BEATRIZ HERRÁIZ ZORNOZA – DOT: ANIMATION IN THEATRE FOR CHILDREN

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The art challenges the technology, and the technology inspires the art.

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Introduction

This research aims to shed some light on the relationship between animation and contemporary theatre. It is oriented in two directions; one that involves reading and analysing sources and the other is due to having been part of a team repeatedly working in the creation of the performing arts. In the first respect, I engage with the work of theatre scholars, such as Patrice Pavis (1999, 2000), Christopher Baugh (2005) and Steve Dixon (2007), whose studies extensively cover the relationship between theatre and the new technologies. However, exclusive content about theatre and animation has not been so easy to find, although I have followed Teri Silvio's work (2010) on animation and performance, which has been continued by Paul Manning and Ilana Gershon (2013), as well as texts by Lynn Tomlinson (2013) and Malcolm Cook (2013).

To illustrate some of the issues present in this article and provide a practical view of them, some experiences, processes and outcomes of the play *Dot* will be described. In Valencia, Spain, the children's play *Dot* was performed for the first time in 2013 by the Valencian theatre company *Maduixa Teatre*.[1] This was a multidisciplinary project that combined dance, theatre, illustration and animation. Under Joan Santacreu's direction, Maduixa Teatre started its artistic career in 2004 in Sueca (Valencia), offering both street and indoor performances for the general public.[2] In 2006, the troupe professionalized with their show *Maniatics*, which led the group to consolidate itself as a company in 2008. In 2011, Maduixa launched the Consonant show, receiving a Feten award in 2012 for new audiovisual technologies for the new stage proposals. With the intention of growing and working on new disciplines, the company strengthened its main values, to combine theatre, dance, plastic arts, new media, careful staging and a solid performance. A resolute investment in this research work consolidated

the group, defining its own language.

Dot, directed by Juan Pablo Mendiola, was also staged by a team coming from different artistic disciplines. Choreographers, musicians, dancers and animators started the project by creating a play focused on children's audience. The play is currently on tour in Spain and France. For this production, a completely digital set design was made using a transparent screen scrim onto which animated graphics were projected, and with which the actors-dancers interacted. The play was inspired in the work of conceptual and minimalist artist Sol LeWitt, and all of the animated graphics were based on points, lines and simple geometry.

The challenge now is to discover how animation is expressed through theatre, and to accomplish this, examine the history of theatrical projection, as well as the early days of animation and film to provide an understanding of how this heritage has been transferred to film and theatre.

First performative projections

The use of projection in theatre goes back several thousand years, as the first expression of these projections can be situated in the ceremonies of puppets and shadows. The most sophisticated tradition of this art form was developed in China and Indonesia, but there is a lack of evidence to show the exact origin within these countries. Their origins are also full of myths and controversies, but in an attempt to shed some light on the matter, Fan Pen Chen (2003) collected a number of different theories. According to Chen, a

less shadowy theory subscribes to an origin among the nomadic tribes of Central Asia. It links the characteristics of this theatre to the culture of the Turkish tribes there […] The use of flat figures made of leather, felt, paper, cloth or bark by the nomadic tribes of Central Asia may have been related to their shamanic religious practices" (p. 29).

Those practices may have travelled along the old trade route between China and Russia. Centuries later these traditions were extended to India, southeast Asia and China, with roots that go deep into native cultural traditions. Trade routes facilitated export to North Africa and later to Europe.

Around the 17th century, shadow theatre began to spread across Europe, and it was the Italians who began to develop these shows but, as Iglesias (2008) maintains, with some differences; for instance, they were known as "Chinese shadows," and were smaller and built of other materials such as wood, cardboard or metal. The small figures were dispossessed of their ancestral religious and mythological origins to be used with a satirical sense in Europe. During the second half of the 18th century, the puppeteer Dominique Séraphin created his *Ombres chinoises et jeux arabesques du Sieur Séraphin, breveté de Sa Majesté*, the most successful shadow theatre in Europe, which was set up in the Palais Royal in Paris. After the disappearance of Séraphin, the theatre was closed only to be reopened years later by Rodolphe Salis in the *Le Chat Noir*. These performances were also introduced into music halls

and vaudevilles, as individual artistic shows, but despite the efforts of their creators, shadow theatre never had the popularity it enjoyed in the East. This failure to become popular was also due to the appearance of the magic lantern in theatre. The magic lantern uses the same principles as the camera obscura; that is, its light passes through a set of specially-arranged lenses and mirrors to project a thumbnail image. Since the 17th century, then, the magic lantern was used in travelling shows as well as in theatres, where the technology gradually became more sophisticated by incorporating better lenses and the most powerful sources of illumination, which improved the quality of the projection. A number of tricks were also incorporated to give the impression of movement. In the late 18th century the Belgian Robertson introduced the most popular kind of magic lantern show called *phantasmagories*, an entertainment show that recreates the spectre of socially and politically recognized deceased people like Rousseau, Voltaire, or Marat. The assemblies performed by Robertson were very popular and helped improve different types of technical projections, including rear-screen projections, projection on substances or the incorporation of mobile elements. Like the shadow shows, the magic lantern and other inventions to enhance performances would be seen in theatres but also at little shows like music halls and vaudevilles.

