Northumbria Research Link

Steering Audience Engagement During Audio-Visual Performance

L. McCarthy

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Steering Audience Engagement During Audio-Visual Performance

Léon McCarthy

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Northumbria University

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Abstract

The aim of this research was to establish a new style of AV performance that facilitated me in knowingly steering audience engagement. My interest in steering engagement stems from the intent I have with my performances; an intent to encourage audiences into considered thought about the topics I bring to my shows. As practice-based research, a series of performances formed its basis, with each adapted toward establishing a new style.

I introduced audience conversations to my performances, doing so in real-time by harnessing the audience's second-screens. In this way, their smartphones facilitated spontaneous collaboration between the audience and I; in turn this gave me a way to steer them toward thinking about the themes behind my performances. By then bringing this style of performance to the context of live debate, a new paradigm emerged; one that challenges the audience to participate in shaping the emergent audio-visual event.

I had to develop the capacity to monitor audience engagement, first offline with the 'video-cued commentary' and then in real-time via two different 'audience-commentary systems'. This may be of interest to anyone engaging in forms of audience analysis or viewer studies. How I developed second-screen systems may be of interest to designers of phone-network-based social-media commentary platforms. My effort toward simplifying how I generated audio-visual content and how I controlled it on-stage may make this research of interest to other digital-media performers and installation-designers.

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Topic: my perspectives on over-fishing

https://vimeo.com/csisul/betav04_ul

Performance Relevant to Chapter 4 (Phase B)

Performance at the *Tyneside Cinema*

Oct 2013,Newcastle, UK

Topic: my perspectives on over-fishing with audience-comments

https://vimeo.com/csisul/betav07_tyneside

Performances Relevant to Chapter 5 (Phase C)

Performance at the *ICLI Conference*

Nov 2014, Lisbon, Portugal

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Performance at the *Pigtown Scratchings Event*

May 2015, Limerick, Ireland

Topic: a discussion about the Irish Same-Sex Marriage Referendum

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Topic: a discussion about the migrant crisis in the EU

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Note: the above performances can also be viewed on the accompanying DVD.

List of Accompanying Material

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Video synopsis of all pivotal performances

Video recording of University of Limerick performance

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List of Supervisors & Examiners

Principal Supervisor:

Dr. Stephen Gibson

Department of Media & Communication Design

Faculty of Arts, Design & Social Sciences

Northumbria University, UK

UK

Secondary Supervisor:

Dr. Ben Salem Bernard

Department of Media & Communication Design

Faculty of Arts, Design & Social Sciences

Northumbria University, UK

Internal Examiner:

Prof. Paul Rodgers

Department of Media & Communication Design

Faculty of Arts, Design & Social Sciences

Northumbria University, UK

External Examiner:

Dr. Mick Grierson

Goldsmiths Dept. of Computing

Goldsmiths, University of London, UK

Acknowledgements

Author's Declaration

I declare that this thesis, the body of which totals 30,462 words, has not been submitted for another award. It is based on performances that took place over the course of the research. It was undertaken as a part-time period of study, alongside my role as lecturer in digital video at the University of Limerick.

The opinions, ideas, and other research herein are, unless otherwise stated, my own research. All procedures for ethical approval have been followed and all requisite training courses attended. I can also state that I have received permission for my use of pictures not belonging to myself and which not available under creative-commons.

Two journal articles have been published during the course of this research. Chapter 2 is based on a paper entitled 'Social Commentary through the Transdisciplinary Practice of Audio-visual Performance', published in the *Professional Journal of Professional Communication* (JPC) as part of a special edition addressing the theme of *Art/Science Hybrids* (McCarthy, 2013*b*). Chapter 3 is based on a paper entitled 'Gathering Audience Feedback on an Audiovisual Performance', published in the *Leonardo Electronic Almanac* (LEA) in 2013 as part of a special edition addressing the theme of *Live Visuals* (McCarthy, 2013*a*).

Name: **Léon McCarthy**

Signature:

Date:

Chapter 1

Overview

1.1 Motivations

1.1.1 Introducing Audio-Visual Performance

When a video-jockey (VJ) projects visuals as an accompaniment to the songs chosen by a disc-jockey (DJ), the visuals tend to play second fiddle to the music. When the visuals and music are given an equal footing, they can support and complement each other. Thus, musicians and visual-artists can collaborate to suggest one over-arching meta-narrative; I refer to this as *audio-visual (AV) performance*.

With the opportunity of unifying intent across the visual and the sonic, AV performance offers a level of control over the emergent narrative that is not possible for the nightclub VJ and so across performances by the likes of 'Emergency Broadcast Network' (EBN), 'Coldcut' and 'The Light Surgeons', we see AV performers challenging their audience's sensibilities with narratives that resonate of contemporary social causes such as warfare, deforestation and urbanisation. These collectives create experiences for the audience that they hope will provoke reflection on social issues, so I call them 'social-activists'. Like the aforementioned artists, I also encourage audiences to interrogate the meaning of my performances by suggesting perspectives around social issues, so I too consider myself a 'social-activist'.

Why does AV performance facilitate artists in addressing social issues, when in our contemporary world newspapers, documentary films and TV advertisements already do so? With TV, a message is broadcast from sender to receiver, with mis-interpretations unavoidable due to anomalies in the semiotic codes applied (for more see Section 2.2.3 Semiotic Theory). On the other hand, performance is more akin to a conversation than a broadcast, as the performer and audience can engage in a dialogue. In contemporary terms, it is more relevant to compare such bi-directional conversation to that which happens on social-media, where one has the ability to immediately respond to the comments of others in the public domain.

1.1.2   Seeking a Meaningful Style of Performance

Research by Oliver et al. on audience 'appreciation' versus 'enjoyment' suggests experiences that are entertaining will be more meaningful when they are provocative (2010). This suggests audiences will appreciate AV performances that explore 'meaningful' themes all the more, so long as the experience also remain entertaining.

Prior to this research, my style of AV performance was what I call 'live cinematic documentary'; I used audio-visuals to support my perspectives on social issues. Narratively, it was a style similar to what Nichols calls an 'observational' style of documentary film-making (see Section 2.3.2 Nichols on Documentary for more). Furthermore, because these performances took place in front of seated audiences in cinematic type venues, it created an aesthetic akin to 'live cinema', or what I call 'live cinematic documentary'.

I aimed to both provoke and entertain the audience, assuming I had the means (through my audio-visuals) to do so by moving the audience from 'light-listening' to 'considered thought'. My assumptions were based upon cinematic semiotic principles that I, perhaps presumptuously, applied to my context (for more see Section 2.2.4 Audio-Visual Semiotics). I came to the conclusion that a considered analysis of this style of performance was needed to gauge its effectiveness.

It was a style of performance that facilitated me in presenting my perspectives on social issues to the audience, but perhaps there were moments when my didactic approach was lulling the audience's intellectual faculties rather than challenging them to actively interrogate the issue at hand? Furthermore, I tended to perform according to a pre-ordained timeline almost irrespective of the audience's presence, so was it a style mitigating against the ephemeral nature of performance[1]? In not reacting to the presence of the audience, was I effective as a social activist? To address such questions, the rigour of an academic investigation into my practice was necessary.

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[1]See Section 2.4.1 Film vs. Performance for a discussion on the difference between film and performance

1.2 Aims of the Research

1.2.1 The Research Question

The previous section outlines the assumptions I used to make about audience engagement during my 'live cinematic documentary' performances, yet during these shows I was paying little cognisance to their presence. Focusing my research on the audience would lead to insight about their experiences and the effectiveness of my style in bringing them to interrogate my performances. These insights could then serve my goal; that of engaging audience's in considered thought about issues I deem of social significance.

This brings me to my research question; could I establish new styles of AV performance that facilitate me in knowingly steering audience engagement? In addressing this question four phases of research emerged, yet while each posed a separate challenge, they remained related both to each other and to the aims of my research at large. To summarise:

- With phase A, I investigated how live audio-visuals facilitate me in steering audience engagement

- With phase B, I asked whether real-time audience conversations could emerge as part of an AV performance

- With phase C, I sought a new style of performance, one that related audience conversations to my audio-visuals

- With phase D, I explored a context outside AV performance (that of a live debate) so as to gauge the wider impact that my research might have

1.2.2 Outcomes of the Research

I will now give an overview of the outcomes that emerged from this research, beginning with the following quote:

> All good research is for him, for us and for them: it speaks to three
> audiences (. . .). It is for them to the extent that it produces some

> kind of generalisable ideas and outcomes (. . .). It is for us to the
> extent that it responds to concerns for our praxis (. . .). It is for
> him to the extent that the process and outcomes respond directly to
> the individual researcher's being-in-the-world. (Reason and Marshall,
> 1987, pp.112-113)

The above quote can be used to outline the 3 cohorts that may benefit from
this research. In challenging my sensibilities, knowledge and abilities to develop
new styles of AV performance, 'him' refers to the impact this research has had on
my practice. Developing a new style of AV performance also saw me develop techniques and approaches that will be of interest to other VJs and AV performers,
so 'us' refers to the potential that this research has for this cohort. Lastly, 'them'
refers to the wider community I am part of, one that includes both practitioners
and academics across performance art, audio-visuals and audience-studies.

Outlining those that may benefit from this research segues to a discussion
about the outcomes from each research phase. During phase A, I developed a
hybrid form of audience-analysis I call 'video-cued commentary': as a method of
gathering qualitative feedback, the video-cued commentary could prove useful to
those engaging in audience analysis (artists, directors and performers) and those
studying social interactions (designers, sociologists and advertisers), while the
way I developed a framework for coding the language of the audience's responses
could be of interest to those seeking to develop forms of analysis via grounded
theory and comparative analysis.

During phases B and C, I designed systems that facilitate audience conversations to take place during my performances. These solutions (which in my
opinion were prototypes) could suggest technical approaches for other artists who
are seeking to bring second-screening to the context of their own practice. Perhaps bringing second-screening to the arena of performance could also challenge
the assumptions of others about the right place for such an activity - I certainly
had my initial doubts about whether the premise would suit the context of my
performances.

During phases C and D, new approaches to the creation of live narrative
emerged. While my previous approach had been didactic (in that I 'gave' the au-

dience my perspectives on a topic), during phase C and D it became collaborative in that I relied less on pre-ordained plans and more on input from the audience. A collaborative approach to the creation of live narrative could prove of interest to performers, journalists, social-facilitators and content-creators alike.

During the 'live cinematic documentary' performances of phase A, I expected the audience to 'receive' my audio-visual narrative. During phase B, second-screening encouraged them to become more active by considering, commenting and challenging my narrative. During phase C, a form of 'collaborative performance' gave the audience an opportunity to influence my audio-visuals directly, while during phase D they influenced the panelists discussion as well as my visuals. With their roles moving from that of 'passive-receivers' to 'active-thinkers', it is clear that the audience's experience evolved.

When one contrasts the early performances with the later ones, it is clear that new styles of AV performance emerged. During phase A, the performances were of a style I call 'live cinematic documentary', in that I 'documented' topics in long-form narrative for a passive audience. During phase B, the style remained similar, as I was still presenting my own narrative irrespective of the presence of the audience's comments on screen. The style changed during Phase C when I forced myself to react to the audience's comments: as a result, rather than present my own narrative, shorter 'episodes' emerged in a style I call 'collaborative AV performance'. Phase D saw the style develop further: the audience suggested topics for discussion, the panelists took turns to speak while my visual backdrop framed proceedings in a style I call 'media facilitated debate'.

1.3   Methodologies

1.3.1   Trans-Disciplinary Practice

The skills required to design, prepare and perform live audio-visuals are many, straddling the fields of video-production, motion-graphics, media composition, computer-science, video-art and performance. Whether I work alone or in collaboration with others, I engage with each field in equal measure - hence I call this approach trans-disciplinary rather than multi-disciplinary, taking my reference for

the difference between both from Bremner et al.'s discussion on the similarities and differences between the various design approaches. (Rodgers and Bremner, 2013)

Before a new art form can establish a communicative-code[2] of its own, its early practitioners borrow codes from other domains; Auslander uses the term 'remediatisation' to summarise this tendency in new art forms (Auslander, 2008). As a trans-disciplinary artist, I remediate practices from photography, graphic-design and motion-graphics, all of which then go on to influence the style of my performances. Figure 2.1 is an example of the visuals I create by compositing video content with motion-graphics.

1.3.2   Action-Based Practice

This research was informed by my own practice, so it could be labeled either practice-led or practice-based. Others use these terms inter-changeably because practice informs both, but for me there is a difference:

- Research is practice-based if the aim is to enrich one's practice through the creation of art

- Research is practice-led if the aim is to inform wider practice by writing about that practice

Candy defines practice-based research thus: "Practice-based research is an original investigation undertaken in order to gain new knowledge partly by means of practice and the outcomes of that practice." (2006, p1) To relate my stance to that of Candy's, I will return to an earlier discussion about how my research was firstly for me, then for other performers and only then for my wider community of academics and media artists[3]. This underlines why my approach was practice-based; the research was first and foremost about enriching my own practice. With each performance, my method was to:

1. Trial an idea about how to engage the audience through a new style and approach

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[2]See Section 2.2.3 Semiotic Theory for more on communicative codes
[3]See Section 1.2.2 Outcomes of the Research

2. Analyse this performance to gauge the effectiveness of this approach in engaging the audience

3. Deduce what of this new approach to keep and what to adapt before starting the design of the next performance

This meant that over the series of performances that made up this research, I was able to establish styles of AV performance that met my research aim - that of engaging the audience in interrogating the themes underpinning my shows. While the above method was practice-based, it is also a method aligned with Carr & Kemmis's 'action research'; namely to 'plan - act - observe - reflect'. (Carr and Kemmis, 2003, p.186) From my perspective, I tend to:

1. 'Plan' a way to present a theme

2. 'Act' or render a performance and perhaps record for later observation

3. 'Observe' my experience both of myself and the audience

4. 'Reflect' on what to change for the next performance

1.3.3   Preparing an Audio-Visual Performance

I will now elaborate on how I prepare for a series of performances. The process starts when I consider how to encourage an audience to consider a specific social issue. I then develop a vision for how I would like things to emerge on-stage; this vision acts as a vehicle, focusing me toward achieving specific qualities in a performance. To work towards a performance from a vision makes my approach 'platonic', as each performance becomes a rendering of the 'ideal' vision that I have (see Section 2.2 Aesthetics & Semiotics for more on audience reception). The following is a step-by-step outline of my preparatory approach:

1. I begin with a social issue that I feel warrants consideration by an audience

2. I source sonic and visual content related to this issue; both by sampling existing material (sourcing videos, speeches & songs) and/or creating my own content (taking photographs, filming footage & recording sounds)

3. I edit and then render footage as loops

4. If my aim is to portray a specific argument, I may consult with specialists (such as scientists or engineers) to obtain reliable information, from which I then compose motion-graphics

5. I compose music according to an overall sound-design

6. I then decompose the music and visuals into elements that can be triggered, when needed, on-stage

7. I then design a performance interface that facilitates control of the audio-visual content

8. Finally, having noted the architecture of the venue, I tailor the manner of diffusion to suit

Figure 1.1: L. McC (aka 3pin). *VJ Performance.* **Composite of Live Visuals, Temple Bar Music Centre, Dublin, 2007 (creator: L. McC) -** These visuals, taken from one of my VJ performances; illustrate the style of my VJ performances.

1.3.4 Reflexive Research

While this research could enrich the AV performance practice of others, its focus was primarily personal; the aim was to develop my own style with a view to engaging audiences in considered thought. The following quote outlines how the individual researcher and their own preferences impact on the research;

> A researcher's background and position will affect what they choose
> to investigate, the angle of investigation, the methods judged most
> adequate for this purpose, the findings considered most appropriate,
> and the framing and communication of conclusions. (Malterud, 2001,
> pp.483-484)

As both the 'researcher' and the 'researched', I had to be conscious of the duality of my presence; framing insights according to my context would allow me to qualify the deductions I came to. Qualitative enquiry across the arts and social sciences relies on the researcher maintaining this sense of self; only then can one successfully frame and bracket out personal tendencies from the overall conclusions one comes to. The following quote points to the importance of this; "The researcher accounts for their perspective and monitors this clearly and transparently, allowing understandings to emerge." (Butler-Kisber, 2010, p.5) During the research, I intended for each performance to formatively influence the next. Only at the end did I feel confident in then making summative conclusions. Maintaining a sense of my own presence within the research meant that when casting summative judgements, they were judgements that could then be applied beyond the context of my own practice.

1.3.5   Grounded Theory

While a reflexive form of action-based research underpinned the research, there were other methodologies employed. The term grounded theory was first suggested by Glaser and Strauss; the following quote highlights the fundamental of this approach as 'the discovery of theory from data'. (Glaser and Strauss, 2009, p.1) A further quote, this time from Charmaz, outlines that such theories can only emerge after one has meticulously coded ones' data to find its underlying tendencies;

> We study our early data and begin to separate, sort, and synthe-
> size[sic] these data through qualitative coding. (...) Coding distills
> data, sorts them, and gives us a handle for making comparisons with
> other segments of data. Grounded theorists emphasize[sic] what is
> happening in the scene when they code data. (2014, p.16)

During phase A, I asked whether my assumptions on how audio-visuals engage the audience would stand up to rigorous analysis. Through a form of audience-analysis I called 'video-cued commentary', I was able to ascertain how audience members had engaged and what may have led them to do so. The video-cued commentary itself was developed along the lines of a grounded-theory approach, whereby:

1. I started with a need to formulate a framework around modes of audience engagement

2. I recorded and observed audience-comments about a performance

3. I made notes, distilled meanings and so came to a loose framework

4. I re-applied my framework to the remainder of the comments

5. I compared my findings to related audience-questionnaires, which gave me confidence in the 3 modes of engagement that emerged from this process

I coded the comments of each conversation multiple times until I came to a sense of the modes of engagement that best described the tendencies in the conversation; once the modes were established and re-applied to the whole commentary, some comments could be disregarded as they fell outside of the modes and so my requirements. To disregard certain data as unrelated is an acceptable approach if one can cross-check decisions to do so with additional frameworks; in my case I cross-referenced such comments with both with the recording of my performance and the questionnaires that had been completed by the participants. This is an approach related to Glaser and Strauss's 'comparative analysis' method, developed by them to confirm the validity of omitting certain data that seems unrelated (2009, see p.23).

1.3.6 'Mash-Up' Design

Phase A revealed those who participated in the video-cued commentaries enjoyed conversing about their experience of my performance. As a method, the video-cued commentary did facilitate me in establishing the dominant modes of

engagement, but it was a method of analysis that took place the day after the performance; such a delay undoubtedly introduced errors due to memory recall. During phase B, I wanted to explore whether I could facilitate such conversations to occur in real-time during a performance, hoping to;

- Get the opportunity to gather real-time feedback on audience engagement

- Give the audience an opportunity to discuss the theme of my performance

As I could find no suitable audience-commentary system, I decided to develop my own. 'Mash-up' is a term contextualised by Hartmann et al. as an approach that harnesses freely available code, commercial API's and online fora for problem-solving (2006). It is a term that emerged from a survey they made of a number of hackers and designers, who suggested the advantages of taking a 'mash-up' approach are that it:

1. Facilitates one in solving problems

2. Gives one solutions to technical hurdles

3. Leads one to pragmatic, working solutions

By accessing the API of a well-known product, one can harness the familiarity users have with it's interface to ease them into the use your own product or service, quote: "Mashing enables designers to easily buy into a product or service genre. Leveraging existing materials can scaffold user expectations, for better or for worse." (Ibid., p.9) It was for this reason that I decided to develop a system based on the Twitter API, knowing that most audience members would already be familiar with application interface of Twitter. To access the Twitter API in the domain in which I was programming (Processing/Java) required me to hack a 3rd party library (Twitter4j) so I could find and access the audience's Tweets; however in line with Hartmann et al.'s words 'for better or for worse', I found disadvantages to using Twitter, with the audience bringing 'Twitter behaviour' to the context of my performances. In chapter 5, I will outline my move away from Twitter when I noticed such 'twitter-speak' mitigating against an engagement with the social themes behind my performances.

1.4 Overview of the Research

1.4.1 Limitations of the Research

With this section, I will acknowledge some limitations to my research, which arose due to the nature of my trans-disciplinary practice, the methodologies I applied and the technical solutions I developed.

My practice is trans-disciplinary in that I straddle the fields of video-production, motion-graphics, media composition, computer-science, video-art and performance. I practice in this way without claiming to be an expert in any one field; if the reader forgets that a 'jack-of-all-trades' approach underpins my trans-disciplinary practice, one may come to expect something else from this research.

As an AV performer, my language is that of audio-visuals. Later in this dissertation, I will document how film-directors and sound-designers create meaning through sound and vision. However, at no point will I claim to be an expert sound-designer or film director: I only intend to be judged as an expert in the trans-disciplinary practice of AV performance.

This dissertation required me to consider issues of aesthetics, specifically my stance on the experiential nature of performance and what role my intent plays in shaping the audience-experience. In Section 2.2 Aesthetics & Semiotics, I will give an overview of my stance on issues pertaining to authorial intent and audience reception, however a more comprehensive discussion of such was deemed beyond the scope of this research.

In realising new directions in AV Performance, I had to surmount various technical hurdles. I will reference some such software solutions, but at no time should the reader consider me an experienced computer-programmer. These solutions were prototypes developed by me as a 'hacker': as a result, a computer-programmer may find some solutions lacking in elegance, but they are solutions that work in the context of my practice nonetheless.

A significant hurdle for performance-based researchers is in sourcing suitable events at which to perform; one must procure events in suitable venues with audiences interested in experimental forms of performance. When one manages this, one then faces occasional cancelations (as happened with a performance

scheduled for ISEA 2016) and re-scheduled performances, which despite my best efforts, did interrupt my research.

1.4.2 Merits of the Research

With this section, I will outline how I judged my research for merit. As I was both performer and researcher, my reflections were of central relevance; if I felt less than energised after a performance, I sought answers, engaged in analysis and then adapted the style of the next performance.

It is worth now mentioning a comment made by Knowles when discussing John Dewey, summarising "good criticism as that which extends conversations, leading to growth rather than stagnation." (Knowles and Cole, 2008, p.487) I feel this is an important point in a practice-based context, as both personal and external criticism are only worthwhile if they encourage further artistic and practical development. As this research was practice-led, it was my own formative judgements that drove the research forward, leaving it up to me to decide which performance styles best facilitated me in steering audience engagement. It was only at the end of the research that I was really in a position to cast summative judgements. As is suggested by Knowles, one can judge practical research in terms of:

- The researcher's goals: with my goal being to develop a more thoughtfully engaging style of performance, each performance was assessed accordingly

- The approach taken: each performance took a slightly different approach to engage the audience, so formative judgement was generally contextual to each performance

- The audience members' experiences: as I was ultimately seeking to engage the audience in certain ways, gathering feedback on their experience was central to the research. This was initially gathered through questionnaires, then video-cued commentary and eventually via second-screen comments

As many performances took place at festivals and conferences, these audience's contained fellow academics and practitioners: performing to these cohorts

gives me confidence that this research is grounded amongst my peers. Furthermore, two peer-reviewed papers emerged from this research, both of which make up the foundations of specific chapters within this dissertation; to have ones research vetted in this way strengthens the argument that my research is grounded amongst my academic community.

1.4.3 Trajectory of this Dissertation

This section will outline the trajectory this research took and how it has been documented in this dissertation. Of the 13 performances that took place, it is only the pivotal ones that are detailed; these pivotal performances can be viewed both online (at the links listed throughout this dissertation) and on the accompanying DVD. Figure 1.2 reveals the 4 research phases, their pivotal performances and the styles that emerged with each.

Chapter 1, this current chapter - gives an overview of the query, methodology, trajectory and contributions to practice and therefore has no performances that need to be viewed in parallel with its reading.

