Lepage (1957, Québec City) is one of the most acclaimed directors and interpreters of contemporary theatre. Together with the stage designer Carl Fillon and with the multimedia staff Ex Machina he has created some of the most emblematic examples of integration of video onstage and of the dramaturgical use of the technique either in theatre and in opera.

characteristic of the show: the visual solution ideally transports into a space-time in which the lines between spiritual and material, natural and artificial vanish. The memory of the history is entrusted to the store of tragic and violent images, but the possibility of rewriting it, giving it a new meaning for the society of today, a message for the new generation exists.

On this subject, Picon-Vallin remarked that the real theme of the show is actually the "treatment of memory":

> In *The Seven Streams of the River Ota* where the principle of photography is constitutive of the narrative itself, the image is declined in shadows, reflections, archival documents, films, photo booths, slides, videos, computer texts, lumakee, images of synthesis. Like the stages – the layers – of the history of our gaze, the show evokes the theme of the "treatment of memory" with its different modes of production and masking implicit in the digital and in the machines that further process the recorded images (26).

In fact, the scene is structured like the façade of a traditional Japanese house, with seven transparent screen-panels made of spandex on which video images and shadows are projected: the "inlay" effect between the projected image and the actor's body and between the luminescent monochrome figure and background creates a surreal dialogue between bodies and light and shows the deep meaning of the play: the impossibility of erasing the Hiroshima bomb from memory. The scene becomes a "photosensitive" slab and a writing of light, a metaphor for a path of memory, illumination and knowledge.

Sound landscapes, granular sounds, binaural listening impose the viewer an experience that is not only visual but all-encompassing, as in an audiovisual installation: in the performances of the Japanese multidisciplinary theatre collective Dumb Type, born in the 1990s, the spectator's participation is immersive, that is to say, rich in multiple sensory stimulations thanks to sub frequencies and the presence of giant video screens that act as visual and sound landscapes at the limit of awareness. For these reasons, their poetics were defined by Enrico Pitozzi as an "emotional space" (10).

Memorandum by Dumb Type is a visualisation of the memory process when this is mediated by technologies. The scene, simplified to the extreme, is a metaphor of the human mind meant as a clean slate on which fragments of memory in electronic format are progressively "engraved": disturbance and noise – thanks to Ryoji Ikeda's electronic music that adds a fundamental contribution to the visual section – represent the absence, emptiness or fallibility of memory. Memory is scanned, its processes reinterpret history, the signs engraved as video traces are deep to be unforgettable. The human mind that on stage perceives the world through a technological mediation is treated as a sort of technological black box, whose functioning is shown in the act of being conditioned by external environmental stimuli and while producing responses

in audio and visual forms. It is the process that would find a correspondence in the functioning mechanism of the peripheral and central nervous system.

Cubism in theatre: not cinema, not theatre. The ambivalence effect

Could two languages coexist without conflict? Does cinema in theatre constitute a "rival scene"? What dangerous relationship is grafted between these different representation techniques when they share the same space? In many productions the theatrical action and the film are placed side by side in a dimension of ambiguous and spatial contiguity: a poetics of ambivalence prevails, a temporary coexistence of languages that, while relating to each other, maintain their specificity and also their memory of origin.

In my opinion, it would seem that what Edmond Couchot defines as the inlay effect – referencing to video art and its technique of image composition as opposed to the cinema – prevails. Viewers are faced with a "double coding theatre" that opens up to multiple levels of reading/viewing, in which hierarchies jump: a new "anti-montage" aesthetics is inaugurated:

> The montage aims to create a visual, stylistic, semantic and emotional dissonance among the various elements, while the digital composition tends to blend them into an integrated whole, a single gestalt […] The use of digital compositing to create continuous spaces out of different elements can be seen as an example of larger anti-montage aesthetics of computer culture. Indeed, if in the beginning of the twentieth-century cinema discovered that it can simulate a single space through temporal montage – a time-based mosaics of different shots – in the end of the century it came with the technique to accomplish the similar result without montage. In digital compositing, the elements are not juxtaposed but blended, with their boundaries erased rather than foregrounded (Manovich 146).