The industrial era produced countless inventions for use in the performing arts and entertainment, many of them being gimmicks seeking to surprise the public through magic, illusions and amazement. These inventions sparked new forms of creation and encouraged their inventors, who were the artistic creators in many cases, to improve those inventions at the same time. This tension between artistic creation and invention, and this need to recreate imaginary worlds and interpret reality, fostered the appearance of the inventions that were to revolutionize the world of representation during the 20th century, the cinematographer and the camera, which would lead on to cinema, animation and photography.

In 1914, Winsor McCay jumped from the pages of comics to the screen with *Gertie the Dinosaur*, one of the earliest films fully conceived with drawing-by-drawing animation techniques. McCay himself, like many other cartoonists, took part in some small *vaudevilles* called "chalk talk," at which the audience could listen to the performers' discourses while enjoying their live drawings. On February 8 that same year, McCay introduced his production at the Chicago Theater Palace. He was wearing a dinner suit and held a whip in his hand, with the screen only showing a picture of a rocky landscape. After the order "Gertie will come out of that cave and do everything I tell her to do," a shy female diplodocus appeared in the scene and started to obey McCay's orders. This show was made with McCay's refined art, but with the sole intention of surprising and entertaining the audience, became the undisputable benchmark for animation, theatre and interaction for several different reasons. From the point of view of animation, the quality of the cartoon character was undeniable – Gertie was the first cartoon character who demonstrated feelings and personality. Furthermore, her creator contributed to the animation process with some techniques that would be followed by many cartoonists in the

future, even though McCay's main contribution with this vaudeville was to create (albeit without realizing it) the first interactive play.

Any study dedicated to animation will place McCay and more specifically Gertie the dinosaur as a founding event of animation as a medium, but this fact is not only situated as an important milestone for animation. Steve Dixon (2007) highlights two developments that begin this interrelationship between image and performance in the early 20th century: American dance pioneer Loïe Fuller's experiments with projected film on her diaphanous robes, and *Gertie the Dinosaur* performed by Winsor McCay. Similarly, Cook (2013) argues that animation, "by any definition, begins with a performance. This is equally true of animation's history as it is of any individual film's production" (n.p.). The first of our questions arises here, the contribution made by McCay's animation was extraordinarily well developed by the artists who succeeded him, but why did the performative side fall into oblivion? And it also leads us to sympathize with the questions that Tomlinson (2013) explains in her text. She asks,

why has it taken one hundred years for the combination of live performance and animation to flourish, as it seems to be now? Is it just that advances in projection and digital manipulation of images, and more accessible and inexpensive technologies have led to a boom in these mixed-media performances? Or does it represent a shift in definitions, and a blurring of the sharp distinction between the live and the pre-recorded?" (n.p.).

Winsor McCay was facing an art that was still unaware of its potential, and he did it without complexes or prejudices, with an instinctive playful sense, showing the most performative part, the essence of animation in a live show. The cartoonist's experiment was expected to overstep the physical limits of the screen and, at the same time, the intangible boundary between fiction and reality, an extrasensory experiment that only got its entire meaning on stage, in the moment of the acting. At the same time he was inheriting from those small shows where artists showed the public their inventions and artistic creations. Perhaps the answer to the question lies in his own words when he addressed his colleagues at a 1927 dinner in his own honour. McCay said, "Animation is an art. That is how I conceived it. But as I see, what you fellows have done with it, is making it into a trade. Not an art, but a trade. Bad Luck!" (qtd. in Langer 2005, p. 149). McCay's sentiment stemmed from the fact that around 1910, animation started to become an industry, and not a solely artistic endeavour. This new industry was centred in New York, which offered the best opportunities and production systems, according to Bendazzi (2007). The systematization of production methods and professionalization of the sector started, where little by little the rules were increasingly dictated by Hollywood, and in which the animator's techniques were more directed towards technical prowess and virtuosity than to transgressing the boundaries of the medium or finding new ways of relating to the environment or representation. In the process, the playful character and experimentation initiated by the early pioneers were lost forever and the era of the hegemony of the big screen and big blockbusters was heralded in.

Current Panorama[3]

As I have stated, the commercial interests of the nascent film industry fractured the performative possibilities of animation, but while this occurred in animation, theatre began to undergo a number of transformations, which have continued throughout the 20th century, straying from the traditional pillars it was based on, due to avant-garde artists and authors such as Brecht, Piscator, Kantor, Ionesco or Beckett, who have influenced the contemporary theatre scene. Theatre has explored and continues to explore all the narrative and conceptual possibilities. In fact, today the boundaries between disciplines seem to have dissolved. According to Pavis (2007), the development of technologies has affected concepts like interaction and the fusion of artistic genres. In this context, then, we have found different artists that work on animation for performance in different ways. We can distinguish between those animators who create animation for their own performances and those who have been part of a theatrical production team.