Chapter 2 sets out the context of the research. Partly a literature review, it first addresses issues relating to aesthetics and semiotics, paying attention to how meaning arises in film, documentary and performance. It then sets out the historical context that led to the emergence of what is now known as VJing. It presents examples of artists using AV performance as a platform from which to champion social issues. The chapter is an elaboration of a paper that was published in the Journal of Professional Communication (JPC) special edition on Arts/Science Hybrids, the title of which was 'Social commentary through AV Performance' (McCarthy, 2013*b*)

Chapter 3 is based on a paper that was published in the *Leonardo Electronic Almanac* (LEA) special edition on *Live Visuals* (McCarthy, 2013*a*), the title of which was 'Gathering audience feedback on an audiovisual performance'. The chapter will outline phase A of the research, during which I analysed a form of performance through a process I call 'video-cued commentary'. As well as revealing how my audio-visuals had engaged participants, it emerged that they

Chapter	Phase	Pivotal Performances	Stylistic Development
3	A	University of Limerick	Live Cinematic Documentary
4	B	Tyneside	Live Cinematic Documentary (with Audience Chatter)
5	C	Lisbon	
		Pigtown	Collaborative AV Performance
6	D	Mindfield Series	Media Facilitated Debate

Figure 1.2: L. McC. *Research Trajectory Chart.* **2016 (creator: L. McC)**
- A chart giving an overview of my research trajectory.

wanted to converse during future performances. The performance that supports this chapter's discussion is:

- Performance at the University of Limerick
  Oct 2012, Limerick, Ireland
  Topic: my perspectives on over-fishing
  https://vimeo.com/csisul/betav04_ul

Chapter 4 will detail phase B of the research, during which I developed a style I call 'live cinematic documentary with audience-chatter', as in essence I was simply letting conversations to occur while I performed regardless: I was hoping that the audience-chatter would reveal them discussing the issue central to my earlier performances (that of over-fishing), however this did not prove to be the case. The performance that supports this chapter's discussion is:

- Performance at the *Tyneside Cinema*
  Oct 2013, Newcastle, UK
  Topic: my perspectives on over-fishing
  https://vimeo.com/csisul/betav07_tyneside

Chapter 5 will detail phase C of the research, during which I developed a style I call 'collaborative AV performance', whereby audience conversations and audio-visuals influence and reflect each other. The first step I took was to ascertain how I could steer the audience's focus (and thus their form of engagement) between their second-screen and my primary-screen. I realised how to do so with the following performance:

- Performance at the *ICLI Conference*
  Nov 2014, Lisbon, Portugal
  Topic: my perspectives on over-fishing
  https://vimeo.com/csisul/betav09_lisbon

The next step I took was to ascertain how I could steer their conversations (and thus their form of engagement) through my audio-visual reactions. I realised how to do so with the following performance:

- Performance at the *Pigtown Scratchings Event*
  May 2015, Limerick, Ireland
  Topic: a discussion of the Irish Same-Sex Marriage Referendum
  https://vimeo.com/csisul/betav10_pigtown

Chapter 6 will detail phase D of the research, during which I made an effort to bring audience conversations beyond the context of audio-visual performance. This became possible when an opportunity arose to perform as part of a live debate. The LAN-based commentary-system I developed facilitated the audience in commenting to my primary-screen. These comments influenced the discussion of those on-stage. I then responded to this discussion by creating a visual backdrop; I call what emerged a form of 'media-facilitated debate'. The performances that support this chapter's discussion are:

- Performance at the *Mindfield*
  Fri. Sept 4th 2015, Electric Picnic Festival, Ireland
  Topic: a discussion about the impact of the Irish Same-Sex Marriage Referendum
  https://vimeo.com/csisul/betav11_mindfield

- Performance at the *Mindfield*
  Sat. Sept 5th 2015, Electric Picnic Festival, Ireland
  Topic: a discussion about the migrant crisis in the EU
  https://vimeo.com/csisul/betav12_mindfield

- Performance at the *Mindfield*
  Sun. Sept 6th 2015, Electric Picnic Festival, Ireland
  Topic: a discussion about the migrant crisis in the EU
  https://vimeo.com/csisul/betav13_mindfield

Chapter 7 (the final chapter) will review the research; considering how I addressed my aims, discussing my contributions to practice and suggesting avenues for future research and development.

Chapter 2

Literature Review

2.1 Introduction to Chapter 2

This chapter will set out the context of this research in the form of a literature review. The chapter elaborates on a paper published in the Journal of Professional Communication (JPC) special edition on Arts/Science Hybrids, the title of which was 'Social commentary through AV Performance' (McCarthy, 2013b). I will begin by discussing aesthetic issues pertaining to the moving image and performance, paying attention to ideas around artistic intent and audience experience. This will lead to a discussion on the semiotic principles that pertain to audio-visuals. As the practice of a VJ is influenced by factors ranging across film, music and performance, I will discuss how the moving image has influenced my own practice, paying attention to the pioneers that developed techniques I now apply in my practice. I will also discuss the liminal space where performance and film meet, documenting the historical context that led to the emergence of VJing and AV Performance. I will then conclude this chapter by making the case that AV performance is a valid platform from which to champion social causes, doing so by considering examples of other AV performers who comment on social issues.

2.2 Aesthetics & Semiotics

2.2.1 Meta-Modernism or Pseudo-Modernism?

For centuries, classical art criticism held that there could be only one true meaning to be perceived from an artwork; if the spectator had neither the eloquence nor knowledge to perceive such, then it was up to the critic to reveal the artist's intent. In the early 20th century, as part of what is known as 'modernism', art criticism established an awareness for the role that the spectator had in shaping their own aesthetic experience of an art work, an understanding that can be deciphered in the language of Duchamp from his paper entitled 'The Creative Act', quote: "(...) the role of the spectator is to determine the weight of the work on the aesthetic scale." (1957) In this way, modernism shifted the goalposts; the

artist had to be aware of the role of the spectator in shaping their own aesthetic experience.

Opinions continued to vary as to the role that the artist plays in shaping the aesthetic experience of the spectator. By the mid 20th Century, critics were positioning the moment of reception above all else; Roland Barthes was a key proponent of such thought, with the following quote illustrating his stance; "(...) a text is made of multiple writings(...) but there is one place where this multiplicity is focused and that place is the reader." (Barthes, 1993) This ushered in a new period in arts appreciation and criticism known as 'post-structuralism', a stance that places little relevance on any meta-narrative the artist intends to communicate. Instead, there are only the endless interpretations of each and every individual, with their aesthetic experiences emerging from the context of reception rather than any singular vision on the part of the artist.

It could be said that post-structuralist thought dominated art criticism from the 1970's onwards, however I feel the need for a new form of criticism that adequately reflects our contemporary world in which meta-narratives emerge around themes such as terrorism and the environment. Meta-narratives play against the post-structural position that there can be no 'meta-awareness', yet what should we call this contemporary stance that has usurped the post-structural? Vermeulen and Akker suggest the term 'meta-modernism', qualifying the term by noting elements of romanticism, modernism and post-modernism in our zeitgeist[1].

> If (...) the modern outlook vis-a-vis idealism and ideals could be characterized[sic] as fanatic and/or naive, and the postmodern mindset as apathetic and/or skeptic, the current generation's attitude can be conceived of as a kind of informed naivety, a pragmatic idealism. (Vermeulen and van den Akker, 2010, p.5)

As well as meta-modernism, there is Kirby's term 'pseudo-modern', quote: "Pseudo-modernism, makes the individual's action the necessary condition of the

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[1]The reader will later note how Vermeulen et al.'s observations resonate with the collaborative role that I gave my audiences when co-creating with them via their second-screens, so my stance on how a performer's intent can shape the audience's experiences tallies with this idea of a meta-modernism.

cultural product." (2013, p.2) Kirby goes on to relate 'pseudo-modernism' to the playing of computer-games, an act in which the player has the freedom to create their experience but within the confines of the game-play of the designers. Similarly, I perceive my AV performances as 'experiential frameworks' through which I can influence the audience as they develop both individual and collective aesthetic responses. As a result, the intent I had in developing new styles of AV performance position my aesthetic sensibilities as meta-modern and pseudo-modern rather than post-structural.

2.2.2 The Audience's Search for Meaning

From the early 20th Century onwards, there has been an acceptance that the work of art only manifests in the presence of the viewer (also sometimes referred to as the receiver or spectator). In the case of film, directors directly address their viewers but performers can have a closer relationship with their audiences, so I will now consider how the audience develop ideas around the meaning of a performance. What contributes to shaping the audience's experience of a film or performance? I will address this by referring to the reader-response theories of Wolfgang Iser and Stanley E. Fish, who suggested that we interact with our surroundings through exploring, playing and talking; interactions that help us learn about the world around us. A quote by S.E. Fish, cited by Leitch in 'The Norton Anthology of Theory and Criticism', outlines Fish's view that it is the reader's 'need to know' that drives them to interact with a text:

> Intention (authorial) is known when and only when it is recognised (by the reader); it is recognised as soon as you (the reader) decide about it; you decide about it as soon as you make a sense; and you make a sense as soon as you can. (Fish, 2001, p.2083)

If one substitutes the word 'reader' for 'audience', then it is the audience's curiosity as to my intent that drives them to seek meaning from a performance, with their quest for meaning then shaping their experience. I have come to realise that, rather than expect to communicate my meaning to all, I should instead seek to engage the audience in searching for 'their' impression or version

of my meaning, influencing their search through my audio-visuals. Then, when the audience are focused on deducing the meaning of my audio-visuals, they will find themselves interrogating the social issue central to the performance. For me, their actual deductions are of little relevance; what matters is their attempt to infer and reflect on their own meaning.

Personally, I tend to judge audience members against how proactive they seem in their search for meaning, labelling engaged individuals as active audience members. To expand on what I mean by 'active', let's imagine an audience watching a documentary film in which the director's argument is transmitted to the audience; I would consider those who are interrogating the audio-visual contract as 'active'. Within AV performance, 'active' audience members exhibit similar traits: rather than passively engaging, they interrogate the variables of a performance such as the audio-visuals, the orientation of the venue and my on-stage setup.

2.2.3 Semiotic Theory

Semiology is the study of how meaning is imparted through messages communicated from a 'sender' to a 'receiver'. The sender uses a communicative code to encode their meaning into a message. For the receiver to deduce the sender's meaning, they need to use a similar code to 'decode' the message. For effective communication, the communicative code should be known by both parties before communication commences: its' absence will lead to inconsistencies between what the sender intends and the receiver perceives. The 'spoken word' is an example of a comprehensive communicative code shared by many: this is why it proves effective in communicating specific meaning.

P. Wollen (Wollen, 1973, p.122) summarises Charles Sanders Peirce's Second Trichotomy of Signs as a theory classifying three message types (or modes of signification) that make up all forms of communication:

1. Iconic - a sign that resembles its inferred meaning directly

2. Indexical - a sign that suggests an icon

3. Symbolic - an arbitrary sign that is learned through a code to denote (rather than connote) meaning

Wollen goes on to put forward the view that the skilful artist alters the presence of each mode of signification to create 'implication & connotation' in the mode least represented (Ibid., chp.3). For instance, he suggests that film-directors tend to use the iconic and indexical to portray reality; it is the absence of the symbolic that leads the viewer of a film to seek clues from the iconic and indexical so as to piece together the symbolic.

It was Ferdinand de Saussure who observed that most of the signs we use are not exact representations of what they refer to; instead, they tend to be arbitrary and of the symbolic type. While symbolic signs need to be learned before use, they tend to carry clearer meaning than the iconic or indexical: this is why language tends to be our most effective channel of communication, featuring as it does mostly symbolic signs. Wollen neatly summarises de Saussure's theory with the following quote: "The linguistic system - what might nowadays be called the 'code' - pre- existed the individual act of speech (. . .). Signs that are wholly arbitrary realise better than the others the ideal of the semiological." (Ibid., p.117)

It is commonly accepted that the language of art is ambiguous and subjective: hence the wide range of interpretations and individual aesthetic experiences of art. That is not to say that there will not be similarities between the many varied aesthetic experiences of an artwork: rather, as an artist develops a style, their followers will develop an understanding of what codes to apply, reducing the distance between their interpretations.

We are now well accustomed to the semiotic conventions of film and the rituals attendant with a visit to the cinema, yet in the early days of film its directors remediated (to use Auslander's term) many of these conventions from other art forms such as theatre and opera[2]. In the introduction to his book, Wollen suggests that in gathering together practices and technologies from theatre, photography and music, these early film directors made cinema the first multimedia art form. (1973). I will now go on to discuss how semiotics emerge through audio-visuals.

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[2]This is now no different for VJs, who remediate from film; their juxtaposition of disparate video clips infers new meaning just as the film-editor does so when editing.

2.2.4   Audio-Visual Semiotics

Michel Chion is perhaps the worlds foremost authority on how sound supports the visual in film. Chion proposed that we listen in three ways, one of which he calls a 'causal' mode of listening in which we focus on attributing visual causes to the sounds we here (see 1994, p.24). An example of causal listening is when we connect a loud punctual sound to the visual of a door slamming shut when watching a film: in this case, we tend to hear the sound without needing to focus our hearing toward doing so. It seems that the sound directs our attention to the area of the screen where the door is. One can trace the cause of this phenomena to H. Helmholtz who, when writing of the difference in how we apprehend what we see and what we hear, wrote that music is apprehended directly: "without any intervening act of the intellect" (1885, p.3). This phenomena is commonly referred to as the 'omnipresent' nature of sound, and its implication is that sounds are engaged with immediately, while it takes time for visuals to be grasped and then interpreted.

As we perceive the visual as existing on a two-dimensional surface, we encode everything spatial onto this 'visual impression'. Conversely, temporal events (including both visual and aural) are registered as an 'auditory impression'. This means that visuals tend to transfer their patterns to the sounds, such that we 'think' we hear rhythms that are actually visual patterns. This can be seen in a sequence from Hitchcock's film Psycho: the main character (Marion) is driving through the rain en route to her hotel, while the string section of the orchestra strikes repeated notes; in a moment of gestalt association that K. Jung would call 'synchronicity' (1972), the strings attract to them the movement of the windscreen wipers, such that we 'think' the wipers are moving in time with the orchestra even though they are not.

From the above premise, it is the visuals that require our conscious processing and so it is they that tend to carry objective meaning, while it is the sounds tend to suggest subjective meaning. As a result, an enriched meaning can be suggested by fusing both. The following quote neatly addresses this idea of an emergent and enriched meaning:

> Words and pictures deal primarily with the specifics, while music deals
> primarily with values, emotions and attitudes (. . .). Music transfers
> its own attributes to the story-lines (. . .). It creates coherence,
> making connections that are not there in the words or pictures; it
> even engenders meanings of its own, but it does all this, so to speak,
> silently. (Cook, 1998, p.19)

Chion alluded to this when he suggested it is the soundtrack that passes its
qualities on to the visual, informing it with its qualities, quote "It is always
the image, the gathering place and magnet for auditory impressions, that sound
decorates with its unbridled splendour." (Chion et al., 1994, p.143)

If the visuals are supported by the sounds, how do they fuse to become an
audio-visual stream? Cook addresses this very question when he notes that music
and film can have as little as one loosely related attribute (such as a sonic repe-
tition and a repeating visual pattern); one link is then enough to trigger gestalt
associations in the brain, such that all other unrelated attributes can seem re-
lated, quote; "If the respective attributes of the two media interact, then some
or all of the remaining attributes of the one become available as attributes of
the other." (1998, p.69) Cook calls this a 'parallelism of process', which can be
illustrated by returning to the earlier example from Hitchcock's movie 'Psycho':
the wind-screen wipers of Marion's car seem to reflect the temporal striking of
the orchestral string section and so the motion becomes a metaphor for Marion's
state-of-mind. Because the brain's gestalt reasoning strives to relate congru-
ent media, combining any two media streams will generally result in some sort
of metaphor arising, whether consciously intended by the artist or not. Loose
metaphors leave room for interpretation on the part of the viewer, while strong
metaphors leave less ambiguity for the receiver to paint their own version; by this
logic, strong metaphors should result in a less engaging experience.

There is also the question of how the artist can raise the levels of expectation in
the audience? In both music and cinema, expectation is setup through repetition
and rhythm. Repetition attracts attention with expectation arising, which can
then be interrupted by an unexpected break in the repetition. Variation is also
important in maintaining the focus of the viewer: if repetition continues for too

long, the viewer will perceive such repetition as having been a 'false flag' to their expectation.

2.3 The Moving Image

2.3.1 Eisenstein on Cinema

Early 20th Century Soviet film-makers developed what is now commonly referred to as 'montage theory' when they realised the power that filmic editing offered; they could juxtapose disparate shots to infer meanings that would be impossible to suggest from individual shots presented in linear succession. Sergei Eisenstein describes 'montage' thus, quote; "Montage is an idea that arises from the collision of independent shots - shots even opposite to one another." (1949) This creative use of editing went on to influence practices from cinema to video art and VJing. In film and TV, this led to what we now call the 'cutaway', a practice so common the modern viewer may fail to notice it.

It was in searching for ways to propound his vision for Russia that Eisenstein refined 'montage' techniques into the forms that editors and VJs still use today; he realised he could harness the emotive response of the audience so as to stimulate their social awareness, an example of using art as a form of propaganda. Artists generally create a dynamic in their work by moving between moments of conflict and resolution, yet Eisenstein instead sought to create relentlessly intense experiences; ones without resolution that would then agitate the viewer into realising the unjust class divide in society. 'Agit-guignol' was the term used by Eisenstein to describe this approach; agitating so as to invoke a political sentiment. Wollen describes Eisenstein's films thus: "The film was made up in effect of poster-like, often caricatural vignettes, planned for maximum emotional impact." (1973, p.27) Eisenstein devised three techniques to achieve his required level of 'agit-guignol':

- Layering of visual elements to combine simultaneous, disparate events

- Composition of an image from unrelated parts

- Juxtaposition of shots through editing

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Perhaps the most famous example of Eisenstein implementing 'montage' theory comes from his film 'Battleship Potemkin' in which there is a scene juxtaposing a baby's pram and a firing squad; despite no direct link between the shots, the inferred meaning is that the soldiers are firing on the baby; It is a scene that still retains its power to shock and horrify an audience. The fact that this technique seems so normal to a contemporary audience is testament to the significance of 'montage' theory to the editing practices we use today.

Through the devices of 'montage' and 'agit-guignol', Eisenstein was able to arouse the senses and emotions of the viewer, but his ultimate aim was to instil in the audience the same vision he had; as Wollen states "What baffled Eisenstein was how new concepts could be precisely conveyed" (1973, p.49). The scene from 'Battleship Potemkin' is certainly powerful enough to get one thinking about issues ranging from war and power to violence and death, but Eisenstein also wanted to dictate the vision his audience would be led to; Wollen would say he found this hard, if not impossible to attain and so for me, this shows that no matter how objective a scene appears, its interpretation remains subject to the individual sensibilities of each viewer. As a result, the specifics of any meta-narrative may only (at best) be approximated. Noting this challenge that Eisenstein faced brought me to question my own ambitions in trying to pass on to the audience my perspectives. Could I ever expect to infer objective perspectives through my narrative? Would I be better served by agitating their thoughts and then leaving them to come to their own deductions?

2.3.2 Nichols on Documentary

As an artist, I have for many years been attempting to merge elements of documentary film and VJing into a form of AV performance. As a result, I will now discuss documentary film, doing so by making reference to Nichol's book 'Introduction to Documentary' (Nichols, 2001).

It could be said that the earliest films were observational (rather than fictional) as they documented real-world scenarios; in the case of the Lumiere Brothers, their famous example is the projection of the arrival of a train into a station. While such films may seem devoid of any over-arching intent on the part of the

film-maker, the camera, by its very nature, forces one to frame a portion of reality; whether consciously or not this means documentary film-makers bring their own sensibilities to bear on any reality they record.

In the introduction to his book on the semiotics of cinema, Lottman points out that photography is the least abstract of the arts, so what then for film-makers seeking to use the movie camera to represent more abstract ideas? (Lotman, 1976) Film, as a time-based medium in which a series of shots are presented one after the other, differs from photography as editing can play a crucial role in how the film-maker suggests meta-narratives. As detailed in the previous section, it was early Soviet film-makers who established the conventions of editing; on noting how the likes of Eisenstein could foster thought about social themes, the British film-maker John Grierson decided that by documenting and then doctoring representations of reality, he too could create a form of propaganda. As it turns out, Grierson was the first to suggest and use the term 'documentary', defining it as "the creative treatment of reality". (Nichols, 2001, p.24) According to Nichols, just like fictional film, documentary film involves 3 parties:

- The *film-maker* and their intent

- The *film as-a-work* in and of itself and the meaning viewers gleam from it

- The *viewers*, the meaning they infer from the film and the impact it can then have on their lives

Both fictional and documentary film share common communicative codes, so what makes them different? At its most basic, it is in the telling of the story; fictional films aim to suspend disbelief so as to create a form of escapism, whereas documentary films confront audiences with realities they can relate to as real. That is not to say that documentary film does not need to engage, entertain and excite; documentary must be entertaining while convincing, or as Nichols suggests; "This is what aligns documentary with the rhetorical tradition, in which eloquence serves a social as well as aesthetic purpose. We take not only pleasure from documentary but direction as well." (2001, p.2)

Some sort of rhetorical approach is at the centre of most documentaries. The three 'C's' of rhetoric are that it be credible, convincing and compelling. According to Nichols, it is the second of these 'C's' that is the most important, as audiences tend to engage with a documentary if it appears convincing over and above whether the arguments presented are actually plausible or not, quote; "We tend to assess the organization[sic] of a documentary in terms of the persuasiveness or convincingness of its representations rather than the plausibility or fascination of its fabrications." (2001, p.30)

The plausibility of the arguments presented is less important because a convincing experience will go a long way toward making it a satisfactory one. This de-prioritisation of plausibility gives the documentary film-maker great power, so it is no surprise that documentary films function well as forms of propaganda. With the power to communicate to the masses in this way comes a responsibility; both on the part of the filmmaker towards transparency and truth and on the part of the viewer to maintain a certain level cynicism and doubt. While recordings of the real-world themselves can appear convincing, it is all too easy to forget that they are representations rather than factual documents: there is no such thing as a transparent observation - the act of documenting will always change what is being documented. When the film-maker intentionally twists such representations, they can play with our sense of reality in a way that Nichols compares to that of the lawyer, quote: "Documentaries may represent the world in the same way a lawyer may represent a client's interests: they put the case for a particular view or interpretation of evidence before us." (2001, p.4)

What are the approaches documentary film-makers use to bring to their perspectives to an audience? In general, it can be said that documentary films emerge as a form of audio-visual rhetoric, which can be summarised according to the problem/solution structure typical to classical rhetoric, that is:

1. Catch the attention of the viewers

2. State the problem or issue

3. Argue a stance with supporting material

4. Refute counter-arguments

5. Summate with a return to the problem and perhaps a view to the future

It is then in the manner and individual style of each film-maker that the mode of rhetoric varies. Nichols summarises the main modes or styles as:

- Poetic: productions centred around abstract representations that dominated the early years of film-making before sound arrived

- Expository: productions with voice-of-god narrations that suggest an authoritative and informed perspective to accompany images that support the arguments presented

- Observational: productions that make an effort not to intrude in the recorded context and so aim towards as much transparency and truth as possible

- Participatory: productions presenting the film-maker within the 'mise-en-scene' itself as an actor and director as they partake in and steer the scenarios being documented

- Reflexive: productions that address the nature of the medium itself

- Performative: productions that refer to the essence and beauty of the contexts presented in an effort to bring an emotional affinity between the audience and those documented

I describe the form of AV performance I brought to this research (and analysed during Phase A) as 'rhetorical', in that I aimed to catch my audiences attention, present to them my perspectives, back these up with visual examples and then colour the their deductions with music. Sampled video content and factually-informed motion-graphics formed the backdrop to these performances, so my mode of representation has an affinity with the observational mode of documentary. In hoping to create aesthetically engaging experiences to win over the opinions of my audience, I can also say that an element of the 'performative' enters my approach. As my presence on stage puts me in front of a live audience, I can make my mode of production clear so I can also say that my approach is reflexive and transparent. From Chapter 4 onwards, this dissertation will detail how my style changed by moving from an observational to a participatory mode of presentation.

2.4 Performing with the Moving Image

2.4.1 Film vs. Performance

With this section, I will discuss some of the performance practices that have influenced the development of VJing in general and my own sensibilities in particular. Both film and performance are practices that marry elements of the moving image and the stage spectacle. Where they differ most is in how they are received; 'viewers' attend cinematic screenings whereas 'audiences' attend performances. The different terminology for the receiver of the work highlights the filmic experience as being more about viewers 'receiving' the director's narrative, while the audience's experience is more about participation. This is the ephemeral nature of performance; it can emerge as a narrative open to influence from both the audience and the performer.

Like the documentary film-maker, it is my aim to present perspectives on social themes, so it should come as no surprise that the style of performance I brought to this research was what I call 'live cinematic documentary' (see Section 1.1.2 Seeking a Meaningful Style of Performance for more on this style). However, while audio-visual semantics relate my practice to that of the film-maker, performance practice differs in relation to time: whereas a film presents the rendered (and so repeatable) vision of its' director, a performance offers a 'never-to-be-repeated' manifestation of the performer's intent. This means the performer has the freedom to develop narratives in real-time, be that in reaction to personal whims, other performers or the audience. Because the performer can react to the audience, there is the opportunity to reduce the interpretive distance that exists between the stage and those in attendance.

Film and performance do have their differences: while a documentary's narrative reaches the viewer as a pre-rendered production, the narrative of a performance emerges in the presence of both artist and audience. The simultaneous presence of artist and audience creates connections that cannot arise at a film screening. While sacrificing some of the control that the film-maker has, the performer can adapt their narrative in reaction to the audience.

On page 86 of his book entitled 'Performance: a critical introduction', M. Carlson (2004) summarises Jean Alter's view from her 1990 paper entitled 'A Socio-Semiotic Theory of Theatre' that theatre has two social functions, namely:

- Performant: to entertain and appeal to an audience

- Referential: to communicate a message, a text or an insight through signs

Rather than limit this observation to theatre, it could be said that both filmmakers and performers communicate while also entertaining. I seek to communicate while entertaining, hoping the spectacle and ceremony of my performance will encourage audiences to first engage on a perceptual level, but then with an emotional and intellectual engagement as the performance progresses.

2.4.2 Mixed Media Performance

Throughout history, there are examples of artists harnessing the newest technologies of their day to expand the possibilities for their performance practice. While this could be said of the architectural developments that the Greeks made for their theatrical performances to the vision Wagner had for a 'Gesamtkunstwerk', I will focus on certain developments from the 20th Century onwards, as it was only then that technology began to suggest and facilitate ways of combining lighting, sound and vision into what can be called either mixed-media or multi-media performance. I will discuss particular movements and artists that forced technologies toward their artistic needs, as it is such endeavours that have inspired me to challenge my own performance practice through technological invention.

Like Wagner, artists at the Bauhaus in 1920's Germany had the belief that by unifying intent across the art forms, one could create a stronger message toward the betterment of society at large. One such Bauhaus artist, Moholy-Nagy, had his own vision for a theatre of totality, quote: "It is time to produce a kind of stage activity, which will no longer permit the masses to be silent spectators, which will allow them to fuse with the action on the stage." (Goldberg, 1979) Multimedia collaborations also took place at the Bauhaus:

- The reflected light compositions of Hirshfield-Mack sought to portray the sensation of depth and space on the 2 dimensional planes with light.