The space of the theatre is visible, the mechanisms of cinema are made explicit and a dynamic space is made: the dispositive creates an ambivalence of technologies as a potential for the exchange of the languages, a sort of "double storytelling". Big Art Group, Teatrocinema, Agrupacion Señor Serrano, Katie Mitchell, Ivo Van Hove and Motus are emblematic of this tendency of theatre to explore the free nomadism of languages, beyond any attempt to the specificity of genre.

The Italian group Motus has been characterised from its beginnings as a theatre with strong visual connotations and a cult of the image; it has been experimenting from the 1990s to the present day, the so-called "theatre-cinema" format on stage (from *Twin*

Rooms (2001) to *X(ics) Cruel tales of youth* (2005) up to the more recent *Panorama* and *Chroma Keys* (2019), which the founders Enrico Casagrande and Daniela Niccolò define as "attempts at brazen sabotage of the cinematographic frame"). Laura Gemini, who has been following the group's activity for a long time, speaks of the "live cinematic nature of their theatre": "The awareness of the *mediatisation* of the social, or the fact that the media context in which we are provides frames and formats to our experience, can be traced back to the *artistic frame* that Motus has always preferred in theatre and that is the cinematographic one."

Twin Rooms (2000–2003) inspired by the novel *White Noise* written by the American author Don De Lillo, shows a real cinematic process through a particular visual and sound device. The theatrical action, which proceeds by panels and close-ups and rebuilds a set, takes place in an anonymous hotel room: the structure doubles in height, giving life to a digital room with two rear-projections flanked by images that are pre-recorded or from CCTV cameras and mixed live with images shot live by the same actors on stage. The scenographic frame created by the set designer Fabio Ferrini of this "expanded live cinema" invades the entire length of the stage, generating an overload of the visible[2]. The live video managed by the actors themselves, looms as a disturbing presence inside this claustrophobic container of those bodies reduced to images, a visual process that effectively dramatises consumerist totalitarianism, the sense of alienation and loss of identity in the flow of self-representation, cynically narrated by De Lillo, who is considered the greatest postmodern novelist.

For a decade, the English director Katie Mitchell has also worked on "real time cinema", a special format in which a film is shot in real time on stage (with operators acting on sight with cameras, telescopic microphone booms, cables, monitors) in front of a theatrical audience: the public sees both the show and, at the same time, the film from a gigantic elevated screen.

"Not theater not film", this is how Katie Mitchell explains the working method for *Shadow (Eurydice Speaks)* and *The Forbidden Zone*. A skewed, double vision is added to theatre history. There is another perspective, the interior one, and it is the cinema that offers it to the public:

> For me, the final form of the show is a synthesis of theatre and film which creates a third thing, which is like Cubism in theatre. What the cameras do is allow us to see all the sides of how something is constructed whilst looking at the constructed object, a bit like Picasso's first three-dimensional portraits of a woman's head with all the planes visible at the same time. It is neither theatre nor film; it is another strange thing, which uses both the strengths of the film world and the theatre world. Cinema can go deeper than theatre in digging into the character, their tensions, and it can do it with close-

2 You can see the project of the set design and the 3D rendering for *Twin Rooms* online: https://www.audinoeditore.it/libro/9788875274467/3808

ups, with the details that you inevitably lose from afar. I think what the camera does is equalise the audience's view of details. For me, the use of cameras is about details and subjectivity. They get you closer.

Politics and new media in theatre

Technologies, considering their spreading, manipulative, invasive and pervasive potential, pose new political questions, even from the ethical standpoint, to those who use them creatively, and relaunch the link among art, ethics and communication. A stage that reveals the economic and capitalistic logic of the communication apparatuses, trying to destabilise them, is Peter Sellars's one. His statements on current issues are very harsh: from globalisation to multiracial society, from war to the manipulation of information by the media, to racism, to the problem of refugees. Characteristic of his theatre is a scene full of current political themes often masked under classical texts (the cycles of the Greeks and Shakespeare). In *The Persians* (1993) the images on the screens showed clips of the Gulf War seen through CNN reports. In *The Merchant of Venice,* during the scene of the trial between the Jewish Shylock and the Venetian nobleman Antonio, a TV broadcast the images shot by a video amateur of the black motorist, Rodney King, beaten to a pulp by white policemen then acquitted by the court with the sentence that triggered the tragic riots in Los Angeles.

