Dramaturgy as an enquiry on how interweave space, body and technology in performative interactive installations

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Abstract

This paper explores some of the important steps in the evolution of my doctoral research, which aims to relocate the notion of dramaturgy from the performing arts into interactive installation art. It briefly contextualises dramaturgy in the 21st century, and analyses the dramaturgical transformations caused by the impact of technology. It uncovers the still open process of the composition of a performative interactive installation, which supports the development of *space dramaturgy* concept. Developing the concept of space dramaturgy presupposes the analysis of other compositional elements vital for the elaboration of the concept: space, body and technology.

The first aspect to be analysed is the philosophical scope related with both individual and collective experience of space. This draws on Bachelard, Merleau-Ponty and Lefebvre's spatial theories. The theoretical underpinning is followed by a review of the process behind practice-based research, reflecting on the possibilities of adapting that to a dramaturgical questioning. Finally, the paper enquires into the interweaving of spatial bodily experience, participation, technology, the importance of time, and memory as a mean of finding performativity in interactive art installation, taking as a specific example the doctoral practice research.

Keywords

Dramaturgy, performance, spatial theory, interactivity, installation

Dramaturgy's contemporary panorama.

Dramaturgy is a discipline that envisions the creation of performative artworks. Experts Cathy Turner and Synne Behrndt state that "Dramaturgy tends to imply an observation of a play in production, the entire context of the performance event, the structuring of the artwork in all its elements" [1]. Turner and Behrndt reflect on dramaturgy as a comprehensive and complex practice and describe dramaturgy's main attributes: analysis, structure and composition.

Theatre and dance are fields with a complex practice, frequently involving people from different areas. Dramaturgy can offer support in the management of complexity through the analysis of the performance elements, how to structure and organise them into one composition.

The dramaturgical practice of analysis, structure and composition is historically linked to theatre, being theorised, for instance, by Aristotle [2] or the 18th century philosopher G. E. Lessing [3], who reflected about the composition of drama, function and effect. A dramaturgist, a theatre director or a playwright can either carry out the dramaturgical work, but throughout its evolution, dramaturgy built a close connection with text and literature. As the 20th century brought cultural and artistic transformations, the relationship between dramaturgy and text changed and detach from each other. Nevertheless, text and literature were not completely put aside; they are just not the most highlighted elements for the performing arts in general. In contemporary practice, dramaturgy can focus on spectatorship, defended by De Marinis in *The Dramaturgy of the Spectator* [4], the body, sound or image.

Historically, the deviation of dramaturgy from text was also a result of the technological development, one of the greatest transformations of the 20th century. Looking back, the artistic movements of the past century explored the dynamics of various technological innovations: industrial technology seeding into artistic expression related to *machine aesthetics*, which defined the work of Oskar Schlemmer and Meyerhold; cinema impacted scenography, resulting in projects like Svoboda's *Lanterna Magika*; or computer and digital aesthetics in the work of Merce Cunningham, for example.

Technology shaped performance into other formats beyond the traditional theatre and dance territory, and the transformation of performance can be observed from two perspectives; one is how technology stimulated the growth of interdisciplinarity in performing arts, opening way for the development of hybrid genres that intersected theatre with film, dance or installation art. As Hans Thies-Lehman notes in his seminal book *Postdramatic Theatre* [5], the incorporation of technology also impacted contemporary dramaturgy and the literary text lost its prominence. He asserts this could be as important as any other element such as sound, image or movement. For this research, dramaturgy is concerned with the interweaving of all the performance elements and to transform them into one single artwork. The crossover between art and technology, not only allows to take a closer look at where disciplinary boundaries meet, but also to see the potential expansion territories for dramaturgy. As Adrian Heathfield [6] explains:

Dramaturgy no longer belongs to the theatre, nor dance-theatre, it is a practice spanning diverse disciplines and cultural sites. Wherever there is a performance taking shape there is a set of dramaturgical questions being asked and dramaturgical principles being tested.

Secondly, the public became more emancipated, as advanced by Rancière [7], and is also more capable of perceiving simultaneously different types of communication. The transformations happened at two different levels, the artistic production and reception, and both represent the two sides of the same coin and are an important reflection of the cultural and social dynamics. Therefore, the 21st century dramaturgy no longer needs to be bonded with text and literature, and deals with a much wider variety of elements as well as with new types of audience, that perceived and consume art at a much faster rhythm, are more informed and more keen to take part in art.