- A fusion of music and painting is evident in the collaborations between Kandinsky & Mussorgsky such as in their work entitled 'Pictures at an Exhibition'.

- Film projects also featured at the Bauhaus; an example being F. Kiesler's set design for K. Capek's theatrical production 'Rossum's Universal Robots' (R.U.R.), a set that incorporated mechanically operated screening devices.

The Bauhaus disbanded towards the start of the 1930's, with many of its practitioners crossing the Atlantic to the USA, where in the post-war 1950's, performances were stripped of the rigorous preparation seen at the Bauhaus, leaving more scope for the expression of the performer. 'The Filmmaker's Cinematique' in New York was the site for many interesting multimedia collaborations. Oldenburg's 'Moviehouse' event saw performers mixing with the seated audience while the stage and screen held the spectacle: this seems an attempt to narrow the 'comfort zone' between the audience and the stage, breaking down the 'fourth wall' to heighten the audience's awareness and challenge their assumptions.

Through the input of the engineer Gordon Mumma, John Cage's 'Variations 5' pushed the boundaries of multimedia - photoelectric sensors on a floor-grid enabled dancers to control the lighting and the projections, while electronics were used to create sounds. It was after Allen Kaprow's '18 Happenings in 6 Parts' that such activities began to be pooled under the title 'Happenings', however the term was misleading, as often such events had been practised and choreographed well in advance.

The avant-garde met the mainstream when Andy Warhol and others at 'The Factory' in New York began collaborating with musicians from 'The Velvet Underground'. Their series of shows called 'Exploding Plastic Inevitable' could be described as part film, part dance and part art installation; it was perhaps closer to a Fluxus Happenings event than a typical rock concert, with its looser narrative, episodic structure and spontaneity.

It was not only avant-garde artists that sought to enhance their practice through the application and development of new technologies. Since the 1960's, there are examples of mainstream musicians embellishing their performances with new forms of stage apparatus: the psychedelic rock group Pink Floyd embellished

their stage presence to enhance the experience for their audiences, many of whom were high on LSD.

Across the 1970's, concert visuals tended to be created from 8mm or 16mm film projections. Even to this day, some artists use such media in their live shows; the visuals projected by the Canadian musical group 'God Speed You Black Emperor' are based on a process of manually looping short lengths of 16mm film until the melt and snap, however 16mm is an expensive medium requiring the use of specialist equipment, so the arrival of VHS tape in the 1980's ushered in a new era in visually-enhanced musical performance.

2.4.3   Sampling Culture & VJing

1980s New York saw the emergence of Hip-Hop as a street-art, dance and musical movement. While the practice of looping music may have already been pioneered, it emerged into the mainstream when Hip-Hop DJs sought for ways to create music over which 'break-dancers' could perform; creating new musical material by repeating and mixing existing material across multiple sets of turntables. Music-video directors adopted this practice, re-appropriating visual content that had been sampled on VHS tapes. Narratively, rather than seek to mimic the music of the song, such music-videos tended to create their own visual narrative to complement the meaning of the song, but with the focus neither solely on the song nor the video.

The emergence Hip-Hop coincided with the early broadcasts of MTV, broadcasts that brought the premise of the 'music video' to mainstream consciousness. The MTV approach was to celebrate style over substance through the use of short, snappy and arresting audio-visuals. This was part of a larger trend in TV to keep the attention of the 'trigger-happy' audience (with their remote control in hand)[3]. This 'MTV style' style went on to shape the emerging style of VJs and to this day, visuals of spectacle still tend to prevail in night-clubs the world over.

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[3]The film-director P. Greenaway is reputed to have said the death of cinema occurred in 1983 with the arrival of the remote-control.

In his essay on VJing, Bram Crevit's considers the roots of VJing to have been sown in early 1980's New York at The Peppermint Lounge (Faulkner and D-Fuse, 2006, p.14). It was in such underground venues that the premise of the 'house party' first emerged: a social celebration in which the revellers focused on dancing. Replacing performing musicians with a DJ removed an element of spectacle, so visual projections were seen as a way to embellish the sensory experience of the dancers. To my mind, such VJs were to the 'house-party' what set-designers are to theatrical productions: executers of a visual style that embellishes the audience's experience.

During the 1980's and 1990's, VJs were performing with multiple VHS video decks and live cameras, mixing and layering these sources to accompany the music. Since the early 2000's, developments in computer-technology have seen VJs move away from using VHS, relying instead on digital files (images and videos), layered compositing and visual effects. Despite the changing technologies, we still tend to find VJs performing in nightclubs alongside DJs, triggering visuals in reaction to the rhythms of the DJ's dance music selection.

2.5 Social Commentary through Performance

2.5.1 Early 20th Century Performance

Throughout history, there are examples of artists seeking to instil in their audience an awareness for contemporary issues; from the ancient Greeks' use of theatre to reaffirm the moral compass of their society to Shakespeare's intent to comment on the social mores of his time.

In the early 20th Century, artists began experimenting with the accepted forms of classical theatre because they felt it had become a site for pure spectacle, in which audiences expected light entertainment above all else. In keeping with the modernist ideals of their time, it was the Futurists that looked forward to a future in which humanity would be enriched by the machine through its replicability, accuracy, speed and efficiency. For them, the stage became a platform from which to propound ideas and manifestos. In an effort to force the audience

to think about their manifestos, the Futurists usurped entertainment for antagonism, with Marinetti (one of the founders of the movement) quoted as having once said "Applause merely indicated something mediocre, dull, regurgitated or too well digested." (Goldberg, 1979, p.12)

The injustices playwright Bertolt Brecht perceived in early 20th Century German society drove him to challenge the prevailing attitudes of his audiences, with his plays dramatised so as to agitate the audience. He often broke down the 'fourth wall' of his theatre by having actors address the audience directly. (Carlson, 2004, p.183) Similar to the Futurists, Brecht used shock, surprise and outrage to challenge rather than lull them into a false reality with with fictional narratives[4].

Eisenstein[5] had similar concerns to Brecht, seeking to shock audiences into the realisation that they could and should be living in a more just and fair society, but while Brecht experimented with theatrical forms, Eisenstein pioneered in the realm of film-making, using 'montage theory' to try and shock his audience into social revolt.

2.5.2 Late 20th Century Performance

From the 1950's onwards, homes across North America came to have their own TV sets, meaning it was possible for the 'powers that be' to broadcast forms of 'soft' propaganda. Video artist's such as Nam June Paik saw the nascent power that this networked medium offered and so questioned the medium by re-appropriating the TV as a device in the service of their art.

In the 1970's, 'Punk' similarly emerged as a reaction against forms of authority and accepted norms. While well known as a musical movement, the ideals of Punk proliferated to film-making and installation art; the 'No-Wave' movement emerged in New York as its visual accompaniment, with one of its main concerns that of the rights of females in a male-orientated society. In Vivienne Dick's 1979 film 'Beauty Becomes the Beast', the viewer is shown the daily routine of a

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[4]I once agitated my audience: during a 2013 performance dealing with over-fishing, I offered platters of fish tapas to the audience, hoping to make them uncomfortable with the idea of eating fish.

[5]See section 2.3.1 for more on Eisenstein

young woman who seems to be regressing into childhood under the onslaught of a 'mediatised' culture that seems to control her sense of self. It is hard watching but one that eventually brings us to an affinity with the protagonist (the actor Lydia Lunch); the result is a new awareness in the viewer for the subtle yet regressive messages that 1970's mainstream media sent women about their role in society.

In the 1980's, Hip-Hop emerged as a voice for disenfranchised urban black America; many such musicians realised their performances gave them a platform from which they could speak about the social isolation they experienced. This approach of telling stories about society (known as 'rapping') perhaps found its loudest voice in one of the most controversial groups to emerge - 'NWA' (Niggaz Wit Attitudes); NWA used their platform to bring up issues such as black rights and racial deprivation.

By applying 1980's Hip-Hop approaches of sampling to their practice, VJs began recording live TV broadcasts to VHS tape; re-appropriating the original message therein when projected as part of their performances. The aim of turning the intended message on its head was similar to the aims of 1960's video artists; to force the audience to question the motives of mainstream media producers. It was through this practice that VHS technology enabled the realisation of a new style of visual performance.

When Emergency Broadcast Network (EBN) collaborated with U2 to create live concert visuals for the band U2's ZooTV world tour, it gave EBN the opportunity to champion contemporary social issues relevant; as well as commenting on an 'over-mediatised' society, they commented on issues such as the Iraq War and its cost to humanity. In the early 1990's, Coldcut pioneered technological developments in the practice of scratch-video performance with social issues also never far from their mind; their most famous music video - 'Timber' - is a commentary on the destruction of the Amazonian rainforest, a theme that they continue to present as part of their multi-screen performances.

From the above, one can trace a common aim on the part of these artists or 'social activists', that of challenging audience's to re-consider how society operates. Like Nam June Paik, Vivienne Dick, EBN and Coldcut, I also challenge my audience to re-consider social issues rather than simply accept our problems as part of the inevitable 'status quo'.

2.5.3   Audio-Visual Performance

While EBN performed alongside musicians in the fashion that VJs do, Coldcut were different in that they were musicians and visual-performers in one. As mentioned in Chapter 1, I refer to such collectives who create audio-visual experiences that speak of a single intent as AV performers. It was in the 1990's that Coldcut pioneered ways to relate live sound with live visuals, defining a new style of AV performance heavily reliant on synchronised audio-visual events; it is a style of performance that continues to influence both VJs and AV performers to this day.

With their current performance series entitled Supereverything[6], the Light Surgeons are an example of AV performers fusing musical performance, live motion-graphics and shadow-puppetry in to a live stage performance. D-Fuse are another example of a collective who use AV performance to highlight social issues. For their project *Undercurrent*, D-Fuse travelled to cities in China to map out the effects of mass urbanisation, after which they combined photography, videography, sounds and music into an AV performance series entitled *Latitude* (D-Fuse, 2008).

Film director Peter Greenaway's 'The Tulse Luper Suitcases'[7] performances merge cinematic and VJing practices; re-appropriating content from his own films to create what I would call a form of 'live cinematic remix'. The aesthetics of performance and cinema also meet in the live scores that the musicians 3epkano[8] render to accompany projections of old black-and-white silent-movies. By performing to seated, silent and attentive audiences, 3epkano establish a context that supports a longer form of narrative story-telling than is possible for the nightclub VJ.

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[6]Supereverything [online], available: http://supereverything.net/ [accessed: 3 January 2016]

[7]The Tulse Luper Suitcases [online], available: http://petergreenaway.org.uk/tulse.htm [accessed: 3 January 2016]

[8]3epkano [online], available: http://3epkanomusic.com [accessed: 3 January 2016]

Figure 2.1: The Light Surgeons. *Supereverything.* **Performance still, Gateshead Old Town Hall, Newcastle, 2013 (photograph: unknown)** - An example of a form of AV performance; the on-stage performers are creating live audio-visuals for a seated, silent audience.

Figure 2.2: D-Fuse (L-R: Matthias Kispert, Michael Faulkner, Toby Harris). *Latitude.* **Performance still,** *On Off* **Festival, São Paulo, 2009 (photograph: Itaú Cultural)** - This performance is an example of a collective addressing a social issue through AV performance.

Figure 2.3: 3epkano. *Metropolis.* **Performance still, NCH, Dublin, 2014 (photograph: Thomas McGraw Lewis)** - An example of a form of AV performance; the musicians are creating a live soundtrack to accompany a silent-movie.

Chapter 3

Phase A: Analysing an Audio-Visual Performance

3.1 Introduction to Phase A

As I present perspectives on social issues, I hope audiences will interrogate my performances for their meaning. Before this research began, I had been unable to tell whether audiences were engaging sensually, intellectually or otherwise. To learn more of the manner of their engagement, I sought a way to gather qualitative feedback. I already had experience using audience surveys and while they often revealed general impressions, they rarely yielded feedback on specific audiovisual events. It was while seeking a method to gather such specific feedback that I came across 'video-cued recall', a method used to assess user-experience within interactive installations at the 'Creativity & Cognition Studios' in Sydney (Costello, 2011). I adapted this approach to work in the context of analysing an audio-visual performance, calling it 'video-cued commentary'.

This chapter will detail the design, implementation and analysis of a video-cued commentary, a process that was first detailed in a paper I published in the *Leonardo Electronic Almanac* (LEA), entitled 'Gathering Audience Feedback on an Audio-Visual Performance' (McCarthy, 2013*a*).

3.2 Gathering Audience Feedback

The questionnaire is a method commonly used to gather qualitative feedback. My own experience in using and analysing post-performance audience-questionnaires had shown me they can yield general insights on the audience's experience, yet I was concerned with how specific audio-visual events steer their engagement. As I knew the questionnaire would not lead to such insight, I had to consider alternative methods.

The 'preview screening' is used the film industry to screen a version of a film to a private audience, aiding the director in then deciding on the 'final cut' for general release. It struck me that were an audience to re-watch a recording of a performance while filling out a questionnaire, they may find it possible to reflect on how they were thinking during that performance, perhaps leading to insight on any audio-visual events that triggered them to think about meaning. Perhaps they could be interviewed while watching a recorded performance?

3.3 The Video-Cued Commentary

My approach crystallised after coming across 'video-cued recall', an approach pioneered by B. Costello as a form of participant-analysis (Costello, 2011). Costello was studying how the experience of play emerges amongst people as they interacted with an art installation. Costello's method was thus:

1. Participants played with an art installation while their actions were being recorded.

2. On leaving the installation, they entered a booth in which this recording was played back.

3. While they watched the recording, they conversed about what their intent had been with each of their actions - this conversation was also recorded.

4. The recordings were then analysed

Costello mentions that video-cues tended to keep the participants focused, reminding them of what had occurred. She also found that by putting couples (who are familiar with each other) through the process, they were less inhibited in giving their reflections.

If one assumes that a participant's video-cued recall of their experience is similar to the actual experience, it could be useful in assessing how audience members had engaged with a performance; perhaps it would isolate attributes of my performance that had cued the audience to engage in certain ways. For these reasons, I decided to adapt the premise of video-cued recall to the context of one of my own performances, calling it a 'video-cued commentary'. It manifested in the following way:

1. A performance is recorded by a camera capturing a similar perspective as most of the audience see

2. This recording is replayed to a pair of participants from the audience, over which they converse about how they remember the performance with the audio their conversation recorded

3. The recording of the performance is synchronised with the recording of the conversation

4. Both are then analysed to decipher how the participants had been led by the events of the performance

3.4   Developing a Keyword Framework

To make deductions from their commentaries required me to analyse the language of each and every comment. The analysis of language is not a straightforward task: one will encounter semiotic ambiguities when deciphering what a participant meant with a comment. Analysis is made easier if a method of 'coding' the language is first developed. In Costello's case, she adopted Ericsson & Crutcher's 'protocol analysis' method to categorise the verbal commentaries that she had recorded (Ericsson, 2002). This method influenced me to take the following approach:

- I began by listing the expected outcomes

- I then categorised words and phrases so the expected outcomes could be found in the each commentary

- During my analysis of each commentary, I referred to questionnaires when ambiguities arose

I needed a framework of keywords against which I could relate the participant's comments to my performance so I could discern how participants were engaging, calling these keywords the 'modes of audience engagement'. To find the most prevalent modes of engagement, I worked backwards, analysing the comments from a number of video-cued commentaries and then grouping them by similarity. This led me to the 3 most prevalent modes, these being *perceptive*, *interpretive* and *reflective*[1].

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[1]Throughout this dissertation, I use a colour scheme to identify these modes: **pink** is for perceptive engagement, **yellow** for interpretive engagement and **green** for reflective engagement.

- *Perceptive* engagement describes comments made while one is interrogating the audio-visuals for how they sounded, felt or looked; I called it 'perceptive' as it manifests in descriptions of physical sensation such as 'hearing', 'feeling' or 'seeing'

- *Interpretive* engagement describes comments made while one is searching for the meaning inferred by the performance; I called it 'interpretive' as it manifests in comments about the meaning and significance of the performance

- *Reflective* engagement describes comments made while one is reflecting on the broader implications of my performance on themselves, on society and so on; I called it 'reflective' as it manifests when the participant is reflecting on their thoughts

Figure 3.1 lists phrases typical of these 3 modes of engagement[2], but to decipher the mode of engagement alone would not have led me to insights on how I had steered engagement; I also had to decipher what had been the 'trigger' for each comment by relating comments to an audio-visual variables. Figure 3.2 lists the main sources and attributes that seemed to lead participants to make their comments.

Perceptive	Interpretive	Reflective
I like...	I do not understand the...	What if he changed the...
The... appeals to me	That means...	The aesthetic is...
That is an interesting...	It suits the mood of...	I would like more...
The... was triggering...	The plot is...	This could also be...
The... was repetitive	The narrative is...	That reminds me of...
It has a... aesthetic	The symbolism is...	It would not be... if...

Figure 3.1: L. McC. *Modes of Audience-Engagement.* 2016 (creator: L. McC) - This figure lists the 3 modes of audience-engagement and the comments that tended to reveal each mode; part of the framework used to code the video-cued commentary.

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[2]Comments that did not fit any of the 3 modes were left uncoded, which is acceptable in terms of grounded-theory (see Section 1.3.5 Grounded Theory)

Sources triggering engagement	Description
Visual	Sources, Shapes, Colours, Dynamics
Sound	Samples, Treatments, Texture, Rhthym
Liveness	Gestures
Audiovisual Relationship	Triggers, Audiovisual Coupling
Plot	-
Mood	-
Setup	Stage Setup, Hardware
Composition	Design, Presentation

Figure 3.2: L. McC. *Sources of Audience-Engagement.* **2016 (creator: L. McC)** - This figure lists the sources (and their attributes) that were the focus of comments recorded during the video-cued commentaries; part of the framework used to code the video-cued commentary.

3.5 The University of Limerick Performance

The performance from which I gathered feedback through video-cued commentary was:

- Performance at the University of Limerick
  Oct 2012, Limerick, Ireland
  Topic: a documentation of my perspectives on over-fishing
  https://vimeo.com/csisul/betav04_ul

As can be seen from figure 3.3, I performed facing the audience with the projections behind me; figure 1 in the Appendix gives an overview of this stage arrangement. During the performance, I used a 'Nord'[3] synthesiser to play music, 'Ableton'[4] to sequence sounds, 'Modul8'[5] to sequence visuals and both the Nord and an 'Arduinome'[6] for tactile control. This performance system can be seen in figure 2 in the Appendix.

The audience was made up of students and academics from the University of Limerick. Attendance was low, with approximately 14 people in the audience, of which 6 committed to partaking in the video-cued commentary: taken

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[3]Nord [online], available: http://nordkeyboards.com [accessed: 3 January 2016]

[4]Ableton [online], available: http://ableton.com/ [accessed: 3 January 2016]

[5]Modul8 [online], available: http://modul8.ch [accessed: 3 January 2016]

[6]FlipMu [online], available: http://flipmu.com [accessed: 3 January 2016]

Figure 3.3: L. McC. *University of Limerick Performance.* **Performance still, University of Limerick, 2012 (creator: L. McC)** - This figure shows the audience-perspective during the UL-Performance.

in pairs, this gave me the opportunity to run 3 video-cued commentaries. As part of their 'protocol analysis' method, Ericsson & Crutcher (2002) recommend using a secondary research resource for cross-referencing any ambiguous comments; in my case, I had the audience-questionnaires to resolve such ambiguities. These questionnaires were completed immediately after the performance, with each numbered so that I could later connect each to their related commentary[7]. The next day, an audio-visual recording of the performance (taken from the audience's vantage point) was setup in 'Final Cut Pro'[8] to be viewed by pairs of participants as they discussed their thoughts, with this discussion recorded.

With the UL performance, I wanted to suggest that industrial-scale fishing is unsustainable, in the hope that the audience would then perceive the need to halt such practice. As can be seen from figure 3.4, the performance occurred in three parts with 3 perspectives thus presented.

Figure 3.4: L. McC. *University of Limerick Performance*, **Composite of Live Visuals, 2012 (creator: L. McC)** - A series of screenshots taken during the University of Limerick Performance; showing the visual composition typical of the 3 parts of the performance.

During part 1, the visuals revealed the oceans and mankind in harmony; my intent was to present one way in which man and nature can interact. Pleasant audio-visuals featured at this early stage to engage the audience. The left frame in figure 3.4 shows a visual from part 1.

During part 2, I presented a perspective in which the seas were seen as a resource to be plundered, with its species to be hunted down through the ever-more elaborate use of technology. The sonics were a combination of drones and the

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[7]The blank questionnaire can be seen in the Appendix from figure 7 through to figure 10.

[8]Final Cut Pro [online], available: http://apple.com [accessed: 3 January 2016]

pulses of machinery. The visuals were industrial, mechanical and cold, incorporating information through animated graphs, showing fish catches for different types of tuna across recent decades. The centre frame in figure 3.4 shows a visual from part 2.

During part 3, the sonics moved away from the rhythms and pulses of part 2 toward an ambient sound design that was atonal in nature, while over this the people faded in with a mix of bells and drones. The visuals were text based, presenting the findings of academic studies suggesting the health benefits of eating fish. Motion-graphics were presented that offered ideas on how we can harvest and consume fish in sustainable ways. The right frame in figure 3.4 shows a visual from part 3.

3.6 Analysing a Video-Cued Commentary

I had hoped the audience would interrogate and reflect on the meaning of the audio-visuals: in assessing how the participants recalled their experience of the performance, the analysis had to ascertain when and how the performance had steered their form of engagement.

As I had a recording of their conversation and a recording of the performance to analyse, I hoped to find qualitative-analysis software that could host video and audio files on a timeline: this would enable me to tag the comments according to my keyword framework. The softwares I considered were:

- 'Transana'[9], which offered a promising interface, however it relied on first transcribing the audio with timecode, a task I decided would be too time consuming.

- 'Dedoose'[10], a tool that runs online (although a desktop app can be downloaded) and so I found that it did not playback video in a responsive fashion. It was also rather restrictive in the way it deals with a coding scheme.

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[9]Transana [online], available: http://transana.org [accessed: 3 January 2016]

[10]Dedoose [online], available: http://dedoose.com [accessed: 3 January 2016]

- 'Atlas'[11], which offered flexible & accurate video control, along with a useful coding approach. Unfortunately, I could not export the coded data for analysis so I did not pursue with its' use.

- 'Interact'[12], which offered accurate video control, an awkward but usable coding approach and some useful tools to visually analyse the data (pie charts, tables and reports), which could then be exported.

I chose to use Interact. The full analysis of this video-cued commentary can be seen in list-form in figures 4, 5 and 6 in the Appendix, however the following will give an overview:

1. I imported the recording of the performance to Interact, muting its audio

2. I imported the commentary, synchronising it to the recording of the performance

3. I played back the timeline, noting the topic of each comment

4. I translated each comment to one of the sources (according to figure 3.2)

5. I labeled each comment as either exhibiting perceptive, interpretive or reflective engagement (according to figure 3.1)

6. I isolated the attribute that seemed to have triggered each comment (according to figure 3.2)

7. Finally, the coded transcript was exported from Interact

Figure 3.5 outlines the modes of engagement across the 3 parts of the performance, while figures 3.6, 3.7 and 3.8 outline the sources of perceptive, interpretive and reflective engagement respectively.