Marianne Weems (who worked as a playwright and assistant director for Elizabeth LeCompte and Richard Foreman), is the theatre director of the multidisciplinary company The Builders Association, specialised in exhibitions exploiting the richness of interactive digital technology and panoramic screens. She continues with extraordinary coherence and strength with her acute examination of technology and communication via computers in reference to their influence in society and their effects on social interactions.

In *Jet Lag* (1998) she criticised the media system and the "construction of information". In *Alladeen* (2002), she observed outsourcing, the effects of the globalised economy, with the workers of an Indian call centre who were instructed to erase their identities and their language and take on the American accent and culture. In *Supervision* (2005), Weems brought the nightmare of surveillance to the theatre after September 11: the citizens, whose bodies have become transparent, "data body" in a "data space", are subject to alienating control.

Marianne Weems puts up stories of ordinary *data piracy* in a post-private era: people living in the continuous remote connection of white noise, travellers held up at the border because of cross-controls between strictly personal information and the AIDC (Automatic Identification and Data Capture). Marianne Weems gave visibility and

tangible concreteness to these *data bodies*, to this immaterial infosphere, thanks to an impressive dispositive made up of a panoramic screen, multiple real-time video projections, computer animations and a motion-capture system.

In *Continuous City* (2007), Weems talks about the "uninterrupted city", in other words, the great worldwide web that allows the passage through barriers, political borders and sovereign states and which has radically changed the face of the landscape and the experience of living in a city or in a global village, just as it has broadened the horizon of our human relationships: the contemporary living landscape has become a *mediascape,* a place of "nomadic passage", dematerialised as Manuel Castells says, into a "space of flows", communicational flows. The urban city in the three stories of the piece is seen through screens of different sizes (smart mob, PCs) that are always turned on and compose an intermittent luminous set, as a coloured kaleidoscope: we can see fragments of a city that are presented as a puzzle that releases residues of animated and noisy environments hung on the line of an internet connection; the father, who works far away and talks via Skype to his daughter, who is always on. Meanwhile, she updates her blog daily, in which she talks about her personal views on the city. Emotions that are shared at a distance, bodies taken to a dimension beyond physical or geographical boundaries, in places crossed by the web, where feedback between transmission and reception is instantaneous.

The technological gap between developed and developing countries, the exploitation of workers by means of outsourcing, media simulation of events, technological mediation invading all actions in people's lives are the core subject of the piece. Spectators witness a genuine example of techno-political theatre, continuously played within exceptionally self-evident and visually effective scenography.

Audiovisual technology has a profound political value also in the *Syrma Antigónes* project[3] by Motus, in which the actress Silvia Calderoni tells a contemporary tragedy: in *Alexis, a greek tragedy* the last step of the project, Antigone is reincarnated in the figure of the young Alexis Grigoropoulos, killed by a policeman in Athens during the economic crisis in 2010. The collective protest sparked as a result of the indignation over the boy's death is regenerated on stage with the concrete gesture of the performer to denounce what happened: photographs and videos of the revolt, even the posters stuck on the walls in the anarchist Greek district of Exarchia are projected on stage by a mobile projector moved by the actress. The images loom everywhere, even on the body of the public, involving them: an unequivocal gesture, a sign of the civil commitment of the new theatre of "reality", that real "documentary theatre" which characterises the artistic work of Motus in the most recent years.

3 "*Syrma Antigónes, Antigone's trace* – title of the total project – is the ancient name of a site close to Thebes, where it seems that Polynices' death took place: the focus of exploration converges precisely on this killing which we dedicate to the many young people who have died in riot struck streets. Everywhere" (from the official website of Motus).

