# Complex Interactive Music Theatre;
# Audience participation through technological agency

## INTRODUCTION

This proposal is for research into new approaches to music theatre-making. It will analyse cases where technological agency and immersion have contributed to the successful development of interactive and participatory performing art projects. The analysis will then inform investigations on the possible application of such processes in music theatre. The research will explore the music and dramaturgic challenges arising from the development of participatory music theatre performances. Based on the conceptions of *immediacy*, *hypermediacy*, (Bolter & Grusin, 2000) and the role of playfulness (Huzzinga, 1939), the research aims to contribute in the conceptualisation and realisation of complex interactive music theatre performances. The research will be practice based, employing a reflective methodology combining theory and practice.

## RESEARCH BACKGROUND & HISTORIOGRAPHY

Current lines of research on sound and interactivity can be categorised under either *Performer-technology interaction* or *Spectator-technology interaction*. Many artists' explorations of interactive technology in performance have been very successful: *The Hands* (Michel Waisvisz, 1984), *SSS* (Atau Tanaka, 2003). Investigations on interactive technologies applied in opera and music theatre present similarly successful outcomes: Aperghis' *Paysage Sous Surveillance* (IRCAM, 2002) and Machover's *Death and the Powers* (MIT, 2010). These types of performance, though, exclude spectators from the interactive process. Other strategies deal differently with the concept of interactivity:

interactive installations evidence that audience participation in instrumented spaces where technology reacts to human presence can be very rewarding: *Silicon Remember Carbon* (David Rokeby, 1993), Hylozoic Grove (Philip Beesley, 2008).

Historically, a number of theatre makers such as Brecht, Grotowski and Boal have developed strategies to immerse spectators in performances and engage them actively in the decision-making of their narratives (Klich & Sheer, 2011, p.176). More recently, Blast Theory (*Can You See Me Now?*, 2001, *Kidnap*, 1998) utilised *gamification* (Kapp, 2012) to motivate spectators in active participation in a narrative. In *The Masque of the red Death* (Punchdrunk, 2007) spectators are immersed in the setting and are offered with the possibility of interacting physically with the performers. The outcomes of the project prompted further implementations, combining gamification, immersion and technological interaction in *Last Will* (Punchdrunk, 2008). Despite theatre practice increasingly incorporating such methods, there is a lack of similar research in music theatre. This proposal aims to contribute in the field of music theatre by drawing from the experience of successful processes of interactive and participatory performance, installation and theatre.

The aim of the project is devising strategies that would enthuse music theatre spectators to become participants by engaging in technological interaction and by immersing in the *mise-en-scène*. The research's contribution to the wider context of arts and humanities relates to the ever-increasing importance of the user's role in daily life. Game entertainment in all its possible hues and manifestations has become increasingly prominent in cultural life in the last decades. Similarly, users' daily experience of interacting with ubiquitous computing applications (i.e. architecture) constantly increases. Traditional art forms cannot be indifferent to such developments, as Bertolt Brecht declared: "*methods wear out, stimuli fail. New problems loom up and demand new techniques. Reality alters: to represent it, the means of representation must alter too*". This proposal, driven by a feeling of responsibility, aims to discover how music theatre can benefit from such developments, examining the aesthetic

implications of a once traditional art form incorporating such techniques. The research outcomes, both practical and theoretical, aim to advance knowledge by answering the questions related to whether art forms could incorporate such innovative methods without losing their aesthetic validity.

## RESEARCH QUESTIONS

- What are the dramaturgical and compositional challenges of music in instrumented performance spaces where audience participation can be considered co-authorship?

- What would the role of music and music technology be in a complex interactive music theatre performance where audience, performers and space would have an active and crucial role in the final performance outcome?

- What are the aesthetic implications of immersion, interaction and gamification in the context of complex interactive music theatre?

## METHODOLOGY

The methodology will be on inspired by Kolb's (1984) *reflective model*, employing a strategy based on a continuum scheme of action, employing:
*Observation-> Reflection -> Concept Development -> Application -> Observation -> Reflection ->etc*

This way, any collected data will inform valuably the next stage of the process; this strategy will allow me to eventually offer solid and practically

assessed outcomes. The methods of documentation and evaluation will include: log book with critical observations, audiovisual documentation, surveys and interviews. Any reflections will be fed back to the process in order to optimise the final outcomes.

Stage One: Observation and Reflection

This stage will be primarily dedicated to the critical analysis of compositional strategies employed in contemporary music theatre. Additionally, I will investigate the role of music as a mean of engagement in gaming and interactive art. I will analyse conceptual, technologic and dramaturgic elements used by theatre companies such as *Punchdrunk* and *Blast Theory*, while studying the writings of Brecht, Boal and Rancière on participatory theatre. This analysis will assist in distinguishing phenomenological and aesthetic implications of immersion, interactivity, gamification, and the role of both the music and the technological agency in participatory projects. After acquiring the first theoretical outcomes I will devise practical proposals on how music and dramaturgy could be manipulated by participants. These proposals will be tested for their validity during stage two.

Stage Two: Concept Development and Application

The main body of the practice-based research, when I will conduct different experiments of complex interactive music theatre, employing strategies derived from stage one. Using immersion, gamification and technological agency, I will offer the participants the possibility to manipulate the structure of the performance, intervene to its plot, and alter musical and dramaturgic elements. The experiments will involve intentional as well as unintentional interaction from the participants, intentional as the direct/personal interaction with performers and music instruments or mediated by technological devices; while unintentional as realised by instrumented spaces with sensors controlling elements of the performance through the participant's presence. In the

meantime, data will be collected from the experiments via different methods, including surveys and interviews. The data will assist the understanding of the experience and the efficacy of the experiments. These findings will then be used to inform new compositional and dramaturgical strategies, as well as technological developments for the experiments to follow.

Stage Three: Final Observations

At this stage I will compile the research in a written dissertation that will contextualise the results of both the creative research and the technological tools developed. I will incorporate a critical reflection of the project processes as well as its outcomes.

SCHEDULE OF WORK

1st Semester: Literature review, research framework, background research. Development of: experiments' evaluation methods, compositional and technologic skills, technological processes

2nd Semester: concept development, Composition, Experiment 1, Experiment 1 data collection

3th Semester: Evaluation of Experiment 1, development of the technological processes, assessment of the experiment's evaluation process, small scale informal experiments, festivals (Ars Electronica, TodaysArt)

4th Semester: Application of previous findings, composition and technological implementation(s), Experiment 2, Experiment 2 data collection, evaluation and reflection on Experiment 2, small scale informal experiments, conferences (ISEA, ICMC, NIME)

5th Semester: Small-scale informal experiments, final development of composition, final presentation (Experiment 3), compilation of

findings, compilation of the experiments' evaluations, publications (LMJ, CMJ, JoNMR)

6th Semester: Review, critical reflection and evaluation of processes, conclusions, contextualization, Thesis, portfolio.

PROVISIONAL BIBLIOGRAPHY


Bolter, J. D., Grusin, R., & Grusin, R. A. (2000). *Remediation: Understanding new media*. mit Press.

Boal, A. (2002). *Games for actors and non-actors*. Psychology Press.

Klich, R. & Scheer, E. (2012). *Multimedia performance*. Houndmills, Basingstoke, Hampshire New York, NY: Palgrave Macmillan.

Kolb, D. (1984). *Experiential Learning: Experience As The Source Of Learning And Development*. Englewood Cliffs, NJ: Prentice Hall. pp. 20-38.

Rancière, J. (2011). *The emancipated spectator*. London: Verso.