I will now give an overview of my analysis of one such video-cued commentary, beginning with the modes of engagement that emerged. From figure 3.5, we

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[11]ATLAS.ti [online], available: http://atlasti.com/ [accessed: 3 January 2016]

[12]Mangold [online], available: http://mangold-international.com [accessed: 3 January 2016]
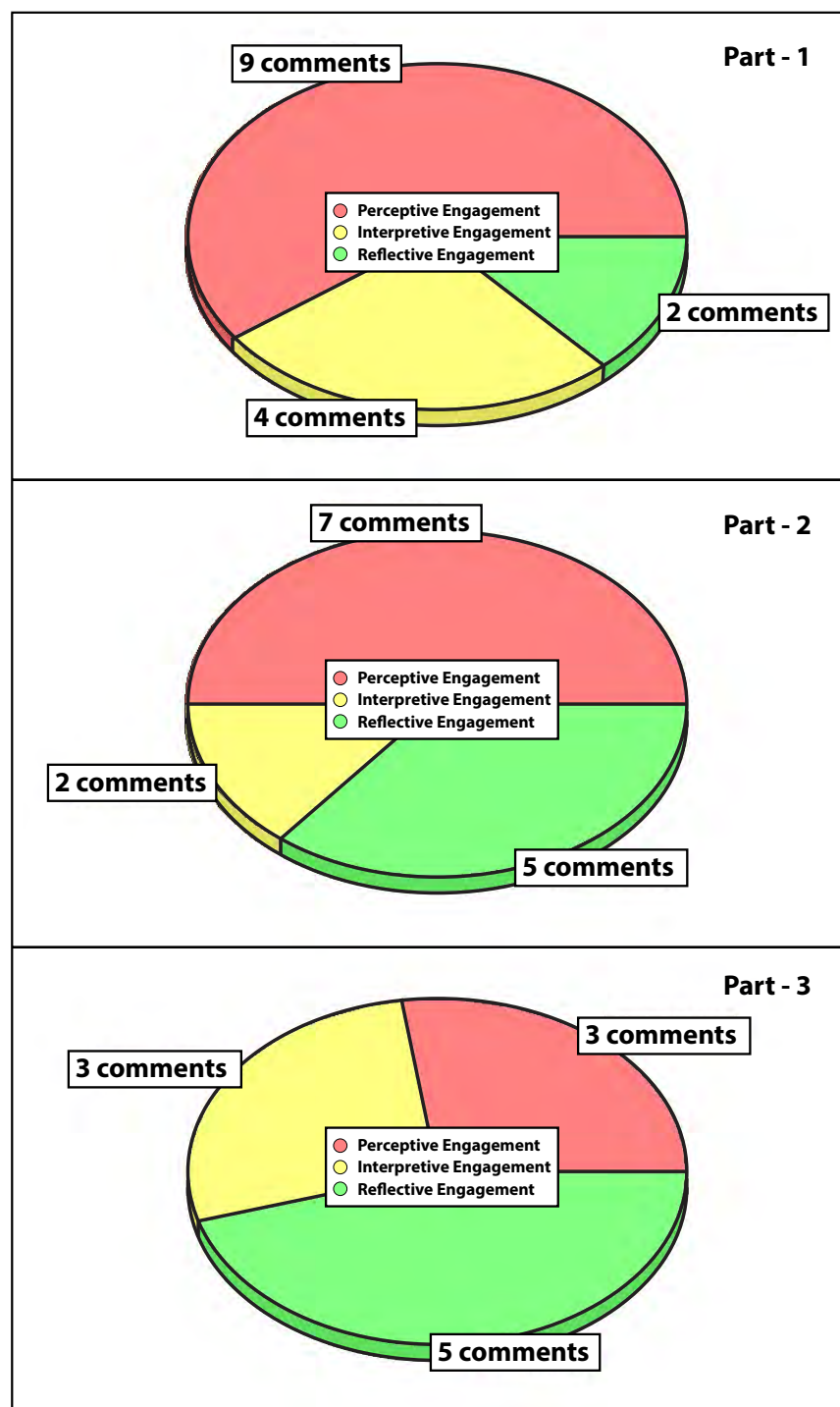
Figure 3.5: L. McC. *Modes of Engagement.* **2012 (creator: L. McC) -** This figure graphs the modes of engagement for the 3 parts of the UL performance.
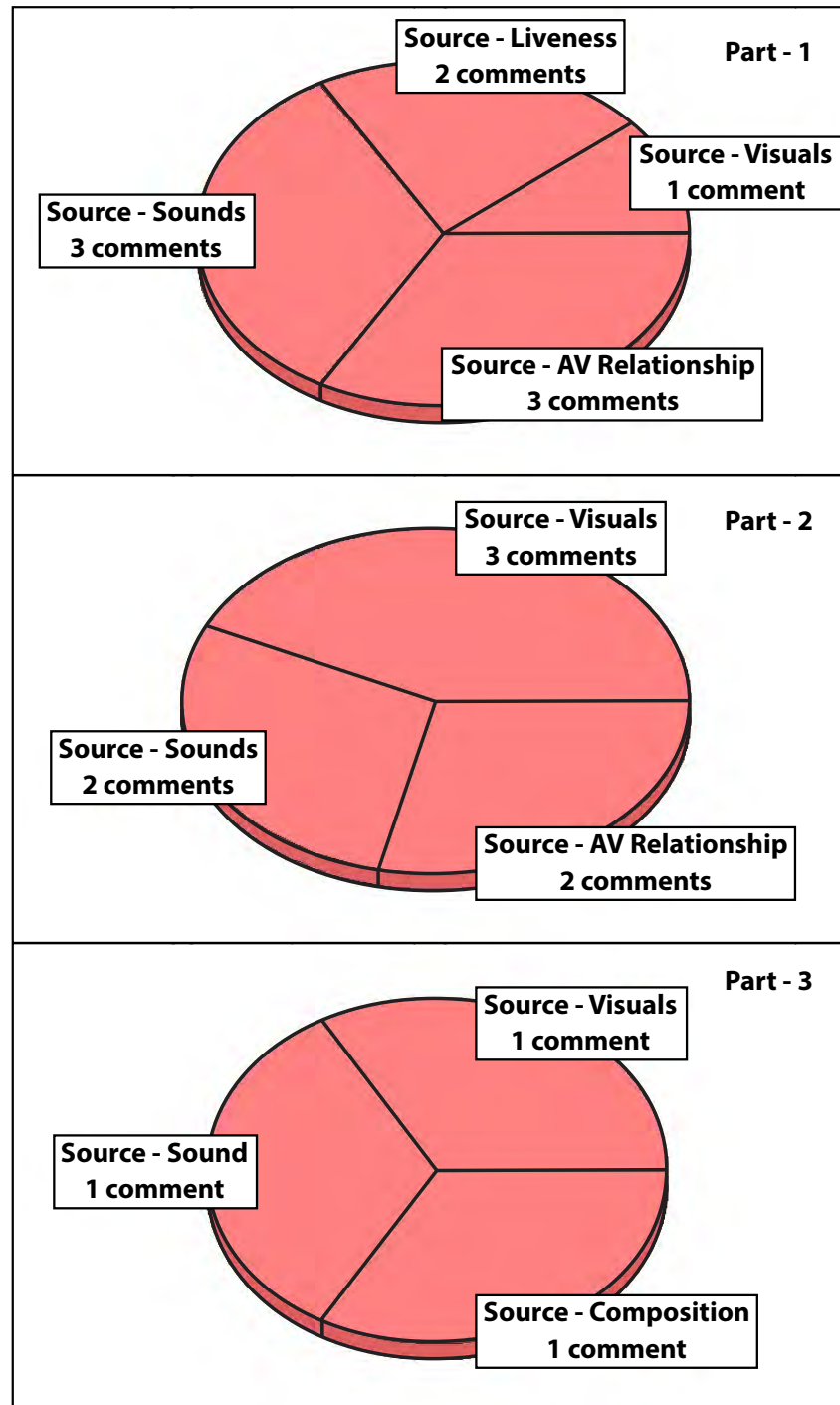
Figure 3.6: L. McC. *Sources of Perceptive Engagement.* **2012 (creator: L. McC)** - This figure graphs the sources of perceptive engagement for the 3 parts of the UL Performance.
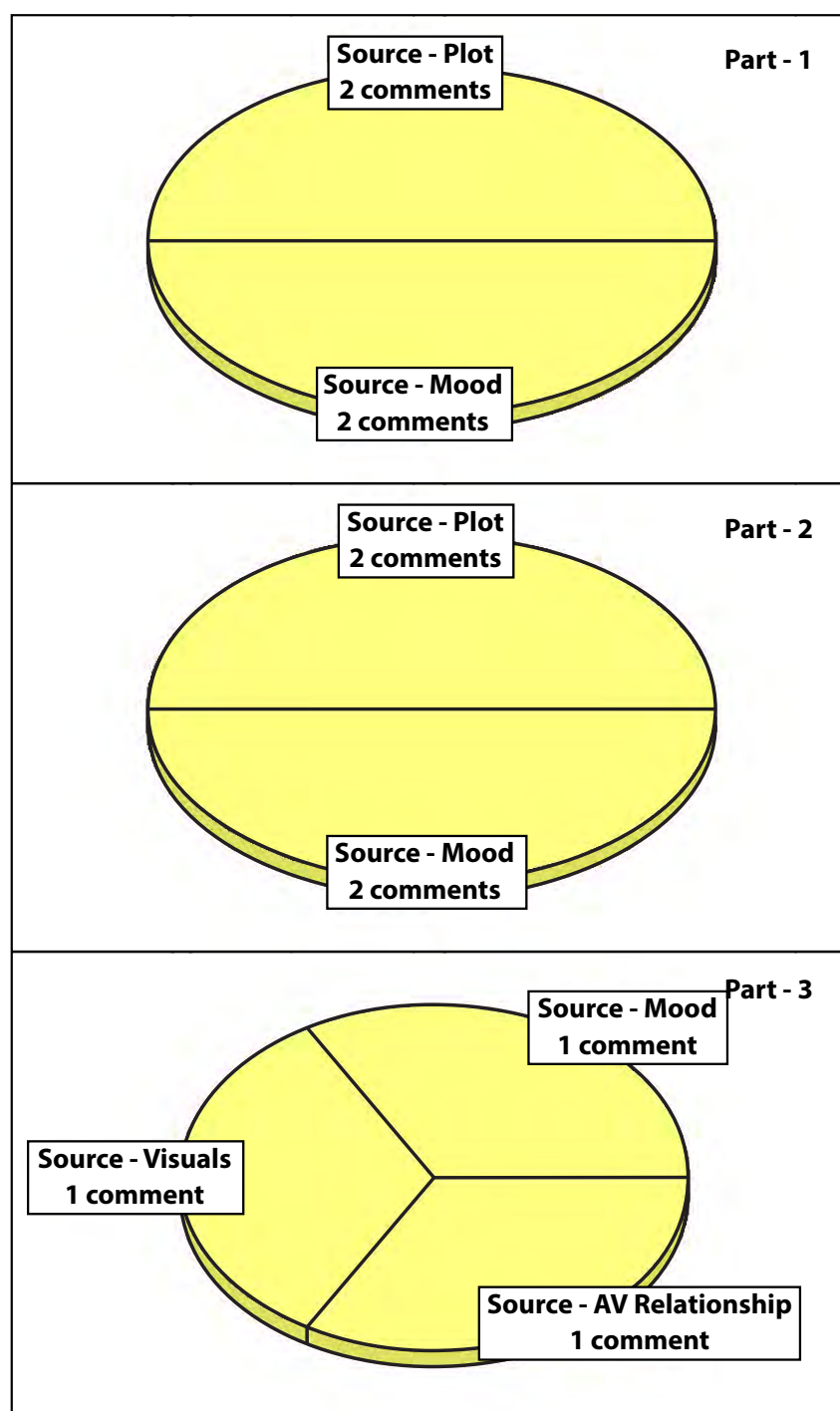
Figure 3.7: L. McC. *Sources of Interpretive Engagement.* **2012 (creator: L. McC)** - This figure graphs the sources of interpretive engagement for the 3 parts of the UL performance.
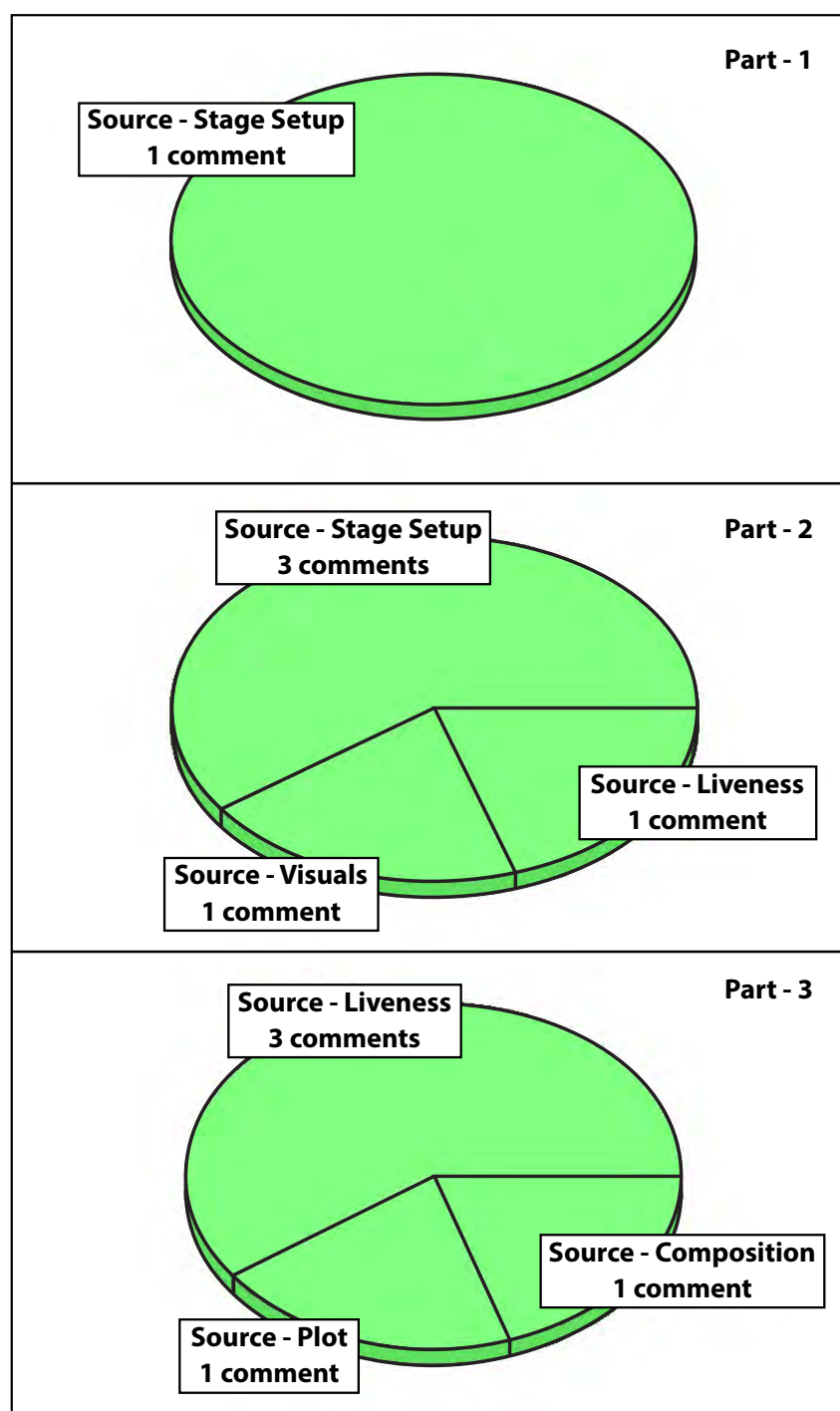
Figure 3.8: L. McC. *Sources of Reflective Engagement.* **2012 (creator: L. McC)** - This figure graphs the sources of reflective engagement for the 3 parts of the UL performance.

can see a decrease in perceptive engagement (pink) across the the 3 parts of the performance, while from figure 3.6 we can see that during part 1, when perceptive engagement was at its highest, it was the sounds (33%) and their relationship to the visuals (33%) that attracted most comments.

Returning to figure 3.5, we can see that corresponding to the decrease in perceptive engagement (pink), there was an increase in reflective engagement (green). From figure 3.8, we can see that during part 2, most reflective comments focused on the stage setup (60%), while during part 3 most focused on liveness (60%).

Returning to figure 3.5, we can see that interpretive engagement (yellow) remained the least common mode of engagement across the performance (at approximately 33%) throughout. Figure 3.7 reveals that mood was a constant source of interpretive comments. In relation to this, if we consider figures 4, 5 and 6 in the Appendix, the yellow-coded comments (interpretive) reveal the participants observations on how sound had created the mood of the performance.

3.7 Reflecting on Phase A

With phase A, I sought a method of analysis that could reveal how the audience had interrogated the performance. I was particularly interested in whether I was encouraging interpretive and reflective engagement, as I believe such engagement the most likely to lead them to consider the social issue itself.

Semiotically, I wanted to know whether sound infers its meaning on the visual to create the mood through which we infer meaning. This tendency has been documented by others with regard to film-sound[13] and I assumed the same would apply to live audio-visuals. From the previous section's analysis, it seems that sound does in fact impart its qualities on the visual: comments such as the "music seems a natural fit to the visuals, creating the atmosphere" (quote taken from figure 4 in the Appendix) and the "music is darker, feeding atmosphere into the visuals" (quote taken from figure 5 in the Appendix) show participants observing how the sound shaped the mood through which they perceived the visuals.

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[13]For more see Section 2.2.4 Audio-Visual Semiotics

I also expected to confirm that sound is perceived immediately whereas it can take time to appreciate the visual[14]. If we consider figure 3.6, we can see that during part 1 of the performance, 33% of perceptual comments were attributable to the sound with 11% to the visual (a sound:visual ratio of 3:1). During part 2, this ratio changed to focus more on the visual (a sound:visual ratio of 3:4) while during part 3, it evened out (a sound:visual ratio of 1:1). This change reveals the perceptive faculties of the participants initially engaging with the sound: the music first took their attention, after which the visuals came to their attention.

I had hoped to find the audience engaging both interpretively and reflectively with the issue of over-fishing. My assumption proved incorrect: early engagement was perceptive, later engagement was reflective but interpretive engagement remained low throughout. The reflective engagement that did emerge focused on my stage setup and the 'liveness' of my performance. In my view, the stage-orientation drew too much attention away from considering the issue (that of over-fishing). The right-hand image in figure 3.9 shows the stage setup for the University of Limerick performance, while the left-hand image shows an 'in-the-round' stage setup. Orientating myself with my back to the audience would reveal my computer-screens; were I to change to such an orientation, would I remove the distraction and so see the audience engage interpretively?

On reflection, the method of analysis, its implementation and its accuracy need to be considered. It goes without saying that the sooner a participant can reflect on an experience, the fresher the memory of that experience and so the truer their account should be; thus the accuracy of the video-cued commentary is related to how soon it occurs after the experience in question. At best, it should happen in real-time in tandem with the performance. The next best is that the video-cued commentary happens directly after the performance itself: Costello (2011) used video-cued recall in this way, with participants participating immediately after their experience. In my case, the logistics of capturing the performance-recording, preparing it for viewing and then running the commentaries mitigated against a fast turnaround: the commentaries actually occurred the day after the performance! Were I to consider further use of the video-cued

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[14]See Section 2.2.4 for more on Helmholtz's theory
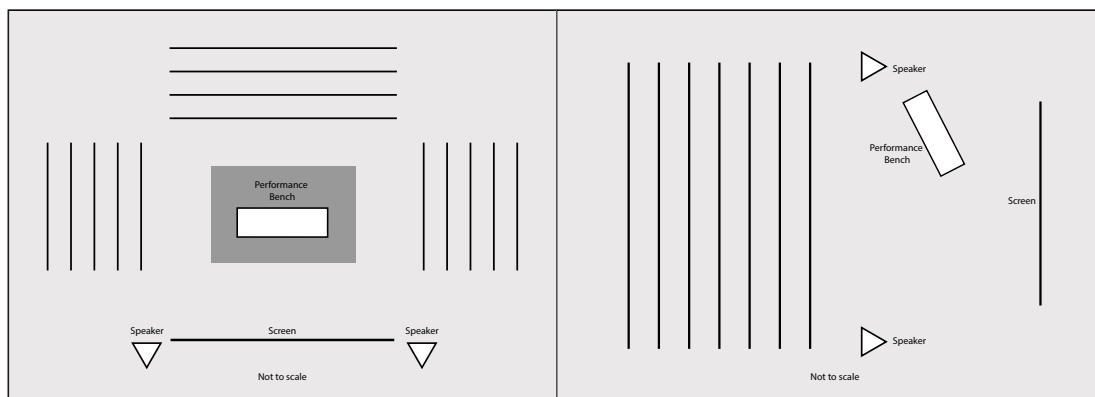
Figure 3.9: L. McC. *Varied Stage Orientations*. 2016 (creator: L. McC) -
This figure compares 2 possible stage orientations; the lefthand image shows an 'in-the-round' stage-orientation, while the righthand image shows the stage-orientation for the UL-Performance.

commentary, a faster turnaround should lead to a truer account of their experience. In terms of efficiency, my approach proved manageable in running 3 commentaries. However, if my aim were to run many commentaries, my implementation would prove impractical. Perhaps the encoding of the recording, its playback and the recording of the commentary could all be facilitated through a customised application for smartphone: that way, on leaving the performance, pairs of participants could record a video-cued commentary without delay.

For me, the most interesting insight to emerge was that the participants enjoyed conversing with one another about the performance. The performance took place as a formal affair with the audience seated in a lecture theatre: this was not a context conducive to conversation as verbal conversations would have distracted from my performance. The video-cued commentary seemed to fulfil this missing facet of the audience's experience. This brought me to ask whether I could facilitate conversations to take place during the performance without causing a distraction? Real-time conversations would give me immediate feedback on the audience's engagement? Perhaps such a paradigm would be a way through which I could steer them to discuss the social issue central to a performance? Seeking answers to these questions shaped the next phase of the research.

3.8   Summary of Phase A

As stated in the first chapter, this dissertation aimed to establish how I can steer audience engagement. To establish how, I first had to assess my existing style of AV performance.

Gathering audience feedback through questionnaires had proven of little value, so during phase A, I developed the video-cued commentary to analyse the audience's perspective of a performance. The first challenge was to develop a keyword framework which I could use to analyse the language of the commentaries. I then had to devise an approach that facilitated me in running these video-cued commentaries. I conducted a detailed analysis of one such commentary, with each comment coded for its source of focus and the mode of engagement it exhibited.

Personally, the video-cued commentary yielded useful insights on my practice. For one, I confirmed some of my assumptions on the semiotics of live audio-visuals, particularly the important role that sound plays in shaping the mood of a performance. I was also able to deduce the dominant mode of engagement for each part of the performance: this led me to the realisation that stage setup was distracting the audience from considering the meaning of the audio-visuals. Notwithstanding, the key finding was that the audience's conversations could be a means through which I could steer them to talk about the social issue central to a performance. This realisation turned out to be a watershed; it went on to influence the remainder of the research.

To conclude, I see no reason why video-cued commentary could not be adapted to dance, theatre and other pursuits in the Arts and Social Sciences. While considerable time is needed to arrive at a working keyword framework and to then analyse each comment, it is time well spent as insights emerge. While my approach to the creation of a keyword framework could prove of use to others, my implementation of the video-cued commentaries could prove impractical, so I would encourage others to strive for a more efficient implementation.

Chapter 4

Phase B: Second-Screen Audience Conversations

4.1   Introduction to Phase B

During phase A, my analysis of a video-cued commentary confirmed assumptions I had on the semiotics of live audio-visuals and audience engagement. However, the most interesting insight was that participants enjoyed conversing about their experience of my performance. This made me realise the potential of real-time audience conversations; as well as offering immediate feedback on the audience, it could be a means through which I could steer audience engagement. With phase B, I decided to investigate whether I could facilitate real-time audience conversations related to the social issue central to the performance.

The performance I analysed during phase A was a form of 'live cinematic documentary', performed to a seated and silent audience. Would the same style of performance facilitate real-time audience conversations? Would those conversing lose focus on the audio-visuals? This chapter will discuss how I addressed such questions through the development of a second-screen audience-commentary system.

4.2   Conversation Reduces Interpretive Distance

How would real-time audience-conversation impact on an AV performance? It is worth now revisiting reader-response theories that suggest we learn through our interactions with the world around us[1]. Through conversation, we learn about other people. Conversation is based upon the communicative codes of language and cultural context: during a conversation, we adapt these codes to better perceive the meaning of one another. A quote from Wolfgang Iser, cited by Leitch in 'The Norton Anthology of Theory & Criticism' may help illuminate how conversation can aid us in this way:

> We continuously form views of their views, and then act as if our
> views of their views were reality (. . .). Dynamic interaction comes
> about only because we are unable to experience how we experience

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[1]For more see Section 2.2.2

one another, which in turn proves to be a propellant to interaction.
(Iser, 2001, p.1675)

By adapting our codes while conversing, not only can we come to a better understanding of another, we transmit our own meaning more effectively. In this way, conversation can reduce the interpretive distance between individuals.

Performance itself can be seen as conversational: a performer communicates to an audience with the intention of imparting some form of meaning, with each audience member deducing different versions of the performer's message. Were the performer and the audience to enter into some form of conversation, they could adapt their communicative codes, reducing the interpretive distance between them. I will now trace out what I expected would happen were I to facilitate conversations during my performances.

- At the start of the event, audience members would start to formulate an impression of the meaning of the performance, informed their individual faculties, experience and current state-of-mind

- Over the course of the event, they would become familiar with the communicative codes being used by the performer(s), with their disparate understandings converging somewhat

- If the audience were to enter into conversation, they could share their individual views, coming to a shared 'collective understanding' of the meaning of the performance

Would audience conversations prove a distraction during a performance? Despite my performance being cinematic in nature, it is not quite apt to compare the experience of one of my performances to the experience of going to watch a film in the cinema. With film, narratives are linear in fashion with the action moving from scene to scene as each portrays a new turn in the plot. My narratives develop differently: they are loop-based with content reappearing repeatedly. Loop-based performance is common in popular music; those attending pop-concerts find it easy to socialise while still remaining aware of the performance. A further example is disco, in which repetitive rhythms continuously return. In these cases,

the content is not always unique so there is what I refer to as *redundancy*[2] in the musical stream. I assumed that a similar wavering of focus would occur amongst my audience, yet perhaps redundancy in the audio-visuals offered moments when they could converse without losing my narrative; they could return their attention to the audio-visuals when they note a significant change.

4.3 The Origins of Second-Screening

Many of us now find ourselves engaging with more than one screen at a time: an example being when one 'texts' a friend about the live sports-broadcast you are both watching on TV. Second-screening is the term used to describe activities in which a second-screen embellishes the experience of the primary-screen[3].

The premise of second-screening can be traced to Japan, where it emerged as a way of watching online videos while feeling part of a social network; while watching online content, viewers posted comments for everyone else to read (Doland, 2015). Visually, these comments flew across the video like a 'bullet' (hence use of the term 'bullet-screen'). The bullet-screen has since become even more popular in China, where it is referred to as 'danmu'. The content on these screens quickly becomes hidden behind a torrent of comments, something I would seek to avoid on my own performance screen. Furthermore, with regard to the use of language, then danmu platform 'Bilibili'[4] reveals a tendency for viewer's to post trivial comments, denigrating the product featured; this is not the form of commentary I would hope to attract to my performance screen.

Phones are generally frowned upon in the movie-theatre, but some Chinese cinemas are now facilitating danmu as part of the cinematic experience, although the comments posted affect no change on narrative of the film itself and so this variation of danmu is merely adding a stream of 'back-chatter' to the experience watching of the film.