Metaphors and machinery of the visions: Robert Lepage and video mapping

The theme that best identifies Lepage's theatre is the machine, in the double meaning of dispositive and actor: within this scenographic machine, containing video and continuous metamorphism of the scene, the actor is an essential mechanism. The scene integrates images and mechanisms of movement of the set in a single theatrical device in which man is still at the centre of research; theatre in a multimedia perspective can thus revert to being a laboratory of integral culture, in which art and technology rediscover their common etymology.

An example of a dramaturgical machine is *Elsinore* (1995) in which a single actor (Lepage himself) impersonates all the other characters of the tragedy, thanks to a metamorphic, flexible, mechanised performance set and to the projections and lightings (a mobile scenic solution that directly recalls Gordon Craig's screens[4]).

For Lepage, a single scenic element through a mobile device holding multiple possibilities of movement and through the relation which it establishes with the character that lives inside its mechanisms shows this indivisible and opposite polarity. Its only attribute is the ability to transform; its attitude is the mutability.

Elsinore is the place, at the same time, the physical and mental of the tragedy, at the centre of which Hamlet is placed, forced to stay in-between, to live separately-close to the corrupt court, relegated to an impossibility of free movement, while the scene ceaselessly moves around him (and not the contrary). All the characters in one, all the places in one: this scene-machine ("humanised" as the stage designer Carl Fillon likes to define it), subject to variations and changes, a true theatrical mask, takes expressions, faces and different personalities, transforms itself constantly and the actor is forced to follow its rhythm, its breath. He can cross it, remain suspended, lean on it and thus create a relation of symbiotic complicity, he can have a dialogue with it, and find some protection in it but also dangers between its cogs; a reversal of roles definitely takes place: the machine which has crushed its last artificial determinism to become a body, is the protagonist and the actor a kind of "Übermarionette", the deuteragonist.

If the machine is humanised, the actor becomes a machine: "For me the machinery is in the actor, in his way of repeating the text, in his method of acting: there is a mechanics in there also." And also: "I tell stories with machines. The actor himself is

4 Christopher Innes first examined Robert Lepage's work in the context of the avant-garde from French Surrealists to Edward Gordon Craig's theories and practices. He described *Needles and Opium*, *Elsinore* and *ZuluTime* as those shows in which Lepage has realised Craig's ideals of the Übermarionette and of his famous mobile screens.

a machine: I know that actors do not like being called 'machines', but when you make theatre, it's a bit like that" (Lepage)[5].

Craig's prediction seems to come true.

Video mapping

Architectural mapping, façade projection, 3D projection, display surfaces, architectural VJ set are some of the definitions used for a new artistic format and a new technique named "video mapping" that consists in projecting video images on buildings, façades and other structures in public spaces (but recently also in theatres and museums) or on nearly any kind of complex surface or 3D object to shatter the viewer's perception of perspective. The projector allows bending and highlighting of any shape, line or space: it creates astonishing optical illusions, it's a suggestive play of light that turns a physical object into something else by changing its perceived form.

The context is that of so-called "augmented reality"[6]. The perceptual illusion, in the most successful cases of video mapping, is a sort of "liquid architecture" which adheres as a film or mask over the concrete surface. Fragments of surfaces, as if they were Lego bricks, create an optical illusion of great impact for the audience, which no longer distinguishes between the real architecture and the virtual one. Immediately acquired by major international brands for advertising and the launch of new products, this technique also offers a glimpse of possible performative uses, which would allow combining video art, animation, graphic art, light design, choreography and live media.

We are facing a new *machine vision* in a theatrical sense: the video mapping projections are based, in fact, on the same principle as were the "ineffable visions" of the 16th century, that is to say, those paintings or frescos created on the basis of anamorphosis, forcing to the extreme the linear perspective of the Renaissance. In the works based on the anamorphic technique, reality can only be perceived through a distorting mirror, while the mapping video is nothing more than a mask that deforms/creates a reality that does not exist.

The borders of theatre change and widen: the use of video mapping in theatre not

5 "Je raconte des histoires avec des machines. L'acteur en soi est une machine. Je sais que plusieurs acteurs n'aiment pas q'on parle d'eux comme étant des machines mais lorsque tu fais du théâtre, c'est un peu ça."