Performing arts assimilated a great variety of computer and interactive technologies. However, the performative potential of interactive technologies was always notorious throughout its history, and works like Myron Krueger's *Videoplace*, David Rokeby's *Very Nervous System* or Rafael Lozano-Hemmer's *Body Movies*, amongst others, are examples of pioneering artistic exploration into interdisciplinary art. They explored the performativity of technology together with the physicality of the body through theatrical settings, dance and music. The work of artists like Rokeby or Lozano-Hemmer, that focused on the creation of interactive installations and aimed to challenge the public to take an active and performative participation, set a fertile terrain for, what Heathfield mentioned, dramaturgical questions and testing of dramaturgical principles.

The compositional elements.

This investigation is situated within the context of a non-textual dramaturgy, aiming to apply this concept common to theatre and dance to interactive installation art. Dramaturgy became the main research vehicle to explore the performativity of this type of artworks. However, in order to proceed with a dramaturgical questioning, it is necessary to define the elements that are going to constitute the base for an artwork. These elements are: space, body and technology.

Space and Body

The research is focused on the development of a *space dramaturgy*, which means that space is the chosen core element. To choose the core dramaturgical element is to choose an artistic language. The research pursues a spatial language based on both individual and collective experience. Spatial theory undermines as well a conceptualisation of the body. The study began with a search for a sentient psychology framework grounded in the phenomenological perspective of Merleau-Ponty [8] and Bachelard [9].

Merleau-Ponty offers a notion of perception that unifies the sensory experiences with the human intellect. Space is intrinsically connected to perception: the apprehension of space is only possible because bodies are capable to spatialised themselves through the reasoning of sensory experience, for instance the understanding of depth thanks to visual information. Spatiality is inseparable from the sensory experience. The conscious processes of that experience is what allows spatial orientation.

The approach on the subjectivity of space was deepened by recovering some of the ideas developed in Bachelard's classic book *The Poetics of space*. Bachelard emphasises the association of memory and imagination as fundamental in the experience of architectural space, and defines personal psychological dimensions as the guiding thread in spatial experience. There is an encounter between the real space, that exists outside of oneself, and the inner or intimate space, constitute by the imagination, which makes particular spaces meaningful.

The philosophical scope of the research expands to LeFebvre's theories to explore the collective notions of space. Bodies are also part of social and collective synergies. These synergies produce data, memories, and impact the spatial environment. In the *The Production of Space*, Lefebvre dedicates a chapter to *Spatial Architectonics* [10] where he analyses the importance of the body in the understanding of the social space. Space is produced in the realm of its relationship with the body, which characterised symmetry and duality (right-left, up-down, front-back) and the released of energy. This type of *spatial body* according to Lefebvre, is determinate by the physiological rhythm and of social, political and economical dynamics.

Spatial theory undermines as well a conceptualisation of the body where the tangible and intangible meet. The idea of space becomes disassociated with the body. The first can only be conceived through the action of the second, involving the physicality of the body's sensory experience as well as its memory, imagination, intellect and awareness. Being in space is not to perceive its attributes, is to assimilate them and become aware of being present in it.

Technology

The technological component does not focus on software development, engineering, or any specific I.T. technologies. Technology is a source of knowledge and reflection about how to enhance the relationship between body and space. The theoretical investigation explored the intimate and psychological experience as a result of the contact with physical spaces. For this research, technology became a means to augment the sensory experience and

explore haptic and tangible interaction. The practical investigation turned to a combination of several technical resources: physical computing technologies involving capacitive sensors, arduino, actuators, digital fabrication and manufactured mechanisms. Altogether, the practice-based research gradually started to bundle body and space within the realm of the *machine aesthetics* where the presence of mechanisms provide these two elements with rhythms, movements and timely dynamics.

The Inquisitive Path Towards a Space Dramaturgy

Within this research, the structuring and analysis of dramaturgical process is also a result of a constant exercise of questioning. Posing questions is what allows to transform the previous theoretical postulations and to interweave the main compositional elements. The questions can be as simple as asking what? How? Why or what for? In essence, asking what?, is to find the initial idea for an artwork. How?, relates to means and techniques for the realisation of the artwork. Lastly, why? or what for?, is the desired effect of the artwork on the public.

The research established a theoretical framework around a subjective, intimate experience of space. This led to the idea of building an interactive maze, which emerged from this framework as it can potentiate the creation of an immersive and intimate environment, and stimulate people's imagination. Hence, the idea of an interactive maze responds to the question what?

Mazes are structures that resemble labyrinths and provide a recognisable visual narrative that is often associated to mythology and religion. On that account, these type of structures appeal to shared narrative with a possibility of becoming a shared spaces. Mazes do not need to look like labyrinths and they can be considered a different type of structure. Unlike labyrinths that possess one singular path with a beginning and an end, mazes have multi and fragmented paths. Nevertheless, these structures are also rich in plays of contradiction and simultaneity that are worth to investigate: visible and invisible, individual and collective experience.