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[2]When content is looped, after a time the viewer becomes familiar with it to an extent that they will be able to partake in other activities with relative ease: second-screening could be one such simultaneous activity

[3]The screen upon which the main stream of visual content can be seen

[4]Bilibili [online], available: http://bilibili.com [accessed: 3 January 2016]
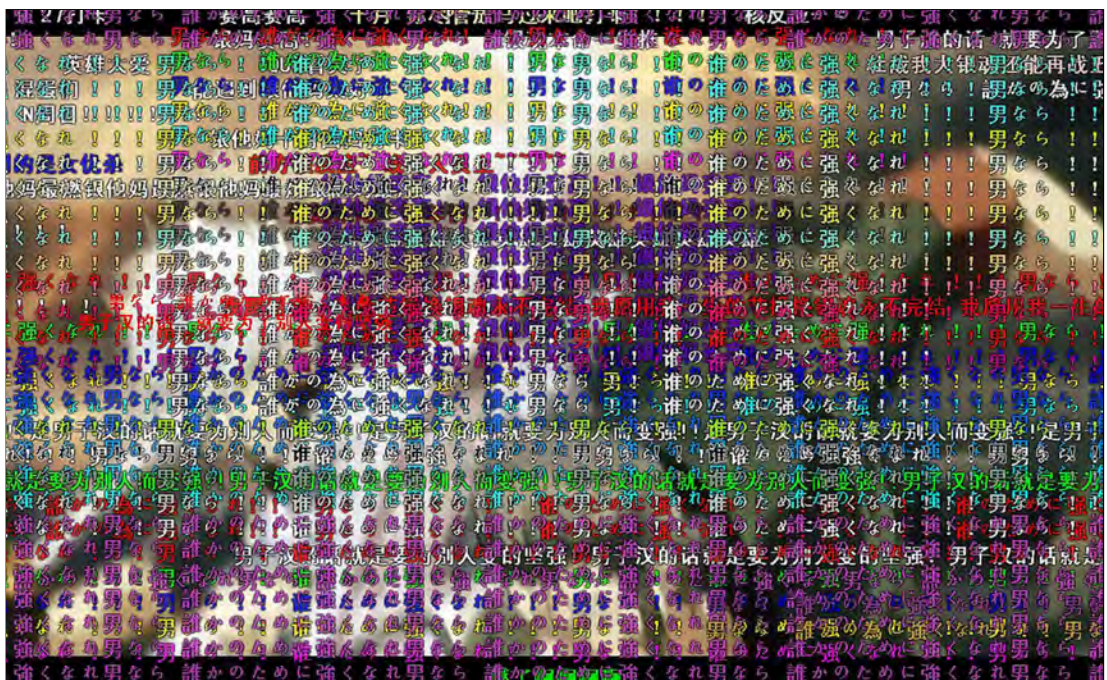
Figure 4.1: Evi. *Example of a Bullet-screen.* **Evi 2013 (creative-commons)** - This figure shows a Chinese viral advert with viewer-comments on it, commonly referred to as a *danmu* or *bullet-screen*.

To western eyes, the premise of second-screening is more common in TV broadcasts than in cinemas. In the past, this was facilitated via SMS but it is now mostly via Twitter. Some TV sets and blu-ray players now come pre-programmed with software that enables the viewer to composite their own Twitter timeline on the TV. Second-screening while watching TV is similar to the premise of 'danmu' in that it can give the viewer a greater sense of social connection, yet it differs when the broadcaster endeavours to react to the submitted tweets: in this case the viewers can exercise some control over the live broadcast (unlike the back-chatter of cinema-based danmu).

Figure 4.2: Jaap Stronks. *An Example of Tweets on TV.* **Jaap Stronks, 2009 (creative-commons)** - Example of a tweets being overlaid on a live TV broadcast.

Second-screening can act as more than a platform for social commentary: enriched content related to the primary screen can be second-screened, although most applications are streaming content to the second-screen that is not aware of (synchronised to) what the viewer is actually watching on their primary-screen. An example of such an app is that which was released by the BBC to accompany

its broadcasts of the 2012 London Olympics; the app was developed with the aim of embellishing the viewing experience with real-time information absent from the live TV broadcast, yet the design merely assumed the user would always be tuned in to the BBC's live broadcast.

There are other instances of content providers creating apps that relate to a live broadcast: in an effort to ensure viewers 'tune-in' to the live stream, HBO harnessed the 'GetGlue' check-in app to accompany its' broadcasts of the series 'True Blood'. This app facilitated viewer's in 'checking-in', marking their dedication to the series with their 'attendance'. Enriched experiences can also be seen with the likes of the 'Miso' app, which allows users to customise its' display to stream commentaries from experts as embellishments to live broadcasts (Hanas, 2012).

As broadcasters continue to develop second-screen scenarios, there is the challenge of developing story-lines that emerge across multiple screens; this is most effective when 'narrative queuing' (from screen to screen) is considered at the script-writing stage. The cinematic release of a film by the name of 'APP' was an example of such an approach; it was scripted in such a way as to move the narrative in an arc from primary to secondary screen and back (Boermans, 2013). The viewers had to first download an app before the movie began; an app containing video clips related to the film proper. The viewer then ran this app during the screening of the movie, with inaudible timecode in the movie's soundtrack keeping the phones in sync with the primary-screen. This meant that whenever a character in the movie used their phone, related audio-visual content appeared on the phones of those in the cinema. At the scripting stage, the director (B. Boermans) and his team decided when the audience should switch focus and wrote the script accordingly; the resultant film shows that through the judicious creation of content, it is possible to fuse the primary and secondary-screen experience.

Within performance, *transmedia*[5] is a term used to describe theatrical productions that harness multimedia to deliver cutting-edge audience experiences. While mostly used to describe productions that incorporate video-projections as backdrops, some productions have made use of the audience's phone. In 2010, the Royal Shakespeare Company presented 'Romeo & Juliet' via Twitter: the actors

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[5]A media that is a hybrid or fusion of others

delivered their version of the script as a series of tweets over a 5 week period. Thus, the audience were free to follow the event where and wherever they wished, while the actors adapted their tweets both in response to each other and their followers (2010).

'Self' is a site-specific theatrical performance that harnessed the audience's phones (Beets, 2014). Like Boerman's film, the audience first downloaded an app containing video files that would playback in sync with the on-stage acting. It was a play about a woman's relationships on social-media, featuring a single actress performing with a phone; whenever she reverted to her phone, both hers and the audience's phones played the same content (such as Skype conversations and Facebook interactions). In this way, the audience watched the story unfold across both the stage and their second-screens. Through the judicious queuing of the audience's focus, second-screening led to a new form of narrative.

When used to contribute comments and ideas via social networks, the second-screen can make virtual connections between people watching a live broadcast in isolation. What I find interesting is the democratising aspect that second-screening brings to such discourse: where once a person had to be present in the TV studio to ask a panelist a question, now this can be done remotely. Censorship occurs, with TV producers filtering all comments before they can be chosen for screening (for legal and contextual reasons), yet were I to bring second-screening to of my live performances, I could choose to allow comments to be posted without any intervening censorship.

4.4 Second-Screening in AV Performance

There are examples of media artists and academics experimenting with audience's phones. Simon Katan, a UK based media artist, created a multi-player smart phone-based game during his residency at Tyneside Cinema in 2013[6]. During this performance, each member of the audience generated and then controlled a simple shape via their smartphone. These shapes could be moved around

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[6]Simon Katan PixelPalace Residency [online], available: http://www.thepixelpalace.org/residencies/artists-in-residence-2013/simon-katan [accessed: 3 January 2016]

the primary-screen, with each shape interacting with those controlled by other audience members.

The US media artist and VJ Tyler Freeman utilised the audience's smartphones as control-interfaces with his performance series 'Layer Synthesis Device' (2013). During these performances, Freeman offered audience members the chance to generate live visuals through their phones, visuals that were then rendered to screens located around the performance space. Like Katan's performance, Freeman's performances had an element of collaboration at their heart; each member of the audience sought to collaborate, contribute or steal control from one another.

A well known precursor to the idea of using the audience's phones is 'Dialtones (A Telesymphony)', a performance series brought to audiences by Golan Levin, Gregory Shakar and Scott Gibbons in 2001[7]. During these performances, the artists made use of the audience's phones as speakers located at specific points in the auditorium space, in effect creating a high resolution multipoint speaker array.

Sebastien Piquemal and Tim Shaw furthered the above premise with their performance series entitled 'Fields' (2014). Similar to 'Dialtones (A Telesymphony)', the artists harnessed the audience's smartphones as local speakers, creating a large multipoint speaker array, but where 'Dialtones' required each phone to be in a certain location, with 'Fields' the location of each phone was irrelevant and so the resulting soundscape was somewhat more stochastic.

I first considered harnessing the audience's phones as second-screen devices after coming across 'Twitter.DJ' (now known as 'RADR'[8]), a system used by DJ Richie Hawtin to tweet the name of his currently-playing song. Twitter users could view these tweets on their seconds-screens (mostly smartphones) while for some performances, Hawtin would also project his Twitter-timeline to large screens within the venue.

In section 2.5.3 Audio-Visual Performance, I introduced the *Supereverything* series of performances by the Light Surgeons. Figure 4.3 shows one such perfor-

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[7]Dialtones (A Telesymphony) [online], available: http://www.flong.com/projects/telesymphony/ [accessed: 3 January 2016]

[8]RADR [online], available: http://radr.dj/beta/about [accessed: 3 January 2016]

mance, during which composited a Twitter feed onto their projections. What I took from this performance was the 'look' that was achieved, reminiscent of films such as 'The Matrix' & 'Minority Report' as well as the bullet-screen described earlier.
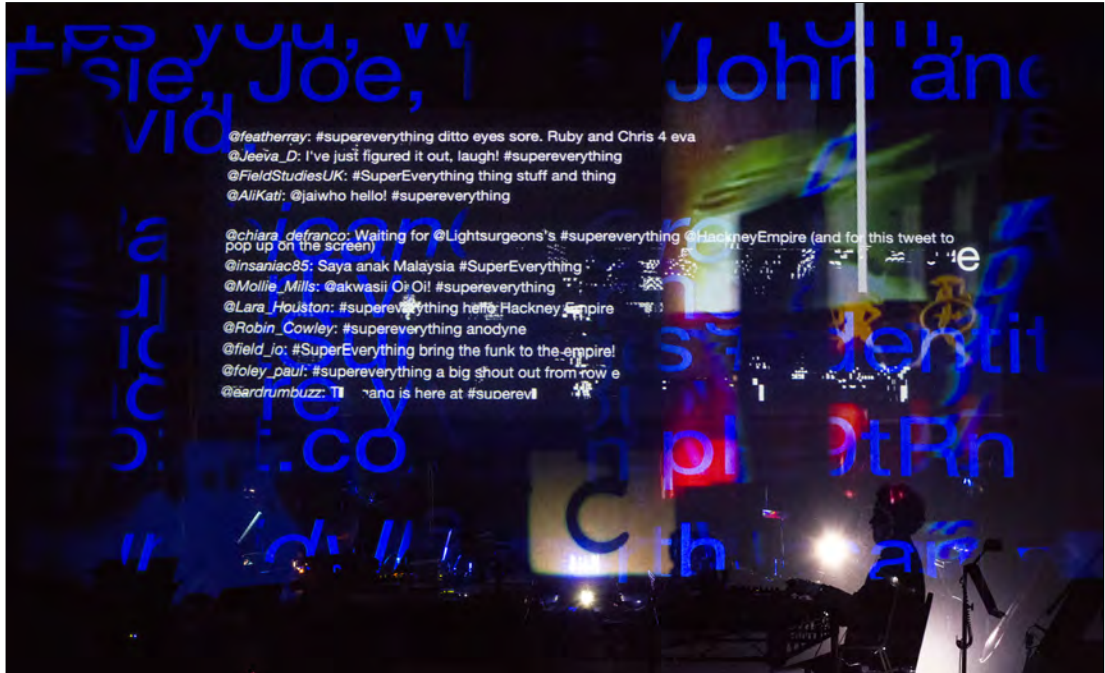
Figure 4.3: The Light Surgeons. *Supereverything.* **Performance Still, Hackney Empire, London, 2013 (photograph: unknown)** - An example of how The Light Surgeons incorporate Twitter into AV performance.

For my purposes, I wanted to harness the audience's phones so they could silently converse about their experience of my performance. I wanted the comments to appear on my primary-screen as a composite on top of my visuals. When considering the implications of this, a number of questions arose for me:

- Would the comments be legible?

- Would the comments prove a distraction detrimental to the overall experience?

- Would two types of audience emerge: one second-screening, the other watching my visuals?

- Would the comments relate to the social issue I was presenting?

This last question was the most pressing; if the comments were off-topic, I would struggle to justify to myself their presence within my performances.

4.5 Designing a Second-Screen System

As second-screening is a relatively recent activity, there are few off-the-shelf solutions that facilitate its' deployment: in both B. Boerman and M. Beet's projects, customised solutions had to be developed to realise their needs. In my case, I had a number of my own requirements:

- There should be as little downloading and setup required of the audience

- The communication platform should already be familiar to the user

- There should be a limit to the length of comments they fit across my primary-screen

I decided to avoid developing an app as this would then have to be downloaded before a performance could begin. Instead, were I to harness a messaging platform based upon web-text (such as Twitter), I could assume most phones would be ready for use as second-screening devices[9]. While such services would not require the downloading of a custom app, I would need a custom app on my own computer to communicate with the the likes of Twitter. Platforms such as Twitter offer developers an 'Application Programming Interface' (API) through which one can program a custom app to receive data in various forms; forms that I realised I could then include as a composite onto my visuals.

As I wanted to place a limit on the length of the audience's comments, I chose Twitter, because its users are familiar with the limitation of writing with no more than 140 characters. Twitter works upon the premise of a keyword known as a 'hashtag', which when included in a tweet lets it be found by anyone else on Twitter. Were I to ask the audience to include a unique 'hashtag' in their tweets, I could accumulate only the tweets posted by my audience.

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[9]It was expected that most would use their smartphones as their second-screen

In practice, the audience would open the Twitter application on their phones before a performance began, at which point I would notify them of the relevant hashtag to be included in their tweets. My software application would then begin scanning Twitter, with any matching tweets appearing on the primary-screen[10], all the while saving each tweet to a text file for later analysis.

This application had to request Twitter information via the 'Twitter API'[11]. With prior experience programming in 'Java'[12], I decided to develop a solution such that 'Processing'[13] would make requests of the Twitter API, with the 'Twitter4J'[14] library facilitating me in achieving this. During phase A of the research, I had been sequencing my visuals in Modul8. 'Syphon'[15] is a software tool that can 'pipe' frames of video between various applications and so with it, I was able to send my visuals from Modul8 to Processing; which then searched Twitter, gathered tweets and then rendered the final composite of visuals. Figure 4.4 shows how Modul8 and Processing interacted, while the overall system designed can be seen in figure 4.4 in the Appendix.

4.6   The Tyneside Performance

The first performance to include second-screen audience conversations in real-time was:

- Performance at the *Tyneside Cinema*
  Oct 2013, Newcastle, UK
  Topic: my perspectives on over-fishing with audience-comments
  https://vimeo.com/csisul/betav07_tyneside

The Tyneside Performance was part of a series that included the University of Limerick performance; the intent across both was to present perspectives on

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[10]These tweets would also be retweeted to my Twitter timeline; this meant people could follow the conversation on Twitter as well as my primary-screen

[11]Twitter API [online], available: http://dev.twitter.com [accessed: 3 January 2016]

[12]Java [online], available: http://java.com [accessed: 3 January 2016]

[13]Processing [online], available: http://processing.org [accessed: 3 January 2016]

[14]Twitter4J [online], available: http://twitter4j.org [accessed: 3 January 2016]

[15]Syphon [online], available: http://syphon.v002.info [ac- cessed: 3 January 2016]
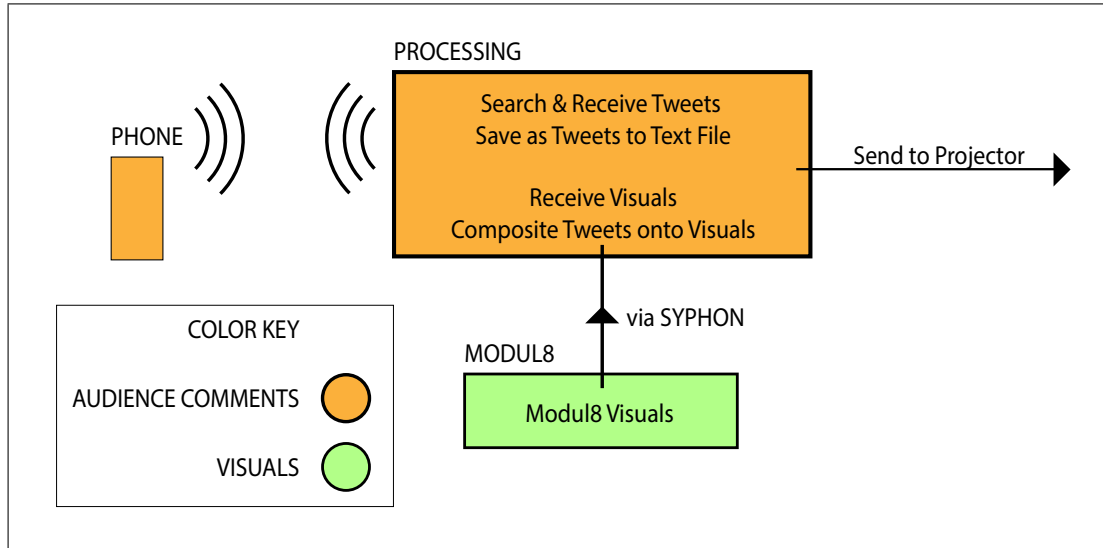
Figure 4.4: L. McC. *Projecting Audience-Tweets.* 2013 (creator: L. McC) - This figure outlines how my system collected tweets from the audience and then composited then with my visuals for Tyneside performance.

over-fishing. The Tyneside Performance took place as part of the 'Real-Time Visuals' (RTV)[16] series of workshops, performances and events. The audience seemed somewhat jaded after a full day's conference proceedings, with many of those present consuming alcoholic beverages. It is fair to say that the atmosphere was jovial - I believe this influenced the nature of the audience's comments[17]. The audience were asked to arrive with Twitter pre-installed on their phones and to include the required hashtag in any comments they wanted to see appear on the primary-screen[18]. Figure 4.5 shows how the tweets were framed alongside my visuals.

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[16]RTV [online], available: http://realtimevisuals.org [accessed: 3 January 2016]

[17]This is something I will discuss further in Section 4.7

[18]The required hashtag was displayed across the top of the primary-screen throughout the performance

Figure 4.5: L. McC. *Tyneside Performance.* **Performance still, Tyneside Cinema, 2013 (photograph: unknown)** - This figure shows the audience-perspective during the Tyneside performance.

4.7   Analysing the Tyneside Performance

During phase A, I used Interact to analyse the comments that had been recorded during a video-cued commentary. Quite like an Edit Decision List (EDL) common to video-editors, Interact orders comments according to the time they were posted. I wanted to be able to analyse the tweets posted during the Tyneside performance in a similar way, so I decided to timestamp each tweet as it was saved to a text file by my application; this meant I was later able to import, format and code the text file in Excel. The performance itself was also recorded: this meant I could then compare the on-stage and on-screen events to the tweets.

		% of tweets
Duration of performance	21 mins	
No. of people in the audience (approx)	40	
No. of people posting tweets	10	
No. of tweets posted	58	
No. of tweets that were part of conversations	41	71%
No. of conversations	14	
No. tweets per conversation (average)	3	
No. of tweets seeded by the issue	54	93%
No. of tweets engaged with the issue	30	52%
No. of tweets exhibiting humour	13	22%

Figure 4.6: L. McC. *Tyneside Performance Trends.* **2013 (creator: L. McC)** - This figure lists the general trends from the Tyneside performance.

Figure 4.6 summarises trends from the Tyneside performance. I was hoping that tweets would reveal individuals thinking about the meaning and significance of the Tyneside performance, so my analysis aimed to ascertain whether this had occurred. Figure 14 in the Appendix lists the tweets posted during part 1 of the performance. From this list, one can read tweets such as "I love sitting in the roxy" and "This is soo[sic] chilled, we should do more events like this"; tweets that seem to reveal audience members reflecting on the event and context. One can also read tweets of a more light-hearted nature, such as "What's everyone having for tea?" and "What's tuna got to do with it?...".

Figure 15 in the Appendix lists the tweets posted during part 2 of the performance. During part 2, the music changed with the emergence of rhythms and

beats. Some tweets, such as "Loving the filter sweeps and portamento" seem to pass judgement on the music. Additionally, 3 audience members can be seen contributing to quite a long conversation (8 tweets in duration): this conversation seemed to be triggered by the the arrival of the rhythmic music; it started with the first person wondering where to go dancing, but then veered away from the issue of over-fishing to talk about where they will meet up that evening[19].

Figure 16 in the Appendix lists the tweets posted during part 3 of the performance. During part 3, the audio-visuals changed again: the musical rhythms were replaced by soundscapes, while the visuals featured textual graphics. The tweets posted differ to those posted during parts 1 and 2, with tweets such as "I believe our tuna are the future" revealing some reflection on the visuals. There were also tweets that seem to show individuals interrogating and reflecting on the content, such as "I don't eat fish and am therefore not responsible for these atrocities".

I wanted to gather impressions on the audience's experience of second-screening during the performance, so I also had them fill out questionnaires. The questionnaires completed by those who were 'heavy' tweeters (4 or more tweets) were of particular interest: one such tweeter wrote that he had been tweeting to connect with others, but felt the lighthearted nature of such conversations had been a reaction to the 'heavy' theme (the depletion of fish stocks). Another tweeter (who posted 9 times) wrote that they tweeted in reaction to the tweets of others. Another (who tweeted 4 times) wrote that they tweeted both in response to the visuals and to the tweets of others. Interestingly, this respondent attributed worthiness to the types of audience-comments posted, outlining that 'social' tweeting was evidence of audience-distraction while tweets posted in direct response to the content were perhaps more worthy, quote: "It highlighted how easily people are distracted or removed from their context".

One heavy tweeter (who posted 8 times) noted that moments of redundancy[20] in the performance allowed him/her to write tweets while still remaining aware of the performance. This tweeter liked the sense of warmth and community

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[19]These 3 tweeters were able to identify each other through their tweets, perhaps by knowing each other's Twitter 'lingo'

[20]See Section 4.2 for more on redundancy

that was created through the conversations and like others, felt that the humour countered the heavy nature of the audio-visual content, quote: "The AV contains less info than a documentary so this redundancy enabled the posting to take place simultaneously".

During phase B, I had set out to facilitate real-time audience conversations during a performance. Did the audience's tweets give me real-time feedback? If one considers the transcripts of the tweets (see figures 14, 15 and 16 in the Appendix), there are clear examples of the audience giving direct feedback on what they saw, heard or thought: the tweet "Sounds like orbital" from part 1 and "louder!!!" from part 2 gave feedback about the music. Each of these tweets offered me direct and immediate feedback: had I been paying attention, I could have adapted my performance in response[21].

I was curious as to whether my audio-visuals had influenced the tweets? In part 2 of the performance, drum-based rhythms entered to trigger a conversation about dancing and nightclubs. When the rhythms receded (in part 3), reflective tweets emerged such as "I don't eat fish and am therefore not responsible for these atrocities". The plethora of fish-related imagery resulted in numerous comments around the subject of eating fish so it can be said that the visuals often seeded the subject of the tweets. Sonically, during part 1 the sounds attracted the attention of many comments while during part 2, the rhythms encouraged thoughts of dancing. It seems clear that the audio-visuals influenced the tweets.

What was the audience's overall impression of trying to second-screen? When asked in the questionnaire of the value of doing so during my performance, it seems those who did not tweet felt it was a distraction whereas those who did tweet found it enriched their experience, giving answers such as:

- "It adds additional interest"

- "It gave me more insight into the performance"

- "It adds humour and allows the exchange of thoughts"

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[21]I did not pay attention because I was too busy controlling my performance system

The premise did prove capable of fostering conversations amongst the audience: with almost 66% of the tweets posted forming conversations, it seems that engaging in virtual conversations was of little trouble to the audience. Interestingly, all 14 of the conversations that emerged were light-hearted in nature: clearly these conversations were not serious discussions about over-fishing. With 38% of all tweets light-hearted in nature, humour certainly coloured many of the comments posted. I had hoped the audience would interrogate the issue with a serious mindset, so this disappointed me. Was the dominance of humour due to the topic, the context, my style of performance or something else[22]? Humorous tweets could be taken as a sign of the audience taking the topic of the performance lightly, or may have been an antidote to the serious and obvious problem we face in dealing with over-fishing? Notwithstanding, many of these humorous comments were still seeded and related to the issue of over-fishing; this can be seen through comments such as:

- "Spooky tuna"

- "Dom? what you having for tea? ... tuna?"

- "Tina sarnie"

- "What's tuna got to do with it"

If humour was an antidote to the serious nature of the topic of over-fishing, perhaps that shows those tweeting had already digested the significance of the issue I was presenting. This was of little consolation to me as had there been no second-screening, I expect they would have noted the social issue in just the same way; second-screening seemed to have added little of value and certainly had not encouraged a deeper engagement and discussion about over-fishing.

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[22]Performing to an audience full of Geordies was going to be the ultimate test, being as they are renowned for their sharp sense of wit

4.8   Summary of Phase B

Phase B of the research emerged when I realised (during Phase A) that audiences may enjoy being able to converse about their experience during a performance. This seemed an opportunity to;

- Create a platform through which I could steer their engagement

- Find out whether conversations would give me real-time feedback

I was encouraged to investigate the potential that conversation offered after revisiting reader-response theories; these theories position conversation as a site for learning. Returning to the semiotic principles discussed in Section 2.2.4, we note that conversation can reduce the interpretive distance between people. Perhaps conversation could reduce the interpretive distance between myself and the audience while also offering them a platform through which to tease out the meaning of my performances amongst themselves?