6 Augmented Reality means overlaying virtual, digital elements on reality. It refers to the innovative multimedia techniques which make reality interact with digital constructions and reconstructions, thus modifying, enhancing and enriching the perceived world. It includes interactive projections, lighting techniques, virtual architecture and communication and audio-visual instruments. Its applications are numerous, ranging from overlapping virtual components onto reality (geolocalisation and referencing, logical and physical mapping) to simulation of virtual reality elements (simulating time-space interactions) and artistic applications through performances, video projections and installations.

only concerns the sets (the stage, the volumes in which images can be projected) but also objects, actors, costumes and the entire empty space.

As a first example of the application of video mapping to the theatre as scenography, we can describe the work by Apparati Effimeri, an Italian technological group: they created a short dramatic scene in video mapping based on the "baroque style" for *Orfeo e Euridice* (2014), directed by Romeo Castellucci. They used video mapping exclusively to project the "grove of greenery" from which emerges a dreamlike ethereal female figure. The projected landscape was worthy of a painting by Nicolas Poussin: we are in Arcadia, the scene unfolds and the video projects onto the scene moving images and 3D effects, giving the illusion of wind in the leaves, lights on the water, and evening shadows. The "baroque technologic style" of the set generates the amazing sensation one can experience when looking at large frescoes from the past. It is in perfect symbiosis with the myth and the emotions of the drama, which focus on the image – live from a hospital – of a woman in a coma, who represents in the theatrical fiction, the contemporary "double" of Eurydice.

The three phases of theatrical video mapping

Through the exact measurement, the projection can be perfectly adapted to every space or volume. The original idea that opens the first phase of a theatrical video mapping is to use the façade of the buildings in the public space as a stage; emblematic are the examples by the company URBANSCREEN[7]: *What's up* (2010) is the title of an architectural video performance in which the enlarged body of a character (previously recorded in a green screen) is wedged inside a cube, in turn, inscribed in the surface of the building located at the centre of Enschede (Holland). A comic and surreal situation that offers a somewhat Kafkaesque theatrical event, well played in the illusion between the dimensions of the real windows of the building, doubled digitally, and the virtual surface of the projection.

Another example of this "vertical theatre", that is a sort of a stage-building, is highlighted by the projection designed by URBANSCREEN in the sail-shaped architectural roofs of the Sydney Opera House, *Lighting the sails* (2012). Two bodies of dancers move in the space limited by the sails, finding both a narrative and a choreographic element in the general setting and in the very shape of the space in which they are placed. Also, in this case, the images were previously recorded on a green screen in a space that

7 URBANSCREEN is a group of architects specialised in digital displays and installations, also in urban areas. It was born as a group in 2008, but its members have been working in this sector since 2004 in Bremen, Germany. They work in the field of entertainment, advertisement and show business using new digital medias and video projections. Open to cooperation with artists who work in the field of motion graphics and video, they have created a new kind of public art, strictly digital. They create extraordinary events and tridimensional effects, as much improbable as phantasmagorian.

simulated the dimensions of the architectural roof.

The second step towards theatrical video mapping is represented by the use of the interaction between the mapped video surface and the audience, as is evident in the project by Architecture 1024 (*Perspective lyrique*, 2010) at the Théâtre des Célestins in Lyon on the occasion of the annual Fête des lumiéres, and by Klaus Obermaier (*Dancing House*, 2014) exhibited during White Night Košice. In the first example, the deformation of the building and its annexed figures was determined and controlled in real-time by the voice of the audience through a microphone and a sound analysis algorithm; in the second case, it is the body of the people who assists, sometimes unaware, traced through an optical system, to determine significant distortions of the images and create a very participatory dynamic.

The third step to theatrical mapping is represented by architectural video mapping with the interaction between performer and video image: a fairly enlightening interactive architectural show project is that of Xavi Bové entitled *Cycle of Life* (2014), with projections on Casa Pastors in Girona. Thanks to a specially created software, the soprano voice allowed the modification of images from a previously chosen repertoire. The evolution of the project is *Movimentos Granados*, an interactive show of live music and images in real time on the façade of Gaudì's La Pedrera in Barcelona (2015).