In the first case there are artists like Kathy Rose, Miwa Matreyek, Dandypunk and the Japanese collective Enra. They have all become heirs to the tradition of vaudeville, which was so characteristic of the early 20th century, showcasing the performers' artistic skills and inventions in front of a small audience in order to entertain and amaze them, but also for them to reflect upon. Rose condenses her most creative work between the 1970s and the 1990s. She started working on short films such as *Pencil Booklings* (1978)*, Mirror People* (1974), and *The Doodlers* (1975), but soon begun combining dance, animation and performance, becoming an authentic pioneer of this kind of mixed art. She explores the projection of animated elements on the volume of her body and face, interacting with different animated characters that co-exist with abstract textures to achieve suggestive effects. Her best known performed plays are *Primitive Movers* (1983), *Queen of the Fluids* (2004), or *Opera of the Interior* (2015). Her non-linear work concentrates on performance-video spectacles and installations, with influences from symbolist art and Japanese Non theatre. Her themes border on absurdity and the unconscious in performances where she herself is the main protagonist of her shows with the choreographies she herself creates.

Rose describes the magic of performative animation, stating that

in the live event, we are more prepared to wait for what happens because we are there, and there is suspense, an excitement in the reality of the performer being there, live on the spot. And anything that occurs integrating two-dimensional imagery seems impossible, hallucinogenic, and is therefore riveting" (qtd. in Sporn 2011, n.p.).

Rose has toured extensively in live performance throughout the United States and Europe. She is now Master Lecturer at the California Institute of the Arts and the Philadelphia College of Art.

Miwa Matreyek is a young artist who, like Kathy Rose, comes from the most experimental side of CalArts. She builds her own particular graphic universe in short films, performances and installations where

her own shadow body is fused with her colourful animations. Although she has had a short creative career, her production in recent years has been soared, with internationally acclaimed short films like *Panorama City* (2009) and *Lumerence* (2012), performances like *Dreaming of Lucid Living* (2007), *Myth and Infrastructure* (2010) and *This World Made Itself* (2013), and installations like *Light City* (2009). In her work she uses lavish animation, as well as digital collages and the silhouette of her own body. Matreyek reflects on humans and their environment, about the origins of life and the power of nature. Matreyek creates a poetic environment, full of expression and visual richness. Her staging is sometimes naïve, sometimes dark, and is not short on visual and technical challenges, sometimes daring to employ advanced projection techniques such as video-mapping.

Joel Sebastian similarly employs cutting-edge technologies in his performances. He uses the stage name "Dandypunk," and creates performances in which he mixes video-mapping and animation with acrobatic dance movements, demonstrating great agility in his movements and acrobatics. Indeed, he worked with the Cirque du Soleil for many years. In *The Alchemy of Light*, Dandypunk projects animations and real images on props, walls and his own body, thereby creating a real three-dimensional feel. Despite the technological basis of his creations, his style is warm and friendly, with fantastical imagery – bucolic and gothic universes that blend the magic of animation and the alchemy of light. The Enra Collective also creates numerous plays, performances and dance, applying graphics and animation mixed with sophisticated digital interactivity in their staging. Their latest work, entitled *Pleiades*, combines two dancers working with lightning animations.

The other references that we have focused on are animators who have worked for theatrical productions. William Kentridge is a South African artist that has delved into the performance aspects of animation. His beginnings were in cinema, where he worked as art director and even creating animated films. His passion for theatre led him to join the *Junction Avenue Theatre Company*, where he remained a member from 1975 to 1991, and just a year later he began to collaborate with the Handspring Puppet Company, where he worked as an actor, director and scene director in plays like *Woyzek*, *Fausto* and *Ubu Rey.*His artwork is closely linked to the effects of post-colonialism in South Africa, emphasizing racial disharmony and the apartheid laws. Although this influence is not directly illustrated in his work, Kentridge works in metaphors from building issues that question the human condition. In theatre he has implemented the use of animation, puppets and volumetric screenings. His animation style is accomplished with pastels and crayons, which Kentridge deletes and then films again, achieving an effect of continuous metamorphosis and transformation of his drawings. He is internationally known for his particular vision of Mozart's *Magic Flute* for La Monnaie (Royal Opera House, Belgium, 2005).

Similarly, 1927 is a theatre company from the United Kingdom, whose winning and best-known artworks are *The Animals and Children Took*

to the Streets and *Between the Devil and the Deep Blue Sea*. The company was founded in 2005 by writer, performer and director Suzanne Andrade, with illustrations and animations by Paul Barritt. Her artwork is specialized in combining performance and live music with animation and film to create magical filmic theatre. Andrade's style is clearly influenced by the artistic and theatrical avant-garde currents, especially Surrealism, Constructivism and Expressionism. The staging by Neil Coppen (actor, writer, director and designer in Durban, South Africa) for the piece *Tree Boy* should also be considered. Set in the South Africa of the 1960s, this shows tells the story of Ben, an eleven-year-old boy whose mother dies. His father, unable to cope with the loss, starts drinking. Father and son move from a farming area to an industrial town, and hope is born again through the example of the life cycle of trees. The show is a mixture of real action and projected animation, between the reality and fantasy of Ben, who seeks solace in an overgrown forest. Real and animated shadows are mixed to show the different levels from reality to an imaginary world. All these references have been chosen for their graphic and conceptual quality and for their contribution to animation and performance.

In the following sections I will examine further the hybrid area between animation and performance. As film animation has been widely studied, theatre animation does not have that theoretical soundness, so the comparison between the two media – performance and film – can yield some ideas that will help us to better understand the theatrical medium itself.