The first challenge I faced was in implementing conversations in such a way that they would not disturb the flow of the performance. Both the 'bullet-screens' in Chinese cinemas and Richie Hawtin's Twitter.DJ performances led me to consider the potential of the audience's phones as devices for communication: second-screening could facilitate silent, text-based conversations which would not disturb the flow of a performance.

Significant time was spent implementing a software solution to meet my needs: an application was developed (in Processing) that searched Twitter for my performance's hashtag and then composited the found tweets alongside my visuals: saving each comment to a text file as it arrived proved invaluable for later.

The first performance I designed to incorporate second-screening took place at Tyneside Cinema, Newcastle. Despite the audience being in a humorous mood, they were still willing and able to second-screen, which can be seen in the fact that conversations emerged throughout the performance. While most were in some way influenced by the topic at hand (that of over-fishing), most were unrelated to the issue of over-fishing.

While I did not try to observe the comments during the performance, had I followed them, they would have given me with real-time feedback on audience

engagement. With such feedback, could I have steered the audience to engage in topical discussion? This question led to phase C of the research, during which I endeavoured to relate the audience's comments to my audio-visuals in real-time.

In terms of outcomes, I prototyped a working second-screening system that harnessed the medium of Twitter through a Java based application. In harnessing Syphon to stream graphics from Modul8 to Processing, I established an efficient way to composite my visuals with the audience's comments. These insights could prove of value to others developing second-screening applications or social-media interventions: I would encourage such readers to further investigate the Appendix to this dissertation and the code on the accompanying DVD.

Chapter 5

Phase C: Integrating the Second-Screen

5.1 Introduction to Phase C

During phase B, I brought audience conversations, via their second-screens, to the context of an AV performance. I did so for a number of reasons: I wanted real-time audience-feedback, but also hoped that their conversations would shape a deeper engagement with the social issue I was presenting. As a result, I was less than pleased to find most conversations veering off topic. With phase C, I decided to explore whether a different performance style would encourage topical discussion to emerge. Phase C emerged in 2 stages;

- The first stage established whether I could steer audience focus between tweeting and watching

- The second stage established whether I could steer their engagement via audio-visuals responses

5.2 The Lisbon Performance

The first step I took toward a new style was to establish a way in which I could steer the audience's focus between their second-screen and my primary-screen. The performance that was designed with this aim was:

- Performance at the *ICLI Conference*
  Nov 2014, Lisbon, Portugal
  https://vimeo.com/csisul/betav09_lisbon

I expected the ability to steer engagement would be useful when introducing new textual information, as at such moments I prefer the audience to focus on my primary-screen. Conversely, there would be other times when I would like them to comment on their second-screen. How could I steer them in this way?

I decided to try and harness redundant moments[1] in the audio-visuals; I would encourage the audience toward their second-screen by repeatedly looping the audio-visuals. Conversely, I would encourage the audience toward my primary-screen by introducing new audio-visuals. To ascertain whether this had worked,

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[1]See Section 4.2 for more on redundancy

I would then analyse the performance, comparing the moments of redundancy against the level of activity on Twitter.

In proposing to test whether I could steer the audience's focus, I needed a system with which I could easily vary the dynamics of the audio-visuals. The system developed for the previous performance had proven so complicated that at no time had I the chance to pay attention to the audience tweets. If I were to be able to read the tweets while performing, the system would have to be simplified significantly[2] and to this end I:

- Re-designed the performance system with an iPad in place of an Arduinome[3]

- Simplified the organisation of audio-visuals in Ableton for easy launching

Instead of presenting a linear narrative (in 3 parts), I planned to present a non-linear narrative (in 5 parts); whenever I felt the audience's attention needed to be switched from their second-screens to the my primary-screen, I would jump then be able to jump to a new part. Within each part, I setup the audio-visual content so that there were variations of intensity (audio-amplitude, speed-of-motion, colour-saturation) and tonality (major, minor, atonal) to choose from: this was to give me the option of varying the intensity spontaneously. The system designed and implemented for the Lisbon Performance is outlined in the in figure 18 in the Appendix. I gathered tweets in the same way as before[4]. As can bee seen in figure 5.1, the main difference was in the visual arrangement of my primary-screen; for the Lisbon performance the tweets were composited below (rather than alongside) the visuals[5].

5.3 Analysing the Lisbon Performance

As with the Tyneside performance, all audience tweets were timestamped and saved. This information was then analysed for emergent trends, with figure 5.2 summarising these:

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[2]See figure 12 in the Appendix for a diagram of the Tyneside performance system.

[3]See figure 19 in the Appendix for an outline this interface

[4]See figure 4.4

[5]This was to make available the the full width of the screen for long tweets

Figure 5.1: L. McC. *Lisbon Performance.* **Performance still, Lisbon 2014 (videographer: unknown)** - This figure shows the audience-perspective during the Lisbon Performance.

		% of tweets
Duration of performance	26 mins	
No. of people in the audience (approx)	50	
No. of people posting tweets	12	
No. of tweets posted	56	
No. of tweets that were part of conversations	43	77%
No. of conversations	6	
No. tweets per conversation (average)	7	
No. of tweets seeded by the issue	42	75%
No. of tweets engaged with the issue	5	9%
No. of tweets exhibiting humour	41	73%

Figure 5.2: L. McC. *Lisbon Performance Trends.* **2015 (creator: L. McC)** - This figure shows the general trends from the Lisbon Performance.

For the Lisbon performance, I hoped I would be able to change parts so as to steer the audience's focus whenever I so wished, however the system still demanded too much of my attention, so I rarely find the cognitive space to read and then react to their comments. A further re-design was necessary for the next performance.

I also intended to test my hypothesis that moments of stasis in the audio-visuals would encourage the audience to tweet on their second-screens, while busier moments would bring their focus back to my primary-screen. At the beginning of the performance I noticed that there were no tweets on screen: to encourage tweeting I let the audio-visuals develop as a sparse and minimal composition, doing so in the expectation that the stasis would encourage the audience to tweet. In actuality, it took far longer for this to happen and so confounded my expectation. Conversely, at moments when I noticed many tweets being posted, I composed busy & dynamic audio-visuals in the expectation that the tweeting would drop off. In actuality, a drop in the number of tweets being posted did not always follow.

Anecdotal feedback from audience members described the early, dense, sparse moments as the most absorbing; during these periods they remained focused on the audio-visuals as they had no interest in tweeting. This seems to counter the premise I had put forward - that 'busy' audio-visuals would attract their attention to the primary-screen; this feedback seems to show that it was the quality of the audio-visual composition that attracted their eyes to the primary-screen and away from commenting.

Figure 5.2 reveals that 73% of comments posted during the Lisbon performance were of a humorous nature. When this is tallied with 38% from the Tyneside performance, a trend emerges; humour was an ever present distraction from topical discussion. Furthermore, I myself found it a distraction to read humorous tweets while attempting to present a 'serious' issue to the audience[6]. I attempted to rationalise the presence of humour. Perhaps the audience were left with little to add: if I had been successful in convincing them that over-fishing must stop, then what more of value could they have added? Perhaps the comments were a reaction against the seriousness of the topic with humour? Perhaps

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[6]The occasional laughter from the audience didn't help either

humour simply emerged because I had failed to embrace their comments as a part of the performance? For the next performance, I needed to further address my style of performing, as it seemed pointless to continue forcing second-screen audience-comments to fit with my existing style of 'live cinematic documentary'.

It was also time to review my use of Twitter as the medium upon which audience-commentary took place. Perhaps the nature of the comments was being shaped by the medium of Twitter? The language used did seem somewhat typical of 'Twitter-speak' (off-hand, humorous and sarcastic). Furthermore, Twitter had become increasingly difficult to work with due to the number of restrictions placed on searches.

5.4   The Pigtown Performance

As mentioned at the start of this chapter, I intended to move toward a new style in two stages.

- With the first stage of Phase C (the Lisbon performance), I established how I could steer the audience's focus

- With the second stage of Phase C (the Pigtown performance), I wanted to establish how I could steer audience engagement via my audio-visual reactions

I will now set out what influenced my design of the ensuing Pigtown performance. 1970's from the field of cultural studies re-assessed the meaning of ancient texts that document social rites from bygone eras; in the introductory chapter to his book on the study of folklore, R. M. Dorson suggests that artefacts (such as the script of a performance) should not be read as documents of an event but rather as blueprints from which a conversation had emerged between the performer and audience (Dorson, 1982, pp.1-50). If performance can be seen as a conversation between the performer and audience, then perhaps I should engage more directly with the audience's comments?

I came to the conclusion that to do so, my style of performance would have to change, as I was not encouraging enough topical discussion: if I was making it

obvious that destructive fishing practices are destructive then why would their be discussion? I conceived a new approach to the creation of narrative; rather than move through my own pre-determined episodes, I would create spontaneously by seeding and then directing the audience's discussion.

I considered new topics that warranted discussion. At the time, the Irish people were about to vote in a referendum; an amendment to the Irish constitution relating to same-sex marriage. In public discourse, the 'pro-change' side had tended to silence the 'anti-change' side by tarnishing them as bigots, closing off discussion in what seemed an undemocratic fashion. The public nature of Twitter had not been facilitating an open and frank discussion. Were I to facilitate the audience in posting comments anonymously, audience members could express their opinion without fear of reprisal or recrimination and so while I designed the Pigtown performance to be a platform upon which they could debate in full anonymity:

- Performance at the *Pigtown Scratchings*
  May 2015, Limerick, Ireland
  Topic: a discussion on how to vote in the Irish same-sex marriage referendum
  https://vimeo.com/csisul/betav10_pigtown
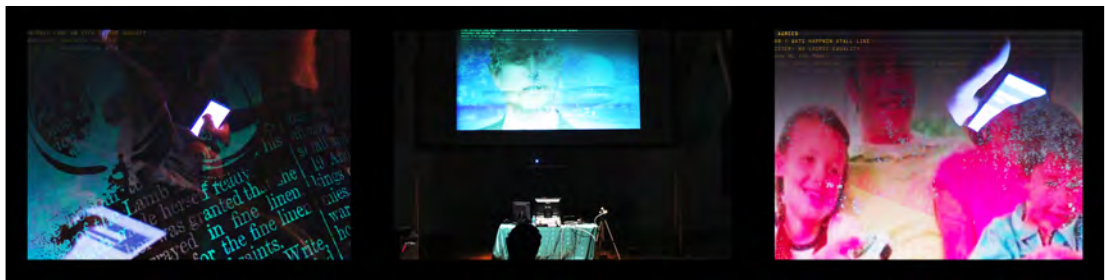
Figure 5.3: L. McC. *Pigtown Performance.* Performance stills & screenshots, 2015 (photograph: Gareth Stack) - This shows a series of images taken during the Pigtown performance.

While the above was my service to the audience, my own goal was to find a way to steer their engagement via my audio-visual reactions. If I wanted to do so, I needed a simple and responsive performance-system. Despite my previous

attempt (Lisbon performance) at simplifying my on-stage setup, I had not found the time to follow the audience's tweets. To this end, I decided I would no longer play the synthesiser: all sounds, songs and rhythmic beats would now reside in Ableton.

Being able to react to the whims of the audience's discussion meant that my existing library of content would have to be expanded to cover more eventualities. Instead or relying on pre-produced videos and motion-graphics, I developed an algorithm in 'Max/MSP'[7] that generated slideshows from folders of pictures. These images were saved in folders according to themes. As the topic of the debate was to be the same-sex marriage referendum, folders were given labels such as 'family', 'child' and 'church'. All images were cropped to a 16:9 aspect ratio and then resized to the output resolution. I would render my video fullscreen with the audience's tweets composited on top as an overlay, no longer including text-based motion-graphics as these would fight for the attention of the comments on-screen: an example of this screen layout can be seen in figure 5.4. Sonically, the visuals were to be accompanied by pre-planned sound-designs that could suggest various moods[8].

I decided to move away from the medium of Twitter as the platform on which audience-commentary took place. There were a number of reasons for this (detailed in the previous section), but it was my wish to facilitate fully anonymous audience-contributions that ultimately forced my hand[9]. As an alternative, I considered using Internet Relay Chat (IRC) for simple 'peer-to-peer' communication, but eventually decided upon a system built upon a 'node.js' server[10]. The system was built to receive and broadcast both 'OSC'[11] and 'MIDI'[12] messages, enabling it communicate with Processing (via OSC), Max/MSP (via both OSC & MIDI) and Ableton (via MIDI). This meant that so long as all the audience's

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[7]Max/MSP [online], available: http://cycling74.com [accessed: 3 January 2016]

[8]In chapter 6, I found that sound suggests the mood through which the visuals are perceived for meaning

[9]After the Lisbon performance, an audience member had informed me that they had not participated as he didn't want his followers to see the comments he wanted to post

[10]Node.js [online], available: http://nodejs.org/en [accessed: 3 January 2016]

[11]OSC [online], available: http://wikipedia.org [accessed: 3 January 2016]

[12]MIDI [online], available: http://wikipedia.org [accessed: 3 January 2016]
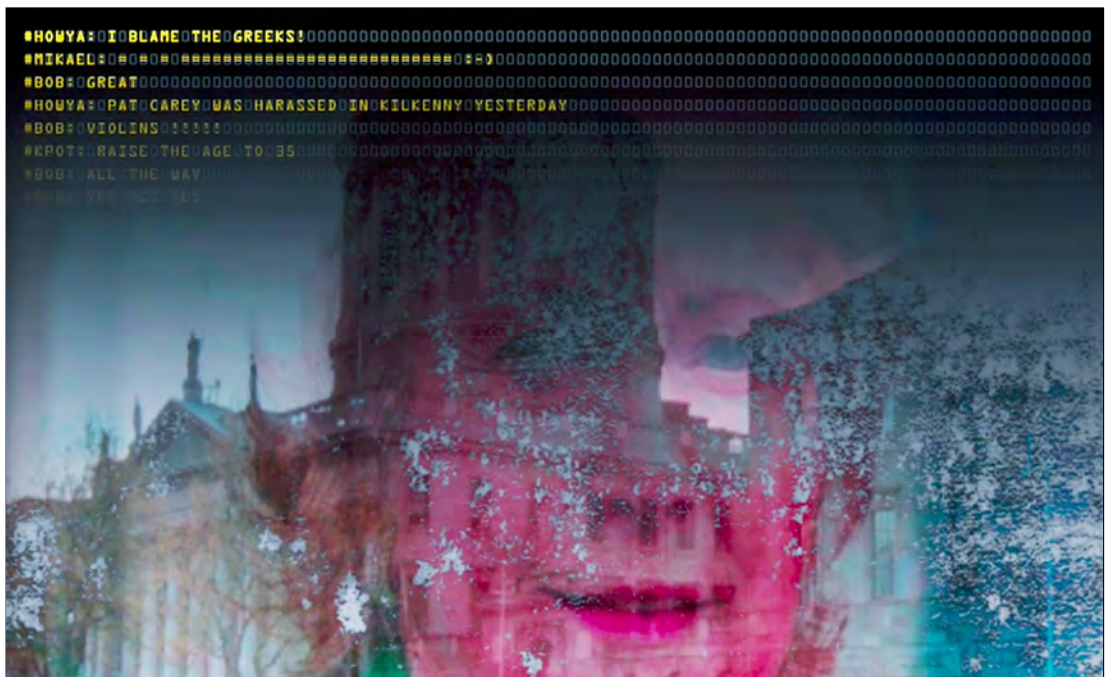
Figure 5.4: L. McC. *Pigtown Performance Primary-Screen.* **Screenshot, 2015 (creator: L. McC)** - This figure shows how the screen was laid out for the Pigtown performance; the audience-comments appeared as an overlay on the visuals.

phones were on the same wifi network as my own computer (the one hosting the node.js server), I could serve a webpage to all. This webpage acted like a web-text messaging service and was itself quite simple[13], containing:

- A panel for entering a username

- A panel for receiving messages

- A panel for typing/sending messages

How could my audio-visuals steer audience engagement? My plan was to perform in a 'phased' way, moving between moments of conversation (a quiet, black screen) and moments of audio-visual response (powerful audio-visual compositions). I would first seed the topic up for discussion by displaying controversial statements over a black background; knowing that I could infer a mood through sound, I would support these visual statements with sound-designs that maximised their 'raciness'[14]. Once a conversation was in flow, I would fade in an audio-visual response of strong compositional quality so as to bring attention back to the primary-screen[15]. Once I felt this composition had influenced the audience, I would move them to discuss another topic by fading it out and replacing it with another 'racy' statement. The following moves through my performance approach step-by-step:

- The screen would start out black with background the sound fading up

- I would post a comment (as a statement), hoping to steer the audience to discuss in response

- As discussion emerged, I would fade in slideshows of images related to the discussion (to the accompaniment of sounds that would infer a mood)

- After a while (when discussion had died down), I would fade back to black, with the above process beginning afresh

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[13]A screenshot of the webpage can be see in figure 23 in the Appendix

[14]In chapter 3, analysis of a video-cued commentary revealed how sound tends to infer its emotional bias on the visual

[15]This is a technique that emerged from the Lisbon performance

The system design for the Pigtown performance can be seen in figure 22 in the Appendix. To summarise:

- Comments were saved, compiled and given a background gradient in Processing before sent (via Syphon) to Max/MSP

- A slideshow was generated from a selected folder of images

- A texture was composited over the slideshow

- When occasional flashing graphics appeared, they triggered percussive sounds in Ableton

- The slideshow, texture, graphics and comments would were then rendered as one to the primary-screen

Sonically, I sourced samples from interviews and news reports related to the same-sex referendum, with these then re-sampled to play continuously. Further samples, drones and songs were arranged for one-off triggering, with everything arranged in Ableton's 'Session View' so I could change the sound-design in real-time.

5.5   Analysing the Pigtown Performance

As with previous performances, comments were saved to a text file by Processing; this meant I could later spend time analysing the comments posted and deduce and over-arching trends. I had hoped that discussions about the topic would emerge; with 61% of the comments related to the topic, it shows those commenting engaging in just such a discussion. The following selection of comments demonstrate this topical focus:

- "It's about freedom"

- "Nobody really cares, should be a safe yes vote"

- "Why do people get angry when some1 says no"

		% of tweets
Duration of performance	19 mins	
No. of people in the audience (approx)	30	
No. of people posting comments	12	
No. of comments posted	152	
No. of comments that were part of conversations	76	50%
No. of conversations	23	
No. comments per conversation (average)	3	
No. of comments seeded by the issue	77	51%
No. of comments engaged with the issue	48	32%
No. of comments exhibiting humour	21	14%

Figure 5.5: L. McC. *Pigtown Performance Trends.* 2015 (creator: L. McC) - This figure shows the general trends across the Pigtown performance.

Humorous comments emerged across both the Tyneside (38% of comments) & Lisbon (73% of comments) performances; I saw this as detrimental to topical discussion as it had led the discussions off-topic. At only 17% of comments being humorous, the trend reversed with the Pigtown performance.

I expected that the Pigtown performance would be driven by the audience's comments: if this happened, I would have plenty of material to react to. With 152 comments posted by 12 people, it was the most successful performance in getting people to contribute comments, meaning I had an almost constant background of comments against which I could react.

With the Pigtown performance, my ultimate aim had been to steer the audience's engagement, so I will discuss how I did this with reference to the recording of the performance and the comments posted by the audience (see figures 24, 25, 26 and 27 in the Appendix). As earlier discussed (in section 5.4), I planned to steer engagement by 'phasing' the emergence of my visuals across the performance.

From the recording of the performance, one can see that I began with a blank screen and kept it so until the conversation was well under way - it was not until timecode 00:05:10 that I introduced my first visual response. From that moment, one can see (from the list of comments posted) there was a 'lull' for approximately 30 seconds (from timecode 00:05:30 to 00:05:54) during which no second-screen

activity emerged; it seems the introduction of the visuals attracted the audience's attention away from their second-screens and onto my primary-screen.

Later in the performance I decided to change the topic that was up for discussion from the 'church' to 'civil rights'. From the recording, one can see me fading out the 'church' audio-visuals at approximately timecode 00:11:31. From timecode 00:13:00 onward, one can note the 'civil-rights' visuals emerging, with the second-screen comments following suit from timecode 00:13:42 onwards. Despite another 'lag' in the audience's response, it again shows how they were steered by my audio-visuals.

Interestingly, I also found that I could steer the audience by posting comments myself: I did so at timecode 00:06:08 when I noticed the discussion veering off topic, posting the comment "Come on stick to the subject, marriage, equality, referendum". Soon after this comment appeared, one can see the audience's ensuing comments returning to the topic of the marriage-referendum.

I had planned to post questions and statements directly to the audience's devices yet failed to do so, taken aback as I was by the flurry of comments. Had I broadcast a statement at the start of the performance, the discussion may have started sooner, however I do not think the absence of broadcasts unduly affected the performance as a whole as there was an almost constant stream of comments throughout the event.

For the Pigtown performance, I required a system that would ease my burden as I needed to find the cognitive space to be able to read and react. The simpler system I built did facilitate me in doing so: I was able to follow the comments, plan audio-visual reactions and then mix them in I saw fit, all of which resulted in an audio-visual narrative that reflected the audience's comments.

There were times during the Pigtown performance when I wished I could have addressed unplanned for themes but could not due to the limited library of pre-produced content that I was working from. Looking forward to phase D, I formulated an alternative premise in which I sourced visual content via web searches (that included suitable videos and imagery) so that I could then follow unforeseen tangents as they emerged.

5.6   Summary of Phase C

Phase B established that audiences can and will second-screen, but most comments proved to be off-topic. With phase C, I sought a style that would encourage the audience toward topical debate, expecting this would be a style that relates my audio-visuals to their comments.

With the Lisbon performance, I first sought to establish whether I could steer the audience's focus between primary and secondary-screen. My approach was to harness redundant moments in the audio-visuals so as to encourage the audience to comment. As it turned out, my efforts at steering focus worked in the opposite way: it was moments of redundancy that built into strong compositions and so attracted the audience's attention, encouraging a sort of trance-like state, whereas an ensuing change then 'broke' their trance and so they began to comment again.

The prevalence of humorous comments in the Tyneside performance continued with the Lisbon performance. I found this distracting and so hoped to reverse the trend with the Pigtown performance. As it happened, not only did I reverse the trend, but I found I had a continuous canvas against which to steer their discussion through my audio-visual reactions.

Technically, it was because I had been able to read and then react to these comments that I had been able to embrace them as a meaningful part of the performance. By organising my visual content into folders of images that then became the visual slideshows, I was able to react to some of the unforeseen tangents in the conversations.

In summary, by moving from a style of 'live cinematic documentary' to 'collaborative AV performance', a new premise emerged yet as a new premise, it warranted further exploration as a platform for discussion. Perhaps the second-screen could remove the barrier of presence, with performances & debates occurring virtually. The next chapter will detail the last phase of the research, a period during which I explored one such possibility; a paradigm where performance and live debate meet through the second-screens of the audience.

Chapter 6

Phase D: Second-Screening & Live Debate

6.1   Introduction to Phase D

During phase C, my style changed from one that harnessed audio-visuals to impart my preconceived narrative to one in which both the audience and I collaborated in the creation of an emergent narrative. Despite this change, I was still performing in cinema-type venues, so I asked myself whether there were other contexts in which live audio-visuals could co-exist with a second-screening audience? With phase D, I wanted to gauge whether another form of live event could benefit from having the audience's comments directed by audio-visuals, a line of enquiry that would then give me an insight into the impact that my research could have on broader practice. This chapter will discuss the Mindfield series of performances, the context of which was a panel of experts discussing topical issues to a live audience.

6.2   Second-Screening during Debate

At this stage in the research, I came to ask what it is that marks the site of a performance apart from contexts in which other social interactions occur? In chapter 5 of his book 'Frame Analysis', E. Goffman discusses how 'framing devices' can mark performance apart from everyday life; devices such as the presence of spectators, the impression of a stage or the very ritual of a public event (1986, pp.123-155). This suggests that a performance can take place in almost any situation, so long as the performer is under some sort of observation. In the context of the performances thus far, it seemed to have been the ritual of the event that marked my performances as 'live', irrespective of whether the audience had been seated, silence, attentive or otherwise.

During phase C, considered comments emerged from the audience only when I presented a topic that warranted discussion by them (the same-'sex marriage referendum' as oppose to 'over-fishing'). At the 'Electric Picnic'[1] music and arts festival, the *Mindfield* tent is an area that hosts spoken-word events. During this annual event, a panel of experts discuss topical issues to an audience who watch,

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[1] Electric Picnic [online], available: http://electricpicnic.ie [accessed: 3 January 2016]

listen and interject with their own point of view[2]. Having seen the success of the Pigtown performance, I surmised that the premise of a second-screening audience would suit this scenario.

6.3 The Mindfield Performances

I approached the Mindfield production team with a proposal to bring second-screening to their event. The panel would still discuss a social issue, but the audience would engage through their second-screens rather than speaking via a microphone. One panelist, acting as the chair, would moderate in response to the audience's comments. Meanwhile, I would tailor a visual backdrop to reflect the discussion.