Robert Lepage used interactive video mapping on scenography in movement in his most ambitious project: the direction of Wagner's *The Ring Cycle* for the New York Metropolitan Opera (2014–2016). The protagonist on stage is a huge machine designed by Carl Fillion for the entire tetralogy, a true work of mechanical engineering, made up of 45 axes that move independently, surging and rotating 360 degrees thanks to a complex hydraulic system that allows a large number of different forms: a dragon, a mountain, or the Valkyries' horse. On the surface of the individual axes, 3D interactive images are projected in video mapping, showing trees, caves, the waters of the Rhine, or the Walhalla.

The up-to-date projects with video mapping are creations with immersive kinetic space with scenography in video mapping combined with interaction design: the most sensational example that has combined dance, video mapping and 3D technology is that of the duo Adrien Mondot and Claire Bardainne with the scenographic variations from the amazing piece entitled *Hakanai* (2013) created with the software E-motion. In these pieces, theatre are images that seem to come out of nowhere and come to life with the movement of the dancers only. The creator of the computer system and the director is Adrien Mondot who talks about the piece as "unique landscapes: bodies that evolve with objects. In this sinuous construction I have chosen to get rid of everything that did not seem essential to me." The scenography, summarised in an immense space of possibilities, returns

to its simplest expression: “the two blank pages of an open book, yet to be written” as the author writes in the stage text.

Amendola, Alfonso, and Vincenzo Del Gaudio, eds. *Teatro e immaginari digitali*. Gechi, 2018.

Balzola, Andrea. *La scena tecnologica, dal video in scena al teatro interattivo*. Dino Audino, 2012.

Balzola, Andrea, and Anna Maria Monteverdi. *Le arti multimediali digitali. Storia, tecniche, linguaggi ed estetiche delle arti del nuovo millennio*. Garzanti, 2004 (4th ed.).

Bolter, Jay David, and Richard Grusin. *Remediation, Understanding New Media*. MIT Press, 1999.

—. Remediation. *Competizione e integrazione tra media vecchi e nuovi*. Guerini & Associati, 2003.

Bargiacchi, Enzo. "Il cammino della Gaia Scienza.", *La scrittura scenica*, no. 22, Bulzoni, 1980, pp. 48–71.

Bartolucci, Giuseppe. "Attraverso gli ultimi segnali." *La scrittura scenica*, no. 22, Bulzoni, 1980, pp. 3–22.

—. *Testi critici 1964–1987*, edited by Valentina Valentini, and Giancarlo Mancini, Bulzoni, 2007.

Castells, Manuel. *La nascita della società in rete*. Egea, 2002.

Chapple, Freda, and Chiel Kattenbelt, eds. *Intermediality in Theatre and Performance*. Rodopi, 2006.

Couchot, Edmond. "L'immagine intarsiata." *Il nuovo spettatore*. Special Issue: VideoImago, edited by Alessandro Amaducci, and Paolo Gobetti, no.15, 1994, pp. 221–231 (orig. in *Communications*, no. 48, 1988, pp. 79–87).

Dixon, Steve. *Digital Performance. A History of New Media in Theatre, Dance, Performance Art and Installation.* MIT Press, 2007.

Gemini, Laura. "Panorama Motus.", *L'incertezza creativa*, 11 March 2018, https://incertezzacreativa.wordpress.com/2018/03/11/panorama-motus/. Accessed 10 November 2020.

—. *L'incertezza creativa. I percorsi sociali e comunicativi delle performance artistiche.* Franco Angeli, 2003.

Giannachi, Gabriella. *Virtual Theatres. An introduction*. Routledge, 2004.

Holmberg, Arthur. *The Theatre of Robert Wilson*. Cambridge University Press, 2005.

Innes, Christopher. "Puppets and Machines of the Mind: Robert Lepage and the Modernist Heritage." *Theatre Research International*, vol. 30, no. 2, 2005, pp.124–138.