The multipath structure, the symbology and familiarity of mazes favour the relationship of space and body in its subjective, individual and psychological dimension. The introduction of the technology enhances the body and space relationship, and brings the technical solutions or means of achievement. Therefore, the technological elements are connected to the question how? With the help of technology, the research explores a type of haptic interaction and a space that is pliable and mutable as oppose of static and rigid. Consequently, the chosen technical means relate with physical computing. The outcome of this exploration is an installation that consists in modules built with wood and fabric. These modules can be combined in different ways and number, and can be

place either in smaller of bigger spaces. The fabric covers the back and front of each module and forms the physical interface, which has capacitive sensors that activate the mechanical inner structure. When touched, the textile interface should move accordingly with the touch intensity.

Finally, the last aspect of the dramaturgical enquiry relates with the question Why?, involving the attempt to predict public's reactions and the overall significance of the artwork. The maze is a space that can inhabit another space or architecture. It has an intervention quality as a fragmented space that can interrupt the linearity of everyday spaces, stimulating adaptation and reconfiguration. In order to pursue this purpose, the maze was envisioned to be set up in a passage type of space: a space that establishes a straight connection between two different places. When this type of spaces are disrupted, people are required to adapt or reconfigure the way they circulate and use that space.

Another element underlies the other three: *time*. For this research, time is not approached as an independent element. It has qualities of duration, speed, movement and rhythm that relate with the mechanical functioning of technology. Time is felt through displacement within space, and time is also a quality of bodies, it belongs to memories and to daydreaming. This last notion of time is also found in Bachelard's phenomenology of space. The ability of the human mind to travel in time, both past and future, is determinant is spatial experience and what allows to give meaning to spaces.

Time is an inclusive notion that entwines all other three elements, and is sensed both externally and internally. Externally, time can be identified through movements and rhythms, which the research explores through technology and interactivity. Internally, through memory and associations that might emerge while interacting with a space that disrupts the previous spatial logic. The intersection between these two dimensions of space, internal and external, should play a role in the engagement of people with the installation. Mieke Bal also corroborates the value of time in the achievement of performativity: "Memory as the mediator between performance and performativity operates on a mixture of temporalities."[11]

In sum, time brings the *here and now* by making the experience of an artwork unique and unrepeatable; hence, performative.

Conclusion

The research is still an ongoing process and the doors of exploration are not closed yet. Nevertheless, it is possible to draw some conclusions of the dramaturgical process.

Dramaturgy establishes a feedback relationship between theory and practice. Whilst theory allows expansion of ideas and concepts, practice allows decision-making, the narrowing down of objective and goals, and bridging the gaps between the connection points of technology, space

and the body within a performative structure. The aim is to seed the research with necessary questions and information for the completion of a performative composition.

Interweaving aesthetics elements for a performative artwork is a complex task. It requires an almost incessant inquisitive search towards a mixture of predictable and unpredictable outcomes. Engaging in a creative process of building an interactive installation alongside with the repurposing of dramaturgy is rather like opening a Pandora's box of paradoxical situations and contradictions.

Dramaturgy does not naturally belong to the realm of installation art, and even within performing arts it is often marginal. As a result, the application of dramaturgical principles to interactive media art tends to be rather technical than intuitive. It is a constant exercise of questioning, back and forth from theory to practice. However, it builds a duality during its creative processes. From on the one hand, artistic creation: researching, sketching or prototype, and achieving a final result to, on the other hand, the exercise of putting yourself in the place of the public and trying to imagine how the artwork will be perceived. It almost becomes an exercise in foreseeing what the installation will become.

The benefits of a dramaturgical enquiry reside on the skill of managing the complexity inherent to performative artworks. For example, performativity in interactive installations raises questions about levels of *control* and *spontaneity* in the public's participation. Interactive installations are programmed to produce planned behaviours and to induce desirable reactions in the public. However, should the public's participation be completely under control? And, to what extent is possible to predict and control emotional responses? Dramaturgy could help to harmonise contradictions like these and define what *control* and *spontaneity* will be focus on, for instance: *control,* as the incitement to a mechanical behaviour or physical reaction of the public, and *spontaneity* as the emotional reaction and the pleasure in aesthetic experience, which could influence the time that people interact with the artwork.

Overall, the research aims to highlight the creative process and, through dramaturgical enquiry, developed a reflective practice, where the sphere of *doing* meets the *thinking* with equal importance.

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Biography

Carla is a Portuguese artist currently doing her PhD at Central Saint Martins with a scholarship from the Science and Tecnology Fundation in Lisbon. She holds a degree in Theatre Studies and a Master in Art and New Technology. Previously, she developed and collaborated in several interactive art projects in institutions like La Casa Veazquez or Medialab Prado in Madrid.