Audience-comments would be unfiltered, offering them a platform to voice opinions no matter how absurd or extreme. Thus, their experience would be different to when contributing opinions to a live TV broadcasts via social-media, as such broadcasts filter incoming comments before they can be included in the proceedings. The production team were excited by how an anonymous commentary system could encourage shy audience members to participate in the discussion. I was excited because by the prospect of taking to the stage with others, as they would lead the debate while I could concentrate on constantly shaping an appropriate visual backdrop, while we were all interested to see whether second-screening would facilitate contributions without interrupting the flow of the debate (as they would be contributed silently and continuously rather than via the microphone-approach typical of a normal Q&A). The three performances realised over the course of one weekend were:

- Performance 1 at the *Mindfield*
  Fri. Sept 4th 2015, Electric Picnic Festival, Ireland
  Topic: a discussion about the impact of the same-sex marriage referendum
  https://vimeo.com/csisul/betav11_mindfield

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[2]As it takes place at a festival, it features argument, humour, laughter and the odd drunken reveller!

- Performance 2 at the *Mindfield*

  Sat. Sept 5th 2015, Electric Picnic Festival, Ireland

  Topic: a discussion about the migrant crisis in the EU

  https://vimeo.com/csisul/betav12_mindfield

- Performance 3 at the *Mindfield*

  Sun. Sept 6th 2015, Electric Picnic Festival, Ireland

  Topic: a discussion about the homeless crisis in Ireland

  https://vimeo.com/csisul/betav13_mindfield

Figure 6.1: L. McC. *Mindfield Performances*. Performance stills & screenshots, 2015 (photograph: G. Torre) - This figure shows a series of images taken during the 2nd Mindfield Performance.

The venue, a large tent, was arranged such that the audience sat on chairs surrounding the stage on 3 sides. The audience accessed the messaging webpage on their smartphones over wifi on a local area network (LAN). Two 42 inch LED flat-screens faced the audience to display both comments and visuals. The stage featured a comfort monitor so the panelists could see the same visual composition as the audience; figure 28 in the Appendix illustrates an abstraction of the venue's arrangement.

In order to be able to follow tangents in the discussion, I planned to stream visuals from web-based image-searches. There were to be 2 streams, one featuring youtube videos via 'Minitube'[3] and the other featuring slideshows via 'TheSlideShow'[4], both of which take search terms to tailor the content they return.

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[3]Minitube [online], available: http://flavio.tordini.org [accessed: 3 January 2016]

[4]TheSlideshow [online], available: http://theslideshow.net [accessed: 3 January 2016]

These streams were mixed together before being composited with text-based graphics and the incoming comments. Figure 29 in the Appendix illustrates the system implemented for the Mindfield performances.

Figure 6.2: L. McC. *Mindfield Performance Primary-Screen.* **Screen-shot, 2015 (creator: L. McC)** - This shows how the audience-comments were composited as an overlay on the visual backdrop for the Mindfield Performances.

I planned for the performances to develop in the following way:

- A performance would begin with a black screen displaying an 'info-line' of text (connection information). At this stage there would be time given for the audience to connect and access the web-page[5]

- When a new comment was posted, it would appear just below the info-line. Each new comment would be rendered to look and sound like 'typed' text. The sound of the text arriving on-screen was particularly important as a sonic 'marker' to alert everyone that new text had appeared. Figure 6.2 illustrates such a layout for the primary-screen

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[5]An image of this webpage can be seen in figure 30 in the Appendix

- As successive comments appeared, they would push older comments down-screen

6.4 Analysing the Mindfield Performances

Figure 6.3, 6.4 and 6.5 give an overview of trends in the comments during the Mindfield performances, while figures 31, 32 and 33 the Appendix list the comments posted.

		% of tweets
Duration of performance	1 hr 2 mins	
No. of people in the audience (approx)	35	
No. of people posting tweets	9	
No. of tweets posted	30	
No. of comments engaged with the issue	22	73%
No. of comments just being humorous	1	3%
No. of direct refs. by panel to audience-comments	2	

Figure 6.3: L. McC. *1st Mindfield Performance Trends.* **2015 (creator: L. McC)** - This shows the general trends from the 1st Mindfield performance.

		% of tweets
Duration of performance	52 mins	
No. of people in the audience (approx)	90	
No. of people posting tweets	14	
No. of tweets posted	54	
No. of comments engaged with the issue	42	78%
No. of comments just being humorous	7	13%
No. of direct refs. by panel to audience-comments	2	

Figure 6.4: L. McC. *2nd Mindfield Performance Trends.* **2015 (creator: L. McC)** - This shows the general trends from the 1st Mindfield performance.

There were a number of technical issues that curtailed me in. The first was a hardware issue: I had requested a high-definition projector and screen for the venue, so it was a surprise to arrive on-site to find LED screens instead. This

		% of tweets
Duration of performance	1 hr 10 mins	
No. of people in the audience (approx)	70	
No. of people posting tweets	8	
No. of tweets posted	40	
No. of comments engaged with the issue	39	98%
No. of comments just being humorous	0	0%
No. of direct refs. by panel to audience-comments	4	

Figure 6.5: L. McC. *3rd Mindfield Performance Trends.* **2015 (creator: L. McC)** - This shows the general trends from the 1st Mindfield performance.

had implications for the legibility of the comments posted. The size of font was increased for 2nd and 3rd performances; while this improved legibility, long comments were then truncated (as they ran beyond the right side of the screen). From the vocal reactions of some audience members, this was found to be frustrating. In future, it would be judicious to wrap long comments across more than two lines (or more) to cater for situations when a large font is necessary.

The was another unfortunate issue that arose due to using LED screens. I had designed a rendering system based upon alpha-channels such that the comments faded the longer they were on screen. With the LED screens, the alpha-channels did not refresh correctly so over time, glyphs of text built up across the lower region of the screen. In future, I would adapt the compositing system to avoid such an artefact.

The doubt I had regarding the reliability of the Internet connection proved well founded. During the 1st performance, I had no Internet connection and so could not obtain any content from web searches and so I resorted to using my local library of slideshows, which restricted my ability to follow and react to the conversation[6].

During the performances, it emerged that certain Android-based phones could not connect to the wifi network and so could not be used to submit comments. The local area network (LAN) was hosted by an old wifi base-station: I can now

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[6]As a fallback, a library of content was prepared for the topics of the 2nd and 3rd Mindfield performances

deduce that the connection issue arose because this was an 'Apple' legacy. In future, I would use a more robust base-station and would test any such system with a variety of phones beforehand.

On site, there arose the question of how best to explain the premise to the audience. At the start of 1st performance, I myself explained how to connect to the messaging-service (via the correct wifi network and then the correct url) however during the event, it was noticed that late arrivals then had no idea what was happening. As a result, before both the 2nd and 3rd performances I had information leaflets distributed to all present and also displayed motion-graphics (intermittently) explaining the premise and connection requirements.
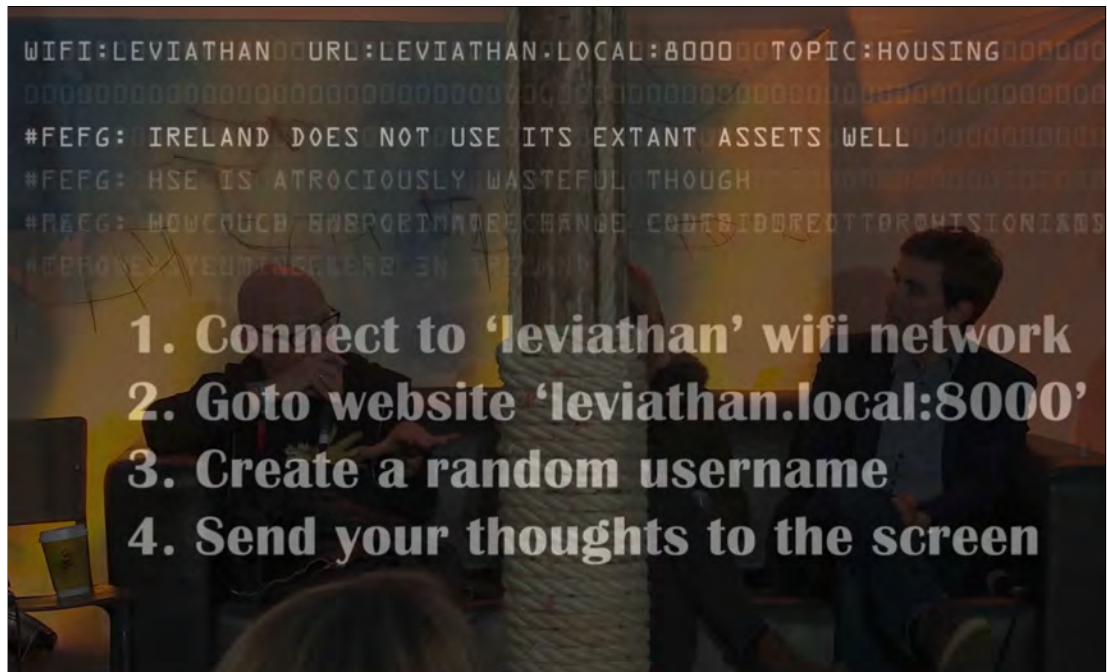
Figure 6.6: **L. McC.** *Mindfield Performance Screen-Announcement.* **Screenshot, 2015 (creator: L. McC)** - This shows one of the screen-announcements used to inform the audience how to connect to the commentary system.

I performed alone for the 1st and 2nd Mindfield performances but for the 3rd, I performed with a colleague (G. Torre); this meant I could leave him to focus on adapting the search terms and web-streams while I could focus on selecting and

then mixing the visual sources together. Sharing the tasks gave us more time to follow the audience's comments and the panelist's discussion, so it is no surprise that the visual backdrop from the 3rd performance seemed the best reflection of the live discussion.

6.5 Reflecting on the Mindfield Performances

With the Mindfield performances, I brought second-screening to the context of a live debate: the audience's phones acted as an interface between their thoughts and the on-stage discussion, with my live visual backdrop a response to the discussions that ensued.

The 2nd performance was the most successful in attracting audience contributions. Figure 6.4 shows that the highest number of comments (54) were posted during this performance, while analysis of the performance-recording reveals those moments when the chair directly addressed comments from the audience by bringing new points up for discussion with the panelists[7].

The 3rd performance revealed the clearest relationship between the discussion and my visual backdrop: there are moments when a dialogue seems to emerge between my visuals and the panelists' comments[8]. I feel this happened during the 3rd performance because I had more time to pay attention to the discussion[9].

In chapter 5, I explained why I found it necessary to post a comment during the Pigtown performance; this was when I felt it necessary to 'stir up' the audience's activity. With the Mindfield performances taking place in the presence of a panel of speakers, I did not expect to have to do so. As it happened, I did post comments during the Mindfield series of performances but rather to express my opinion just as the audience were[10]. Having the panel respond directly to my comment gave me a sense of 'connection'; one I assume was similar to what audience-members must have felt when their own comments were taken up by the panelists.

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[7]These comments are highlighted in figure 33 in the Appendix

[8]These comments are those highlighted in figure 32 in the Appendix

[9]Only during the 3rd performance was I performing with another - G. Torre

[10]During the 1st performance, I posted the comment "Let's talk about the church in this", to which the panel reacted directly

I had requested that the visuals be projected onto a large screen above and behind the stage; as it turned out, I was given 42" LED screens. From figure 28 in the Appendix, it can be seen that these screens were placed either side of the stage. For the first performance, they were positioned against the rear wall of the venue, giving rise to legibility issues for the audience (the text of the audience's comments was to small to read). For the remaining performances, I moved the screens closer to the audience: this reduced the legibility issue but gave rise to line-of sight issues for those seated to the sides of the stage. Neither arrangement was perfect, with both impacting on the ease with which the audience could use the commentary system. Another issue that arose was the need to have a separate screen (comfort monitor) for the panelists: this comfort-monitor cannot be seen from the audience's perspective and so they may have been led to believe that their comments were never seen by those on stage. In any future event of this nature, I would like to explore a variation to the layout of the arena.

Figure 6.7: L. McC. *Mindfield Performance Audience-Perspective.* **Performance still, 2015 (photograph: G. Torre)** - This figure shows a typical audience-perspective during the 2nd Mindfield Performance.

Lastly, it must be said that I found it a challenge to both remind and encourage the panelists to follow the audience's comments as they appeared, however it must be remembered that this was a new premise for them; had they been more familiar with the scenario, I expect they would have reacted more often.

6.6   Summary of Phase D

Phase D of the research set out to bring the premise of second-screen audience-participation to a new context. By doing so, I hoped to learn more about the impact that my research could have on wider on contexts and practices.

By bringing second-screening to the context of a live debate, a panel of experts were led to discuss social issues by both the audience's comments and my own visual backdrop. What emerged may be more appropriately called a form of 'media-facilitated debate', as it gave some the chance to contribute thoughts while others could simply reflect on the general discussion and my visual backdrop.

I was pleasantly surprised to find the visual backdrop can also influence the panelists: anecdotal feedback from one (Dr. S. Kinsella) revealed there were times (during the 2nd and 3rd performances) when he found the visuals to be both arresting and distracting. With the Lisbon performance, I had previously explored whether I could steer audience-focus between watching and tweeting: with a future performance, I would like to explore how the visual backdrop can shift the focus of both those on-stage as well as those in the audience.

By sharing the task of performing with another during the 3rd Mindfield performance, my ability to compose a visual backdrop that reflected the discussion was enhanced. As a result, I see the benefit of performing with others and am excited by the prospect of possible collaborations with poets and rappers; alliances that could bring this discursive form of live audio-visuals to a wider audience.

Sourcing visual streams by inputing search-terms was a new performance practice for me, while the premise of reacting to audience-comments was new to the panelists. I believe a series of rehearsals would have stood us all in good stead. A further avenue for investigation would be to seek ways in which to automate the selection of the search terms through the automated-analysis of the audience's

comments: if it were possible to run the visuals autonomously, the premise could move in yet more directions.

I had been worried about the poor quality of the Internet-streamed visuals. As it turned out, this seemed to matter little to the audience as their primary focus was on the discussion rather than the visuals; the backdrop played a supporting role to the discussion itself, with my role that of facilitating as well as steering the discussion. Future research could refine this liminal and the terminology best suited to its description.

During the Mindfield performances, the small flat-screens proved difficult to read, while the need for a separate on-stage comfort-monitor hampered the emerging audience-stage relationship; such technical hurdles could be addressed with further performances. Were I to design a scenario from the ground up in which panelists and audience look at the same screen, I expect the reactions and interactions would happen far more often. It is an area ripe with potential and so I intend to continue exploring contexts in which I can combine second-screening with performance.

Chapter 7

Conclusions

7.1 On the Aims of the Research

My aim was to establish a new style of AV performance that facilitated me in steering audience engagement. I first developed the video-cued commentary as a means to analyse how my prior style of performance ('live cinematic documentary') engaged the audience. This then led me to explore whether I could steer audience engagement by reacting to the audience's conversations in real-time. When this became possible, I then let the premise influence my approach to live narrative, the result of which was two new styles of performance:

- 'Collaborative AV performance'

- 'Media-facilitated debate'

I will now begin my analysis by considering how I influenced the audience's engagement across the 4 phases of this research. During the University of Limerick performance (phase A), the audience were seated in silence, so compared to the energy experienced at the likes of a rock concert, my audience's experiences were calm by comparison. In terms of narrative, I attempted to render a pre-conceived timeline and so was unconcerned with the audience's presence; I did not look for nor encourage their input.

With the Tyneside performance (phase B), I introduced audience-commentary in a premise akin to that of 'danmu' (see Section 4.3 The Origins of Second-Screening); their comments appeared on-screen but had no direct impact on the development of the narrative. At this stage, I merely wanted to gather real-time comments for post-performance analysis, so I ignored the audience's comments during the performance itself. The introduction of second-screening changed the experience for the audience, as they had to make decisions about when to comment. By analysing their comments after the performance, I was able to make deductions about the nature of their experiences; comments such as "it adds additional interest" and "it gave me more insight into the performance" suggest those who second-screened felt more engaged (see Section 4.6 The Tyneside Performance).

With the Lisbon performance (phase C - part 1), I wanted to establish how I could steer the audience's focus between commenting and watching. By varying

the nature of my audio-visual compositions, I found that I could steer their focus. From the audience's perspective, this was a subtle change in emphasis, so their experience did not change significantly. This can be deduced from an analysis of their comments; they fell along similar lines to comments from the Tyneside performance (see Section 4.8 Summary of Phase B).

With the Pigtown performance (phase C - part 2), I decided to demand more of the audience and so gave them a responsibility towards how the live discussion developed. To do so, I adapted my approach to the creation of live narrative; rather than pre-produce motion-graphics compositions in advance, I created visuals in real-time in reaction to the audience's comments. This meant there was an onus on the audience to take part in the event. The topic I chose ('Irish Same-Sex Marriage Referendum') was a contemporary issue that almost all Irish people had an opinion on, therefore I expected those present would need little encouragement to divulge their opinions. Analysis revealed the audience engaging in topical discussion from the outset, but more importantly, I found I was able to steer their comments through my audio-visuals (see Section 5.5 Analysing the Pigtown Performance).

While discursive events generally facilitate audience input via microphones, some TV productions integrate viewer-comments into the broadcast. Such comments are generally submitted via Twitter, but they are rarely reacted to by those in the TV studio; instead, they function merely as a parallel conversation amongst those at home. It seemed to me that second-screening could embellish my AV performances in a more interesting way and so during phase D, I presented a series of 3 performances featuring a panel of experts in discussion to a live audience. The audience's comments became an integral part of the these events, with the narrative then emerging from the interactions that occurred between myself, the audience and the panelists.

7.2 Outcomes from the Research

7.2.1 Methods of Gathering Audience Feedback

As my research aimed to ascertain how I could steer audience engagement, I first had to develop an understanding of how live audio-visuals engage. Prior to phase A, I had been using post-performance audience questionnaires in the hope of gathering qualitative reflections on how my audio-visuals had steered their engagement, but this approach did not lead to insight on specific audio-visual events.

During phase A, I developed a new method of gathering audience feedback - the video-cued commentary. While time consuming to initially develop a workable framework for coding the language of the participants, once in place, I was able to gather insights on specific audio-visual events. Furthermore, in letting the participants converse without seeding their discussion with my questions, their reflections seemed to come more instinctively.

During these video-cued commentaries, I had participants from the audience re-watch the performance they had attended, but not until the next day; as a result, their reflections were likely to have been coloured by this intervening period. As I was interested in steering the audience's focus during (rather than after) my performances, I sought a way to gather real-time feedback and so the premise of the video-cued commentary 'morphed' into a second-screen commentary system. I expect to continue using both methods into future, as together they can reveal both quantitative and qualitative information.

7.2.2 Techniques for Second-Screening

It was when I sought to gather real-time audience feedback that their phones emerged as viable input devices for text-based comments. I decided to develop my own form of second-screen based commentary system.

My first system harnessed Twitter as a platform for communication, such that the audience tweeted to my primary-screen from their phones. I programmed a software application that would request these tweets from the Twitter API. This application then composited the tweets with my visuals, to be projected to my

primary-screen. All the while, the application was saving the tweets to a text file for later analysis. This system facilitated audience conversation effectively as the application could find and then display all tweets without delay. In time, Twitter did raise its issues for me:

- It proved restrictive with the limitations it imposed on how often a search could be run

- It encouraged comments to be written in an offhand and flippant manner

- It's lack of anonymity arose as a cause of concern when one audience member revealed he had not contributed opinions as if he had done so, his tweets would then have been visible to all of his Twitter followers

In an effort to allow those submitting comments to do so anonymously, I moved away from Twitter to a system based upon a Local Area Network (LAN); a simple webpage was served to the audience's phones, acting like a text-messaging service between myself and the audience[1]. As with the Twitter-based system, comments appeared on my primary-screen as a composite with the visuals. I was no longer curtailed by the time-based search restrictions Twitter imposes on developers, however one drawback was that it required the audience to connect to the same wifi network that my server was being hosted on; this gave rise to delays at the start of each performance as I had to wait until all in the audience had connected. Within the time-frame of the research, I developed and tested this system with apple products only (iPad & iPhone) and so it happened that certain android-based phones could not connect[2].

On reflection, both systems facilitated audience commentary as part of the performance. The main difference between them was that one communicated via social-media while the other communicated anonymously. This meant the Twitter-based system facilitated remote participation in the live event, while the

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[1]As detailed in chapter 5, this webpage could both display my broadcasts as well as accept the audience's comments

[2]This was likely due to the '1st generation' apple base-station I used: it seems it was not serving a protocol compatible with newer android-devices, an issue that could be fixed by using a generic, up-to-date base-station

LAN-based system supported the contribution of ideas anonymously but only from those present in the audience.

7.2.3   New Styles of Audio-Visual Performance

Searching for new ways to engage audiences would eventually lead me to new styles of AV performance, but I first persevered with my existing style while I established ways to gather audience feedback, first offline via video-cued commentary and then in real-time via a second-screen commentary system.

This meant that a new style did not emerge until the Pigtown performance, with which my aim had been to relate the audience's comments to my audio-visuals. I did so in the hope that by responding to their comments, I would find I could steer them to interrogate the meaning of the performance. I describe what emerged as a form of 'collaborative AV performance'; it was a two-way collaboration between myself and the audience.

During phase D, I brought this style of collaborative AV performance to the context of a series of live debates. Previously I had performed alone; the stage was always mine as I created an immersive audio-visual journey for the audience. During the Mindfield performances, I shared the stage with the panelists; while I tailored a visual backdrop, it was the panelists who created the sonics through their dialogue. As a result, the Mindfield performances exhibited a three-way dynamic between myself, the audience and the panelists, a dynamic that differed to the two-way collaboration of before. In many ways, it felt less like my own AV performance and more like a shared event, so I came to call it a form of 'media facilitated debate'.

In summary, the style I began this research with differed significantly from the two styles that emerged: where once I rendered my narrative according to a pre-conceived plan, I came to be influenced by others; be they my fellow performers, the on-stage panelists or the audience. Where once I brought my own preconceived narrative to bear on the live event, I later came to render my narrative spontaneously, one that was a reflection on the interactions that occurred between the audience, my fellow performers and I.

7.3 Implications of the Research

7.3.1 Viewer-Studies

In Section 1.2.2, I outlined how this research was primarily for me, but also for other performers, artists and academics at large. My aim was to establish styles of AV performance that facilitated me in steering audience engagement, but in line with the above, the research that emerged could be of relevance to others. With this section, I will consider the ramifications my research could have for these cohorts as well as for myself.

During phase A, I developed the video-cued commentary as a means to explore the semiotics of live audio-visuals. During chapter 3, I detailed:

1. The development of a keyword framework for coding commentaries

2. The implementation and analysis of one such video-cued commentary

3. The impact that insights from this video-cued commentary had on my performance practice and this research as a whole

In general terms, the benefits of using a video-cued commentary could be of relevance to others who plan to engage in forms of audience analysis; film-directors, advertisers and social-scientists come to mind. The video-cued commentary has this broad relevance because it can lead to insights about one's audience, no matter what the context.

More specifically, the impact on one's practice that engaging with a video-cued commentary could have will be of relevance to other AV performers but also other artists at large. This is because I have detailed how specific qualitative information gathered from the video-cued commentary then led to changes in my performance practice that aided me in addressing my research question.

7.3.2 Technical Developments for Performance

In my search for ways to gather real-time audience comments and then react to these spontaneously, I developed two software-based audience-commentary systems as working prototypes. They harnessed the audience's second-screens as input and display devices thus:

- The first communicated via social media, harnessing the medium of Twitter

- The second communicated anonymously, harnessing a bespoke LAN

I am not the first to prototype a second-screen system for their own needs; during the course of this research, I have detailed the systems of others (such as Hawtin, Levin, Beets and Katan) who also found reason to do so, therefore just like I found their work to be of relevance to my research, they too may find the systems I have developed of interest to their pursuits.

Other artists who are considering developing second-screen systems in the future may be interested in reading about how I surmounted the hurdles I faced when developing my own bespoke systems[3]. The following two lists summarise the advantages of the systems that I developed. A Twitter based commentary-system offers:

- Ease of use - Twitter users already know how to tweet before a performance commences

- Remote access - Tweets can be posted irrespective of geographic location, so an event could take place as a virtual event (via social media and a live video stream)

- Traceability and documentation - Those tweeting do so through their Twitter accounts by posting to the performer's Twitter timeline, meaning the conversation can be seen in real-time by anyone with a Twitter account

Meanwhile, a LAN based commentary-system offers:

- Customisable interfaces - The design of the system can be done according to one's own needs

- Local access - No cellular access is required to access a wifi LAN, so this can suit events to be held in remote locations

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[3]Interested readers should refer to both chapter 4 and the code contained on the accompanying DVD

- Anonymity - A LAN-based system can be designed to be both transient and anonymous; thus empowering audiences to write what they wish (albeit one may encounter individuals who will act with immaturity in such scenarios)

My technical developments did go beyond developing the afore-mentioned audience-commentary systems. Reducing my task load was imperative in enabling me to follow the audience's comments and then react accordingly. To this end, I had to refine both my preparation, my interfaces and my on-stage setup; I imagine the ways in which I did so could prove of interest to other performers[4]. Technical developments that could be of particular interest are:

- How I harnessed the iPad as a centralised AV control interface

- How I used Max/MSP as an automated compositing tool

- How I incorporated visual streams from internet search-engines

7.3.3 Furthering Performance Practice

It emerged that I could steer audience engagement through audience-commentary. This led me to develop new styles of AV performance in which audio-visuals, commentary, discussion and debate overlapped. It was a new premise for me, one in which the live event emerged from the contributions of those on stage and those in the audience.

In order to embrace audience-commentary as part of my performances, I had to reduce my task load. One choice I made was to stop playing live synthesisers altogether and instead rely solely on prepared audio. Over the course of the Mind-field performances, I found that by sharing the stage with others, I could share the burden of performing with them too; with the audio-visuals that emerged proving to be a more effective reflection of the live discussion. It is for this reason that I intend to further explore collaborative performance as a means to reduce task load.