Theatre vs. cinema

The influence of cinema on theatre and of theatre on cinema has been quite apparent from the technical and narrative point of view. The beginning of cinema had a strong theatrical aspect, due to the staging, subject matter, actors' interpretive styles, the frontal camera or even representational spaces. The evolution of film language was, nevertheless, gradually moving away from these common origins to acquire an entity and style of its own. The editing techniques, interpretation styles, the two-dimensional projection on the screen, the prerecording projection and the audience all go to make the perception of the film very different from the way of making and perceiving theatrical plays.

Time

The running time of a film is unchangeable, it comes from pre-recorded photosensitive surface whereas theatrical time is lax – it can be expanded or contracted. The temporary treatment of theatre is considerably different to that of film. Thus, whereas in theatre time is subjected to linearity, in the case of film edition techniques introduce continuous jumps in time like flashbacks or flashforwards, ellipsis, simultaneous action effects or temporary contractions and dilatations. But nowadays many of these concepts are being incorporated into theatre looking to break away from traditional logic.

Presence

Two-dimensional film actors are projected on the screen, their presence frozen in time and unchanging. However, the theatre actor breathes, smells, can improvise, and can even make eye contact with the audience. In the first case, the actor's indexical presence would be defined by the idea developed by Barthes, in which the record is the evidence that something had been in front of the camera, which becomes a witness of that one moment and thereafter becomes a footprint of what was there. The recorded body becomes immortal and comes alive in each viewing, or in any case is a statement that at the time of recording there was life. Conversely, Herbert Blau (1982), theatrical director and theorist, argues that the stage actor is dying every second he spends in front of the viewer.

Ephemeral nature

The performing arts, theatre, dance and performance arts are ephemeral. According to Pavis (1992), the work, "once performed, disappears for ever. The only memory which one can preserve is that of the spectator's more or less distracted perception" (p. 65). The visual memory of each spectator, as the only way of preserving that performative act, never will be repeated exactly the same and not even a recording may maintain the true spirit of the play. However films remain intact at each viewing.

The viewer

Members of the film audience are hidden, in that the boundary between the audience and the image is enclosed by the screen; thus, no direct interactivity is possible between the audience and the screen. On the other hand, the theatre spectator attending a show participates in a communion from the very beginning, in which each viewer will mix with other attendees and the communion is made evident in the moments of applause and cheers. In this respect, the theatre-goer is far more active and vulnerable, since it is a performance where unexpected events can happen.

Focus

The theatre-goer is also subjected to a set of spatial rules where what is seen is real (in the sense of being a live performance), open and continuous. According to Itziar Zorita (2010), in cinema, focus of the gaze is guided by the camera and editing, which are both decisions made previously by the film's director. In theatre, the viewer has the ability to divert his or her attention from the main action and can spend time watching a detail, an attitude and so on – the theatre spectator may choose his own framing. The film viewer is subjected to a partial, seemingly-arbitrary and induced focus, whereas the theatrical spectator can organize what he sees.

Film animation vs. performative animation

This study also has also found significant differences between film animation and performative animation, which affects not only the working methods and relationships with the production teams, but also the exhibition and perceptions of this kind of art.

The interactive animation modes, historically, have been neglected, as it is a topic that deserves further development. In addition this research builds on the work mode designed by the team of the Maduixa Theatre Company: the theatrical animation on its own, outside of the total performance, has no dramatic or expressive value. Without the rest of the parts, and without the presence of the actors or dancers, theatrical animation can only become imbued with meaning during the live show, in the present time shared with the live audience. Furthermore, the animator who undertakes a theatrical project works *a posteriori*, and outside of the context of performance, the work will seem incomplete.

Unlike a film animator whose performance guidelines are and self-defined and who provides character and an acting style from the dramatic conditions set upon his characters, the theatrical animator is dependent upon on the actors' or dancers' actions, and thus the animation will be adapted to this acting. The results of theatrical animation will always be incomplete because in any case these actions will be completed by the live actor, whereas in cinematic animation, the animated characters complete the action. A theatrical animator's work is thus more closely linked to the team, creating interdependencies between its members. Actors or dancers require the animated elements to provide credibility to their interpretation of the material; at the same time, the animator requires the actions of the dancers to give meaning to the animation. Thus, the work of the animator is incomplete for two reasons; namely, because there are elements that the animator cannot control (because they come from the needs of drama) and also because the animation depends on the work of the dancers to acquire all its interpretative fullness. The relationship between dancers and animation can be initially mechanical and clumsy, and requires further work for dancers make the movements of the graphic elements their own.

The entire process requires a fully integrated work by the team, and the animator's work benefits from the dramatic work carried out in rehearsals. Thus, the work grows and reaches full integration and fluidity. Where the film animator imposes character and interpretation with his animation characters, the theatrical animator is guided by the synchronization between the actor's choreography and the music. Moreover, the importance is not in the animated elements, as in film animation. In theatre, the movement of these elements may be the causes that make reactions in the actor or the consequences of their movements and gestures giving the feeling of interactivity. It is a choreographic and interpretive job of the actors or dancers.