Jenkins, Henry. *Convergence culture: where Old and New Media collide*. New York University Press, 2006.

Lehmann, Hans-Thies, *Postdramatic Theatre*. Routledge, 2006.

Lepage, Robert. “Lepage tourne la page." *Le Devoir*, 16 November 1995.

Magris, Erica and Béatrice Picon-Vallin. *Les théâtres documentaires*. Deuxième Epoque, 2019.

Malvezzi, Jennifer. *Remedi-Action. Dieci anni di videoteatro italiano*. Postmedia Books, 2015.

Manovich, Lev. *Il linguaggio dei nuovi media*. Olivares, 2002.

Mango, Lorenzo. “La simulazione tecnologica. Una questione linguistica nella sperimentazione teatrale italiana.” *Mimesis Journal*, vol. 4, no. 2, 2015, pp. 49–70 https://journals.openedition.org/mimesis/1087. Accessed 10 November 2020.

Marranca, Bonnie. *The Theatre of Images*. Drama books, 1977.

Pearson, Joseph. “Not Theatre, Not Film: Katie Mitchell’s Third Art in the 'Shadow'.” *Schaubühne*, 26 September 2016. https://www.schaubuehne.de/en/blog/not-theatre-not-film-katie-mitchells-third-art-in-the-shadow.html. Accessed 10 November 2020.

Monteverdi, Anna Maria. “Michele Sambin, dalle videoperformance musicali al Tam Teatromusica.” *Catalogo Invideo. Charta*, 2003, pp. 15–24.

—. *Nuovi media, nuovo teatro*. Franco Angeli, 2011.

—. *Memoria maschera e macchina nel teatro di Robert Lepage*. Meltemi, 2018.

—. *Leggere uno spettacolo multimediale.* Dino Audino, 2020.

Parolo, Lisa, and Sandra Lischi. M*ichele Sambin performance tra musica, pittura e video*. Cleup, 2014.

Perelli-Contos, Iréne, and Chantal Hébert. “L’écran de la pensée ou les écrans dans le théâtre de Robert Lepage.” *Les écrans sur la scène*, edited by Béatrice Picon-Vallin, L’âge d’homme, 1998.

Picon-Vallin, Béatrice, “Hybridation spatiale, registres de presence." *Les* écrans *sur la scène,* edited by Béatrice Picon-Vallin, L’âge d’homme, 1998.

Pitozzi, Enrico. “Il prisma del reale. La scena intermediale secondo Dumb Type e Shiro Takatani.” *Teatro e immaginari digitali. Saggi di mediologia dello spettacolo multimediale*, edited by Alfonso Amendola, and Vincenzo Del Gaudio, Gechi, 2018, pp. 101–111.

Pittaluga, Noemi, and Valentina Valentini. *Studio Azzurro. Teatro*. Contrasto, 2012.

Pizzo, Antonio. *Neodrammatico digitale. Scena multimediale e racconto interattivo*. Accademia University Press, 2013.

Quinz, Emanuele, and Armando Menicacci. *La scena digitale*. Marsilio, 2001.

Quinz, Emanuele. *Digital Performance*. Anomos, 2002.

Sacco, Daniela. *Pensiero in azione: Bertolt Brecht, Robert Wilson, Peter Sellars: tre protagonisti del teatro contemporaneo*. Engramma, 2017.

—. "The Persians di Peter Sellars. Dire gli universali." *La performance della memoria. La scena del teatro come luogo della sopravvivenza, ritorni, tracce, fantasmi,* edited by Francesca Bortoletti, and Annalisa Sacchi, Baskerville, 2018.

Sapienza, Anna Maria. *La tecnologia nella sperimentazione italiana degli anni Ottanta. Tre esempi.* Istituto Universitario Orientale, 1992.

Studio Azzurro, and Giorgio Barberio Corsetti. *La camera astratta. Tre spettacoli tra teatro e video*. Ubulibri, 1998.

Svoboda, Josef. *The Secret of Theatrical Space: The Memoirs of Josef Svoboda*. Translated by Jarka Burian, Applause Theatre, 1993.