Theatre teams of this nature are interdisciplinary and the different component fields include stage directors, choreographers, performers, musicians and artists. This type of team, despite being from diverging disciplines, needs to be very compact, and there must be dependency relationships among all the components as their jobs are interlinked. The musician creates compositions from the dramatic work and choreography; dancers have to work with a musical reference; and the animator also needs acting references. This becomes a very cohesive

chain in which a continuous and perfect synchronization and communication between work teams is necessary. Sometimes communication is not simple, however, as a variety of different codes are used between the different members, so it is necessary to generate "languages" to ensure understanding of the dramatic rhythm and aesthetic work. A story board from the animation team can help to determine the graphical style and the composition (Figure 1). In this particular case, the story board was insufficient to carry out the timing of the animation, and so it became necessary to work with recordings that show the spatial, temporal and musical references of the action. To better determine the action and timing it is possible to use other kinds of documents or schemes that can clarify the communication between the director and the animator (Figure 2).
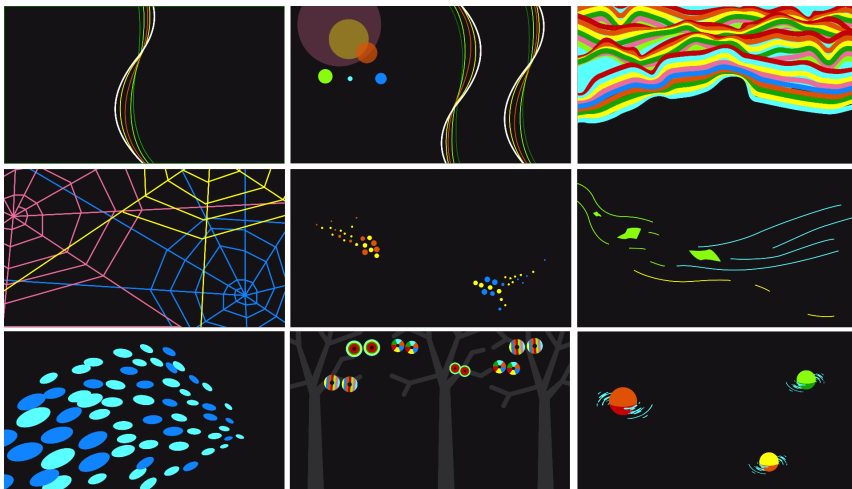
Figure 1: Storyboard for Dot

Writing and workflow

Since the 1970s, there has been an internal shift in the modes of production of performing arts. Dramatic work not only revolves around a predefined text as in the Aristotelian tradition, but triggers further languages and strategies based on interdisciplinary processes and contents. This is a concept in which the visual is imposed upon the textual, where writing is a process and in which media and technology have a specific weight in dramatic construction. Pavis (2000) thus argues that the new media technologies create a crisis for the notion of staging and no-one can speak of a homogeneous message controlled by an individual creator that ensures consistent aesthetics, but rather a transformation of practice into a scene as the staging. In practice, this promotes a 'meeting' (that is, a dialogue) between different subjectivities, different formats and different ways of perceiving, designing and building the world. Moreover, in the scenic transformation that has taken place in recent times, one important element that has intervened is the use of technology. According to Chiel Kattenbelt (2008), media changes and co-relations between media have resulted in new forms of representation; new dramaturgical strategies; new principles of structuring and staging words, images and sounds; new ways of positioning performing bodies in time and space; of creating time-space relationships; of developing new modes of perception; and of generating new cultural, social and

00:17:00-00:22:00 SALE 1º objeto
00:22:00-00:44:00 se desplaza girando hasta posición de revelado
00:44:00-00:46:00 SE REVELA
00:46:00-01:00:00 CAE
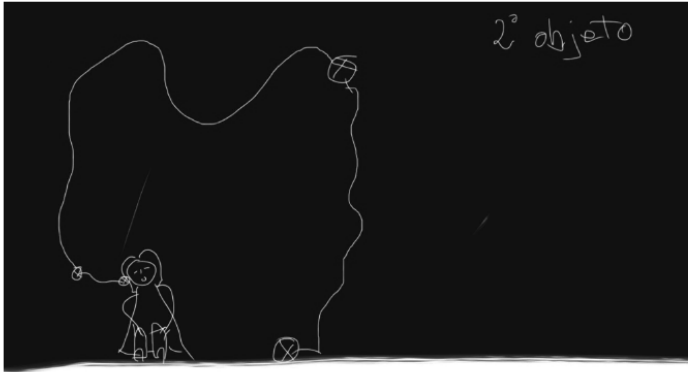
00:57:00-01:02:00 SALE 2º OBJETO
01:02:00-01:11:00 se desplaza girando hasta posición de revelado
01:11:00-01:13:00 SE REVELA
01:13:00-01:23:00 CAE

Figure 2: Schemes provided by stage director

psychological meanings. All these changes have led to the dramatic construction to be undertaken in the performance space itself. Zorita similarly argues that

work builds on the performance space and in that space-time is where all the materials are sorted, tested and rebuilt. Consequently, there are new forms of work processes. Visual artists begin to form a fundamental part of the group and the creative process. The stage becomes an experimental workshop where actors work together with all the technological devices from the beginning of the process. It works directly on a technical structure without postponing the end of the creative process" (Zorita, 2010).

To create *Dot* (as well as *Consonant* and *Harket Protocolo*[4]), stage director Juan Pablo Mendiola created a first draft based on improvisation with just the actors, which allowed him to work on creating the characters, the relationships among them and the situations that guide the evolution of these characters. At the same time, dramatic and physical games were carried out to exploit the use of technology. This process took about three weeks and was recorded on video. The choreographer, who works according to the lines that have been drawn, comes in midway through this process. In this first part the music has not yet been composed, so it is necessary to work with similar rhythms of music until the composer can complete the final piece. It is in these more contoured and defined parts where the stage director, choreographer and dancers begin to work in earnest in different working sessions. All of these sessions will be recorded on video as reference material for animators and musicians. From this

work comes the first dance sketch, where the animation begins working (Figure 3). They will work with the final musical piece and the reference video. Until this moment the dancers have worked blind, the elements that they interact with do not exist. The dancer's movements and the rhythm become the key to integrating the animation that is made on the basis of the video-recording.

Figure 3: Dot, Maduixa Teatre

Once each piece of animation has been completed, the actors must coordinate their movements to the graphic animation. This period is very important and lengthy; it will be performed during the rehearsals but is supplemented in the performances where actors-dancers will be fully inside their role. Tthe actors' work becomes, in effect, double-blind, because they can never see themselves inside the graphic environment, and nor do they have a frontal, or audience-eye view of their performance, and thus do not have a real-time experience of their integration with the animation.

DOT

Dot is a play aimed at children between 4 and 7 years old, with a simple plot but offers lighter or more mature interpretations depending on the age of the viewer, as in this age bracket children require different stimuli. *Dot* is the story of Laia, a girl whose job it is to keep a white wall clean, but who receives an unexpected visit from an intruder, Dot. Dot has a playful personality, is something wild and with wonderful powers, and encourages Laia to undertake a journey full of fantastic episodes, which, as in the initiation stories, will become a different person. The work mixes dance and acting, plus an animated graphical environment where characters interact with each other. Although there is interpretation, the dialogues are kept to the minimum necessary for the play to make sense.

Dot initially appears by placing a point on the wall, which the girl desperately tries to clean, but the stain begins to move, creating a line. This line is driven by Laia's movements, and is then transformed into a wave, with which Laia plays, to the rhythm of the music. But it is Dot who creates the magic going on behind the screen – the scrim screen, a projection with a black background and background lights, immerse the characters within an imaginary graphic world. The little girl,

untrusting but curious, begins to tell Dot how important it is to keep the wall clean and asks what her name is, but Dot does not speak. She falls asleep and Dot enters her dreams and whispers her name. From that moment on, the little girl is taken away by the fondness she feels for her new friend, going through different graphic emotions and experiences that will return her renewed to the real world. Before Dot wakes up, the little girl offers her her own point of light – the magic object to put on the wall.

The show was inspired by the work of minimalist artist Sol LeWitt, who already had an intervention in the world of acting and dance in *Dance1*, performed at the Brooklyn Academy of Music in December 1979. This well-known and award-winning work was directed by Lucinda Childs, with music by Philip Glass, and narrated by Sol LeWitt himself, and was re-released in 2011. The film was projected on the dancer's bodies on stage, via a drape hung at the front of the stage, and consisted of a large geometric grid on which the dancers performed. The difference in scale between the real dancers and the ones projected, as well as the repetitive movements and music by Glass, created a spectacular performative pattern coupled directly with the minimalist current of previous years.

Though the filmed and the live dances were synchronized, they seemed at times to be two different activities, each evoking radically different sensations. The great discrepancy in scale between the film and the actual dance was primarily responsible. Since the filmed dancers appeared ten times larger than the actual ones, the film had considerably greater presence than the comparatively Lilliputian live performance. Indeed, the actual dancers seemed less real than their photographic images." (Caniglia 2011, n.p.).

In *Dot*, the essence of LeWitt's work can be seen in the use of minimal graphic forms like the point and line as well as a reduced colour pallet. The infinite combination of these simple elements and the purity of these forms confer sobriety, expression and poetry to the play.

The projection

Projection, in theatre, has a long history, as previously discussed. In contemporary theatre, there are three main projection techniques: opaque front projection screen, front projection with transparent screen, and back projection with a translucent screen, although other special screening processes are also possible, such as video-mapping or projection on gaseous or liquid substances. In *Dot*, the chiffon drape technique was used, with a 6m x 2.90m screen placed in the centre of the stage, with front projection. This technique works in different ways depending on the lighting conditions that are employed on stage:

1. Front projection and lighting in front of the screen (Figure 4). Although the screen is transparent, such treatment renders the material opaque, so that the display itself is confined in space as though on a wall. The negative side of this is that the shadows cast by the performers will be projected on the screen if they are situated near it.

2. Front projection and lighting behind the screen (Figure 5). By lighting from behind the screen, it is transparent, especially when it absorbs all the light that there is, using dark colours like black and not illuminating the screen directly at the front or the rear.
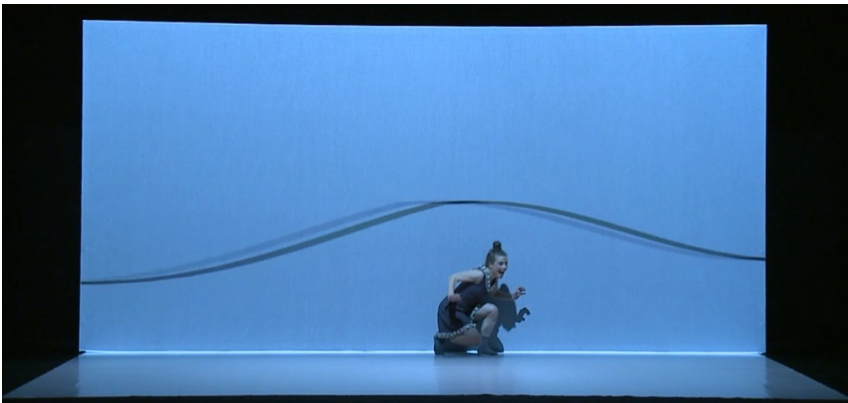
Figure 4: Front projection and lighting in front of the screen

Figure 5: Front projection and lighting behind the screen

Thus the stage was spatially conceived to facilitate the visual metaphors – events close to reality took place in front of the scrim, and behind it, the two actors were seen immersed in a graphic universe that enveloped them; this is where the magic brought by Dot, and the subjective universe of Laia takes place.

Episodes

The animation performed for Dot was carried out by means of digital media, using keyframes with interpolation for the movement of objects, and many special effects like particles were employed. It was performed on a 1024 × 469 pixel screen, which corresponded proportionally to the actual projection screen size. The work is divided into musical pieces interspersed with acting. The work merges moments of interpretation and dance, up to a total of 12 musical moments. The graphics and animation played a more prominent role in these musical moments. Some of them are described below. In the moment of the wave (Figure 6), a line is hit by Laia and becomes a wave, which is driven by the girl and moves to the beat of the music. This is the first moment where the drape/chiffon effect appears: at first, the line is black on a white background and then it is inverted (white on a

black background) so that the characters are visible behind it. The two characters play with these graphic waves throughout the piece of music and the coloured dots multiply as they also appear in sync with the rhythm of the music.
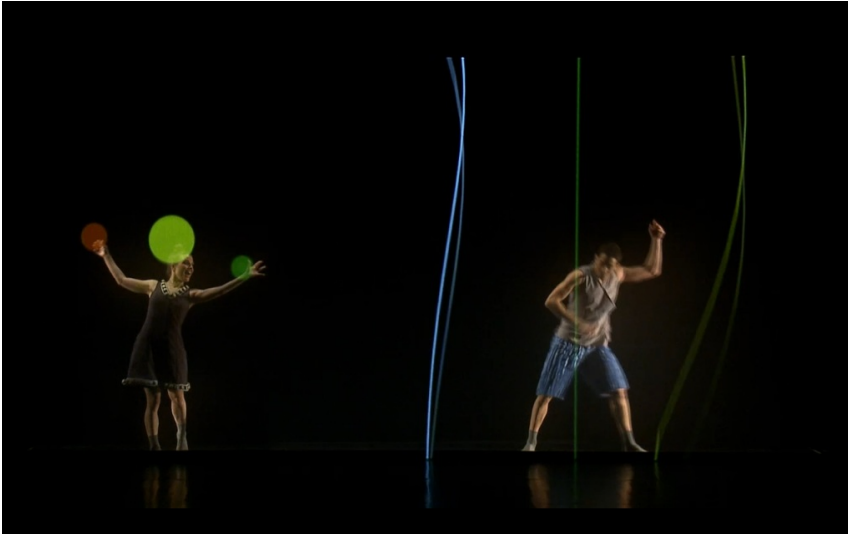
Figure 6: Waves and points

As the two characters play the music piece during which the graphic waves multiply, coloured dots also appear in sync with the rhythm of music.

In Laia's dream moment, she dreams about the objects that obsess her in the play – a whale, a skateboard, an alarm clock. Laia is placed in front of the screen, and the objects leave her head and fall to the ground. Dot interacts with them and whispers his name to Laia. Dot then sneezes, and all the objects hover around, creating an arch above them. The leading characters move this chaotic construction of objects that revolve around them, and as their dance advances, the objects disappear. The use of the silk scrim and the mask tricks used in the animation create an immersive musical experience, in which the objects literally surround the dancers (Figures 7a and 7b).

Figure 7a: Laia's dream

Figure 7b: Laia's dream

In the musical number "Doors" (Figures 8a and 8b), a series of doors are opened, prompting the characters to enter fantasy worlds: a world full of eyes, a cave, a storm, spiders' webs or a starry universe, among other things. Laia and Dot go in and out of these worlds through the doors, and the musical number ends in the firmament.
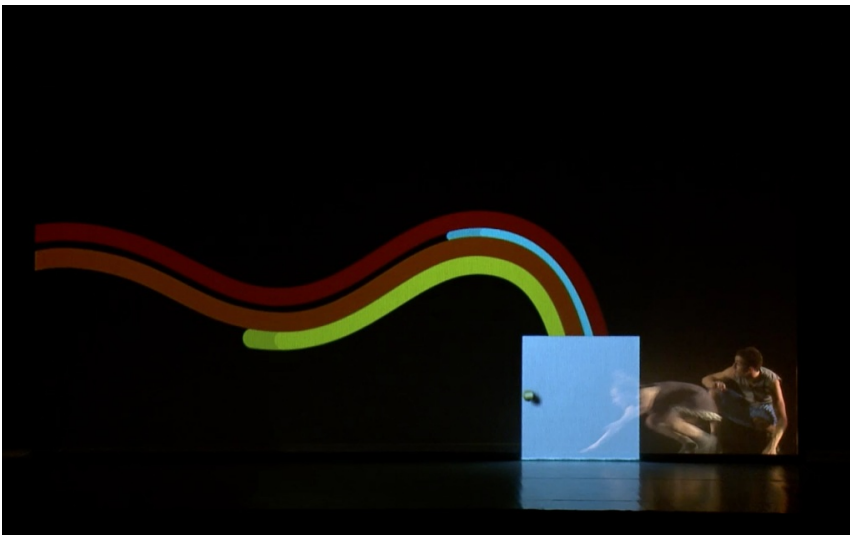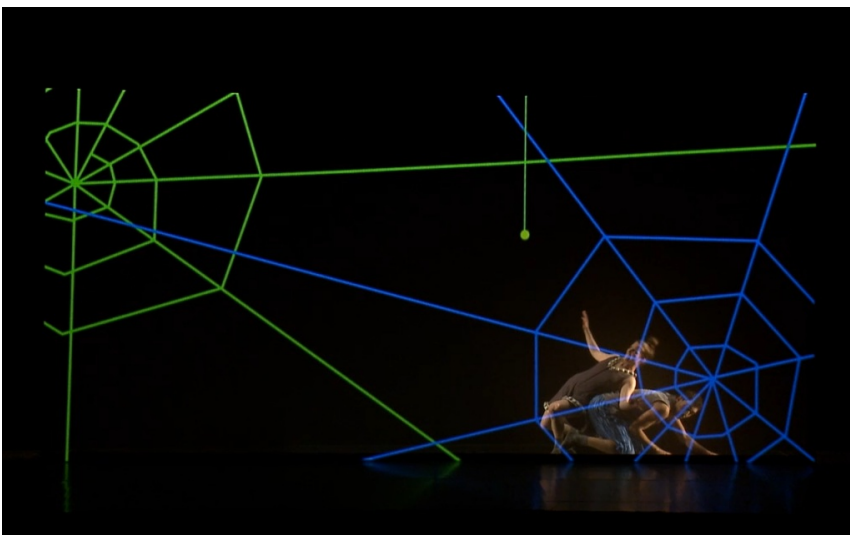
Figure 8a: Doors

In this sequence, Laia and Dot's movements suggest a music video, accompanied by geometric elements forming textures and backgrounds that blend together to make an abstract work of frenetic musical entertainment, with the choreography represented in front of the screen (Figures 9a and 9b).

Figure 9a: Musical video

Figure 9b: Musical video

Conclusions

As argued earlier, the birth of animation was intimately linked to performance, but the creation of the cinematographic industry will end up discovering other possibilities for animation. However, theatre has explored the limits of representation and currently hybrid teams exist in many companies. Today, the boundaries between disciplines are fading, partially due to new technologies, as these allow some

performers/artists to use live animation using new technologies such as video-mapping or other projection techniques. These performances explore the possibilities of animation with body and movements, with surprising results. Animation thus contributes to the creation of new languages, stage strategies and relationships with actors and dancers that are not only considered a level of scenography on which to place or contextualize the action, but which give rise to the generation of dramatic situations.

Children's theatre, with its need for simple and direct messages, thus becomes a special case. Animation can generate virtual universes where the dancers' bodies mix with the animation to create a new visual language. These creations are unique to each performance and their effect is better understood when witnessed live. On the other hand, animators are an integral component of an interdisciplinary team, where each member is an essential part of the scenic creation. The members not only intervene at the end of the process, but are an active and evolving part of the project.

The way in which these animators' work has special conditions that differ greatly from the process of film animation. But nevertheless, this kind of animation offers a new sphere for animated experimentation. In theatre and the performing arts, students and professionals can find new platforms to take advantage of the possibilities of interaction between animated pictures and words and dance and interpretation.

Performative animation is presented as a format with endless possibilities, and not in vain these practices have been introduced in educational environments, where the students are asked to record their bodies and then interact with them. As Tomilson (2013) asserts,

performance with our digital double allows both performer and audience to transcend our corporeally based understanding of the 'live' and enter into the realms of 'magic […] In order to be successful, the performance requires the audience's suspension of disbelief, the essential desire to be fooled, in short, a desire to enter a liminal experience somewhere between the cinematic and the theatrical" (n.p.).

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NOTES

[1] https://vimeo.com/79154716

[2] http://www.maduixacreacions.com

[3] We have collected a sample of many of these artists on a board on pinterest, which we like to share with everyone who is interested in this subject. You can follow us on http://www.pinterest.com/bettyhey/animation-theatre-and-performance/

[4] For further information, see Muñoz and Herráiz, "Harket Protocolo, un proyecto de video mapping escenográfico."

Edited by Amy Ratelle

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