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[4]Readers interested in these aspects of the research can study the diagrams (in the appendix) that outline the performance systems developed

A new dynamic emerged with the addition of live audience-commentary; a dynamic in which the audience and I collaborated in the creation of the live experience. This became a three-way dynamic when panelists were added during the Mindfield performances. As noted in section 6.5, it was a new paradigm for all, one that could be refined with further practice and performance.

To be able to effectively collaborate with the audience, I needed to respond to their comments with related audio-visual content. To this end, I perceived the need for a more flexible performance system and so I designed both an automated generator of slideshows and streamed-visuals from internet search-engines. I intend to further improve my ability to react spontaneously by introducing streamed-audio as well as streamed-visuals, as this would give me even greater scope when seeking to steer audience engagement.

Appendix

Speaker

Performance Bench

Screen

Speaker

- Not to scale
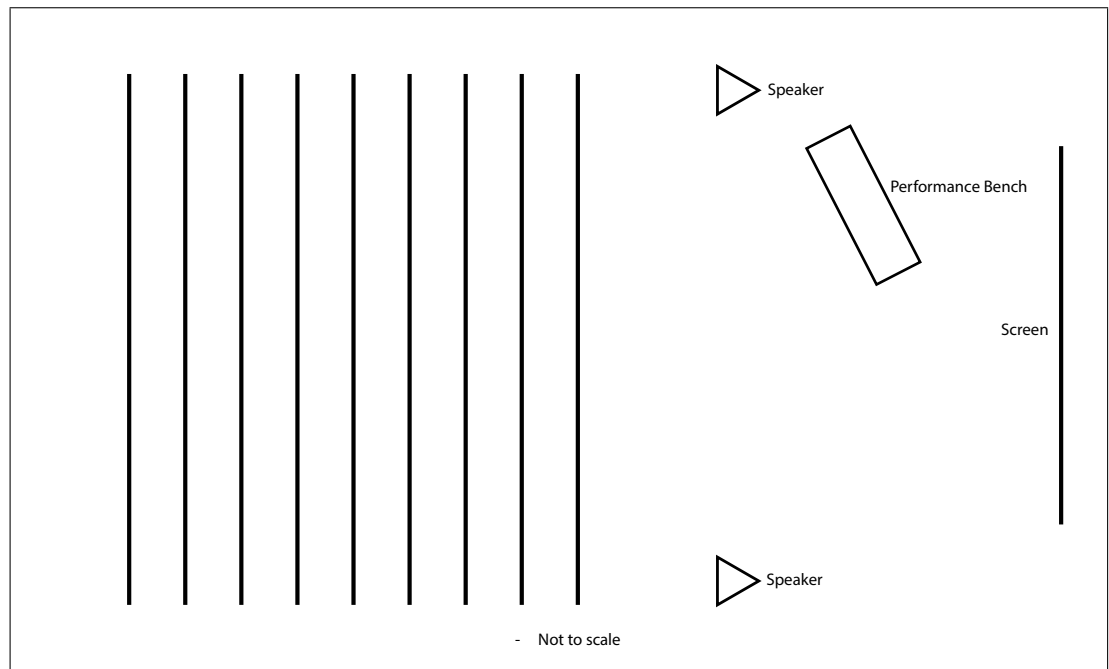
Figure 1: - L. McC. *The University of Limerick Performance Stage Plan.* L. McC 2012
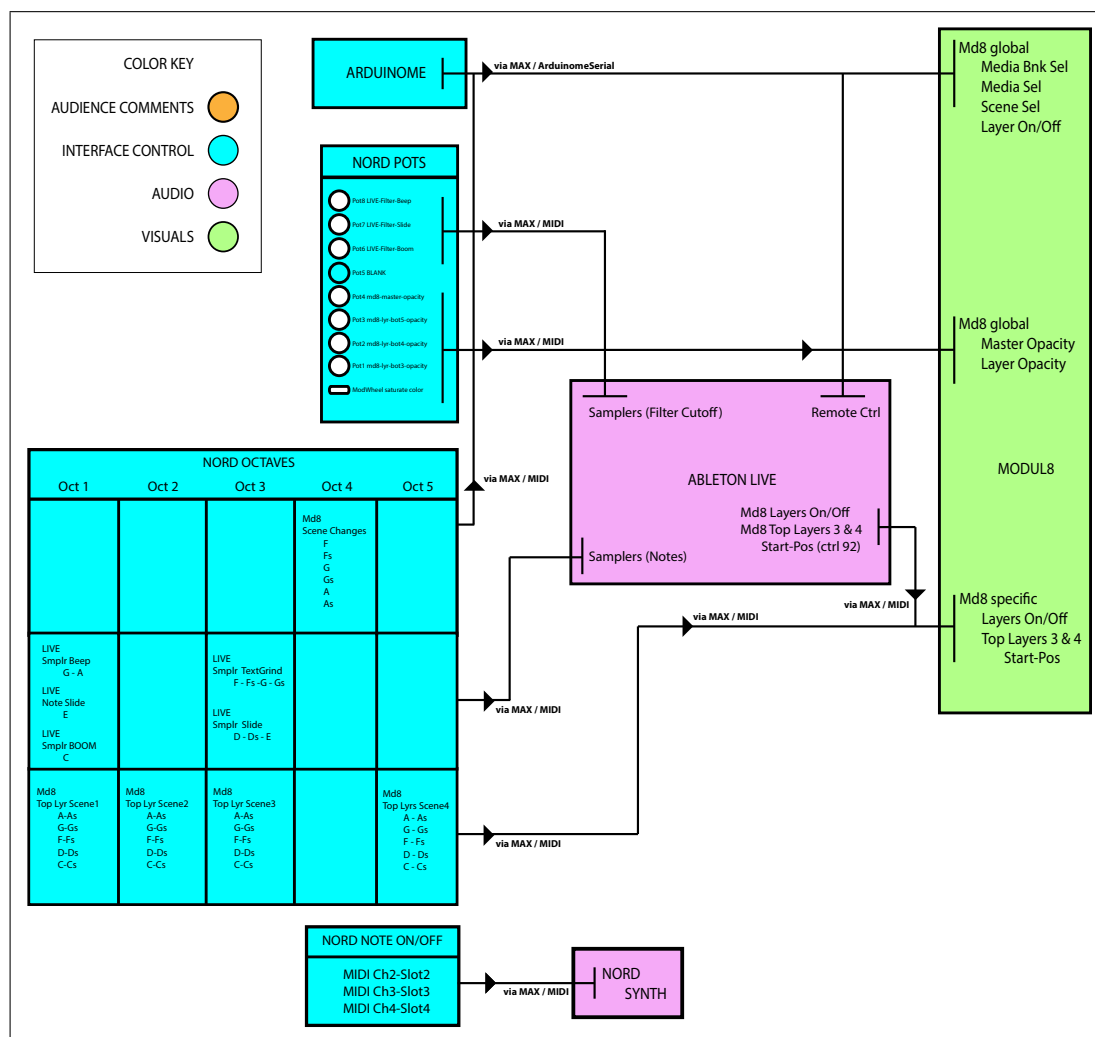
Figure 2: - L. McC. *The University of Limerick Performance System.* L. McC 2012

Figure 3: - L. McC. *The University of Limerick Performance Arduinome Template.* Control-surface template, L. McC 2012

Comments from participants A & B	Attribute that attracted focus	Stream they focused on	Engagement mode
A: hmm interesting title	title	Visual	Perceptive
B: long performant introduction	the introduction	Liveness	Perceptive
A: the slow intro proves the liveness and he likes that	the liveness of the long introduction	Liveness	Perceptive
B: likes the connect between sound and circles	connection between sound and visuals (circles)	AV Relationship	Perceptive
A: likes some of early sounds	early sounds	Sound	Perceptive
B: there is still a mystery about meaning/plot	ambiguity of meaning	Plot	Interpretive
A: likes the music	music	Sound	Perceptive
B: mystery of the plot keeps him interested: intrigued to know more	ambiguity of meaning	Plot	Interpretive
A: likes sonar-type sounds	bleep sounds	Sound	Perceptive
B: music seems a natural fit to visuals, creating the atmosphere	music and visual relationshop	Mood	Interpretive
A: wonders is the nord triggering visuals?	live playing of synthesizer	AV Relationship	Perceptive
B: circle-visuals seem triggered by nord bleep-sounds	playing controlling visuals and music	AV Relationship	Perceptive
Both disagree about whether the music is merely an accompaniment to the visuals	musical character a support for the visuals?	Mood	Interpretive
A: digital performers showing screens - does it engage?	Does seeing computer screens enhance liveness?	Setup	Reflective
B: in this genre liveness is screen-based and is never as effective	Does seeing computer screens enhance liveness?	Setup	Reflective

Colour Code	
	Perceptive
	Interpretive
	Reflective

Figure 4: - L. McC. *The University of Limerick Performance Comments (1).* Video-cued comments recorded while participants watched part 1 of the performance, L. McC 2012

Comments from participants A & B	Attribute that attracted focus	Stream they focused on	Engagement mode
A: more direct narrative here, meaning is becoming apparent	clarity of plot	Plot	Interpretive
A: sound's texture really appeals to him	texture of sounds	Sound	Perceptive
Both feel the `dark' music feeds the atmosphere	music creating a dark mood	Mood	Interpretive
Both love the sub-bass kick and percussion	percusion & rhythm	Sound	Perceptive
A: visual info was repetitive whereas shapes were interesting	visuals become repetitive	Visual	Perceptive
B: visuals could change more as music is going through its changes	visual could change more to follow musical change	Visual	Reflective
Both like the jumping visuals as they react to the music	sync across audio-visuals	AV Relationship	Perceptive
Both ask how is it being done - the modulation/sync/beat/visual?	beat-sync'd triggering of the audio-visuals	AV Relationship	Perceptive
A: likes the red colour changes	red colour appears with synth-filter opening	Visual	Perceptive
B: seeing the screeen here would reveal the audio-visual connections	Does seeing computer screens enhance liveness?	Setup	Reflective
B: russian communist-type visual aesthetic here	the aesethetic of the visuals	Visual	Perceptive
A&B: they discuss what the 3 preview screens could be for	why are there 3 screens on stage	Setup	Reflective
B: could now be a screening as there is less playing	Currently there is little liveness	Liveness	Reflective
Both cannot see my screens and so want more revealed than is possible with I face them	Does seeing computer screens enhance liveness?	Setup	Reflective

Colour Code	
	Perceptive
	Interpretive
	Reflective

Figure 5: - L. McC. *The University of Limerick Performance Comments (2).* Video-cued comments recorded while participants watched part 2 of the performance, L. McC 2012

Comments from participants A & B	Attribute that attracted focus	Stream they focused on	Engagement mode
A: discuss the difficulty delivering a live piece that feeds off the crowd while using computers	challenge to play while controlling computers	Liveness	Reflective
B: currently this is less live & more a presentation, although better than a screening	more a presentation than a performance	Liveness	Reflective
A: he wouldn't find it as exciting as a simple screening	difference between a screening and performance	Liveness	Reflective
B: he notes that's a big fish in the visuals	commenting on visuals	Visual	Perceptive
A: he loves the sound of children: a mysterious relevance to it	commenting on sound	Sound	Perceptive
A: likes that I am giving info aswell as sound and visual streams	the info within the visuals	Composition	Perceptive
B: likes how sound influences way in which to read mood	music is creating mood	Mood	Interpretive
A: finds strange relationship between the meaning of 3 parts: 3rd encourages fish-eating?	tripartite structure of the plot	Plot	Reflective
B: music contrasts visuals, giving conflicting readings: fatalistic vs. positive	multiple readings - contrasting audio-visuals	AV Relationship	Interpretive
A: what is the symbolism of the number 3?	what is the significance of the no. 3	Visual	Interpretive
A: likes the split of the 3 partsas 3 perspectives with seperate narratives	tripartite structure of the plot	Composition	Reflective

Colour Code	
	Perceptive
	Interpretive
	Reflective

Figure 6: - L. McC. *The University of Limerick Performance Comments (3)*. Video-cued comments recorded while participants watched part 3 of the performance, L. McC 2012

Survey betaV#04

Write your <u>name/nickname</u> & choice of group commentary <u>time</u>

Name:_____

Time: (Thr 2-6pm / Fri 10-5pm) _____

Briefly note your initial reflections on this performance? If stuck for direction think about what you: remember / perceived / felt / read-as-plot

_____
_____
_____
_____

Fill out the blanks, finishing the phrases. This tests for salient things that you noticed. The length of the line does not reflect how many words are missing.

The _____ was very_____

The _____ looked very _____

The _____ sounded_____

The _____ was triggered by _____

I think the performer played _____

When _____ I felt _____

I reacted to _____ when _____

It seemed the _____ was meant to _____

I think the _____ is supposed to _____

The aim seemed to be to _____

I imagine that _____

The _____ made me think _____

I would have liked if _____

The level of interaction with _____

I think the other people _____

Figure 7: - L. McC. *The University of Limerick Performance Questionnaire (1).* Page 1 of the questionnaire, L. McC 2012

Circle the colour & word(s) that best describe each section of the performance:

Part 1 - 'to find…'

Mood Colour:	Descriptors (feel free to add your own):
	Smooth Sharp Uneven Erratic Spiky Jarring

Part 2 - 'to take…'

Mood Colour:	Descriptors (feel free to add your own):
	Smooth Sharp Uneven Erratic Spiky Jarring

Part 3 - 'to need…'
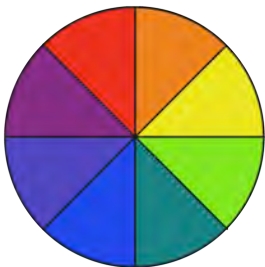
Mood Colour:	Descriptors (feel free to add your own):
	Smooth Sharp Uneven Erratic Spikey Jarring

Figure 8: - L. McC. *The University of Limerick Performance Questionnaire (2).* Page 2 of the questionnaire, L. McC 2012

Draw thought-bubbles around the 2 boxes in reaction to the 2 themes:

MEANING FOR YOU

ARTIST'S INTENT

Figure 9: - L. McC. *The University of Limerick Performance Questionnaire (3)*. Page 3 of the questionnaire, L. McC 2012

Can you recall audiovisual moments that resonated with you – if so why?

_____
_____
_____
_____

Did ideas/reflections come to you during the performance – if so what & when?

_____
_____
_____
_____

Explain whether you think your experience was richer due this being a live performance as opposed to being a pre-rendered audiovisual presentation?

_____
_____
_____
_____

How familiar are you with the art forms below, on a scale of 0-1-2 where:

0 = unfamiliar   1 = somewhat familiar   2 = very familiar

VJing	
Experimental Cinema	
Documentary Film	
Theatre	
Digital Media Production	
Electronica/Techno Music	
Opera	

Rate this performance according to all of the categories below, scaled 0-1-2 where:

0 = not applicable   1 = somewhat relevant   2 = an accurate description

Entertainment	
Education	
Documentary	
Propaganda	

Figure 10: - L. McC. *The University of Limerick Performance Questionnaire (1)*. Page 1 of the questionnaire, L. McC 2012
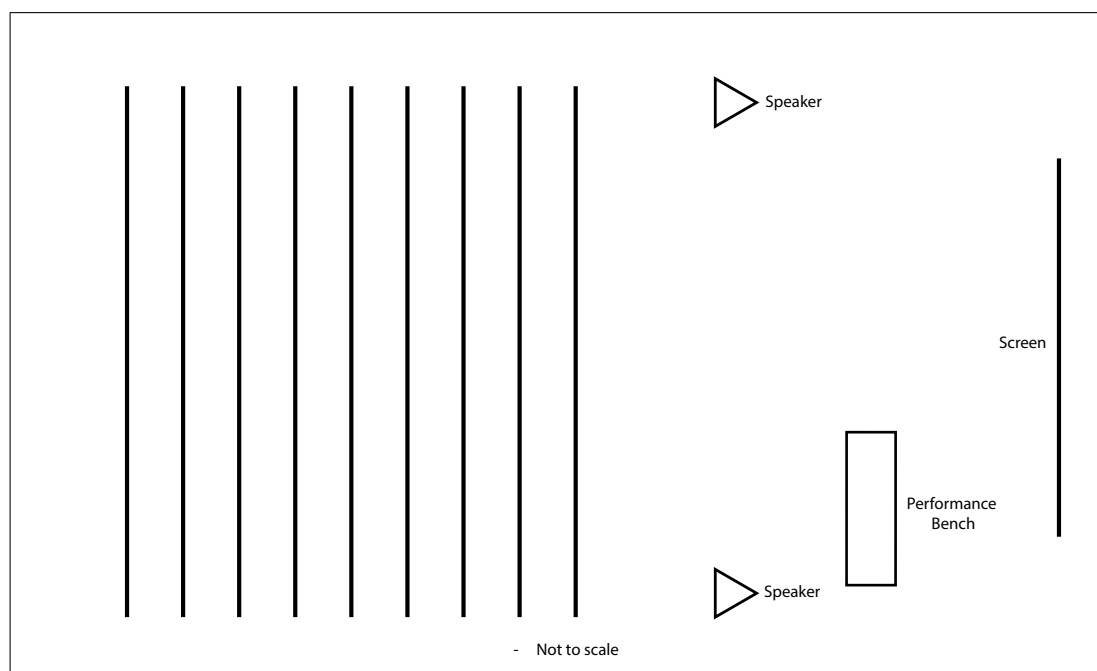
Figure 11: - L. McC. *The Tyneside-Performance Stage Plan.* L. McC 2013

Figure 12: - L. McC. *The Tyneside-Performance System.* L. McC 2013
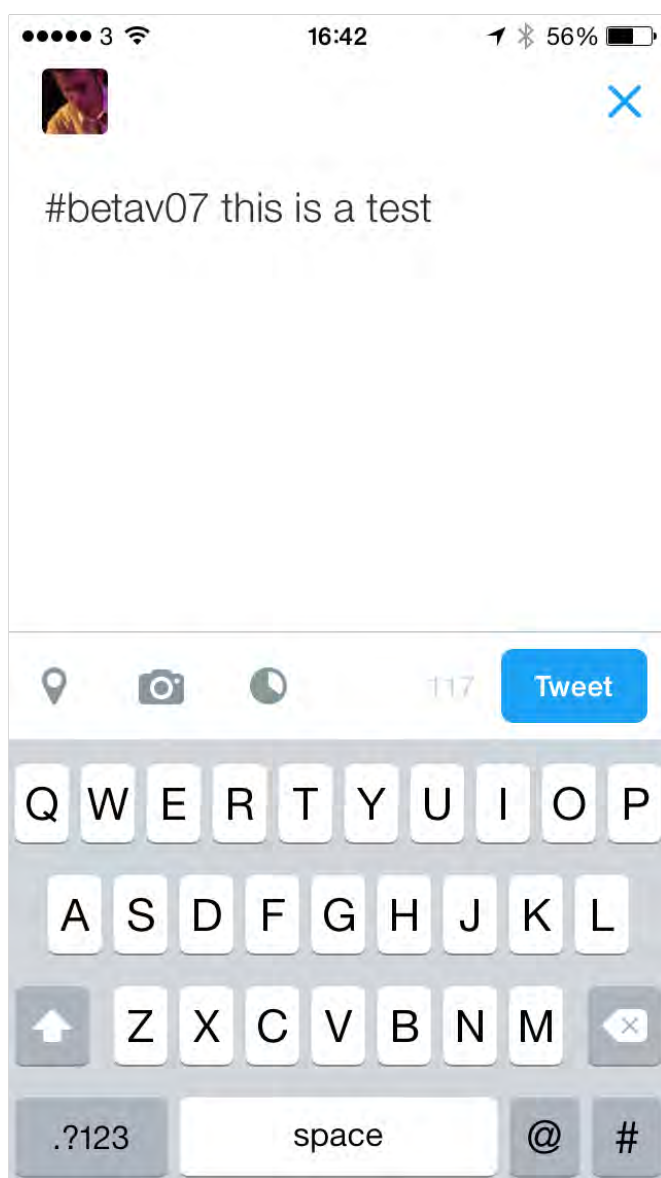
Figure 13:   - L. McC. *The Tyneside & Lisbon Performance Second-Screen.* Screenshot of twitter running on an iPhone, L. McC 2013

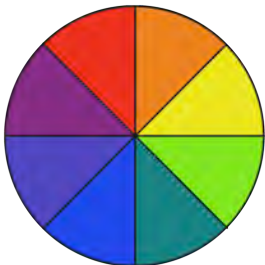| Time	Tweet	Focused on	Engagement	Humour
00:00:15	*lets go*	-	-	no
00:00:30	*hello*	-	-	yes
00:00:41	*spooky tuna*	Audio, Visuals	Perceptive	no
00:01:12	*i love sitting in the roxy*	Context	Reflective	no
00:01:45	*with a beer*	Context	-	no
00:02:14	*nice touch of shine*	-	Perceptive	no
00:02:15	*what's everyone having for tea?*	Visuals, Context, Social	-	yes
00:02:43	*fish?*	Visuals, Social	-	no
00:02:46	*sounds like orbital*	Audio	Perceptive	no
00:02:55	*tina sarnie*	Visuals, Social	-	yes
00:03:09	*dom? what you having for tea?........tuna?*	Visuals, Social	-	yes
00:03:18	*who's tina?*	Social	-	yes
00:03:33	*tuna i meant tuna darn it*	Visuals, Social	-	no
00:03:43	*tina turner*	Social	-	yes
00:04:15	*what's tuna got to do with it...*	Visuals, Social	-	yes
00:04:37	*wet bread basket*	Visuals	Perceptive	no
00:05:02	*fnar fnar!*	Social	-	yes
00:05:18	*this is soo chilled. we should do more events like this...*	Context, Thoughts	Reflective	no
00:05:30	*that's not a real word*	Social	Perceptive	yes
00:06:01	*i concur more video interactive events.*	Context, Thoughts	Reflective	no
00:06:32	*is anyone going to tusk festival afterwards?*	Social	Perceptive	yes
00:06:40	*shouldn't all money go to pixel palace?*	Context	Reflective	yes

Colour Code	Perceptive
	Interpretive
	Reflective

Figure 14: - L. McC. *The Tyneside-Performance tweets (1).* The tweets posted during part 1 of the performance, L. McC 2013

Time	Tweet	Focused on	Engagement	Humour
00:07:18	*yeah i wanted to check out basic house*	Social	-	yes
00:07:21	*dom is that you*	Social	-	yes
00:07:37	*nope.*	Social	-	yes
00:08:05	*no it's sally. dom make yourself known*	Social	-	yes
00:08:08	*this is dom i think money should go directly to my benevolent fund..*	Social	-	yes
00:08:57	*dom. what colour would you say your beard is?*	Social	-	yes
00:09:18	*also that money was just 'resting' in my account..*	Social	-	yes
00:09:30	*green*	Social	Perceptive	yes
00:10:22	*salt n pepper*	Social	-	yes
00:10:37	*pay attention peeps.. quit your jibber jabber*	Context, Social	-	no
00:11:41	*loving the filter sweeps and portamento*	Audio	Perceptive	no
00:12:10	*faster or slower?*	Audio	Perceptive	no
00:12:30	*should we all dance...?*	Audio, Social	Perceptive	no
00:12:45	*did i get lost on the way in? have i ended up in the tuna appreciation society*	Visuals, Context	Interpretive	no
00:12:55	*lower more sub whomp*	Audio	Perceptive	no
00:13:38	*l o u d e r ! ! !*	Audio	Perceptive	no
00:13:39	*it's dark in here isn't it*	Context	Reflective	no
00:14:28	*anonymous are everywhere*	-	-	no
00:14:31	*those stats are pretty nasty*	Visuals	Perceptive	no
00:14:33	*i think we should all start dancing. big fish little fish cardboard box!*	Audio	Perceptive	yes
00:14:44	*a tuna tango*	Audio	Perceptive	yes

Colour Code	Perceptive
	Interpretive
	Reflective

Figure 15: - L. McC. *The Tyneside-Performance tweets (2)*. The tweets posted during part 2 of the performance, L. McC 2013

Time	Tweet	Focused on	Engagement	Humour
00:14:52	*it's weird how i'm typing these words there...and they're up here*	Context, Thoughts	Reflective	no
00:15:24	*technology eh !*	Social	Reflective	no
00:15:46	*i don't eat fish and am therefore not responsible for these atrocities.*	Audio, Visuals, Thoughts	Reflective	no
00:16:03	*i believe our tuna are the future ....*	Audio, Visuals, Thoughts	Reflective	no
00:16:05	*you should all be ashamed of yourselves*	Audio, Visuals, Thoughts	Reflective	no
00:16:30	*that's my dad ! no way !!*	Visuals, Social	-	no
00:16:56	*...wait. i've seen this before!!*	Visuals, Thoughts	Reflective	no
00:17:27	*i had a tuna cheese melt for dinner last night . can i give it back ?*	Visuals, Context, Think	Reflective	no
00:18:00	*i thought for sure leon had taken a camera deep sea diving*	Visuals, Thoughts	Reflective	no
00:19:01	*me too*	Visuals, Thoughts, Social	Reflective	no
00:19:28	*me three*	Visuals, Thoughts, Social	Reflective	no
00:19:57	*and me !*	Visuals, Thoughts, Social	Reflective	no
00:19:59	*i want to kick that laughing kid in the shins*	Audio, Visuals, Thoughts	Reflective	no
00:20:28	*really enjoyed that. thanks everyone for the chat! :d*	Audio, Visuals, Context, Social	Reflective	no
00:20:50	*this is the most fun ive had all week*	Audio, Visuals, Context, Social	Reflective	no

Colour Code	Perceptive
	Interpretive
	Reflective

Figure 16: - L. McC. *The Tyneside-Performance tweets (3).* The tweets posted during part 3 of the performance, L. McC 2013

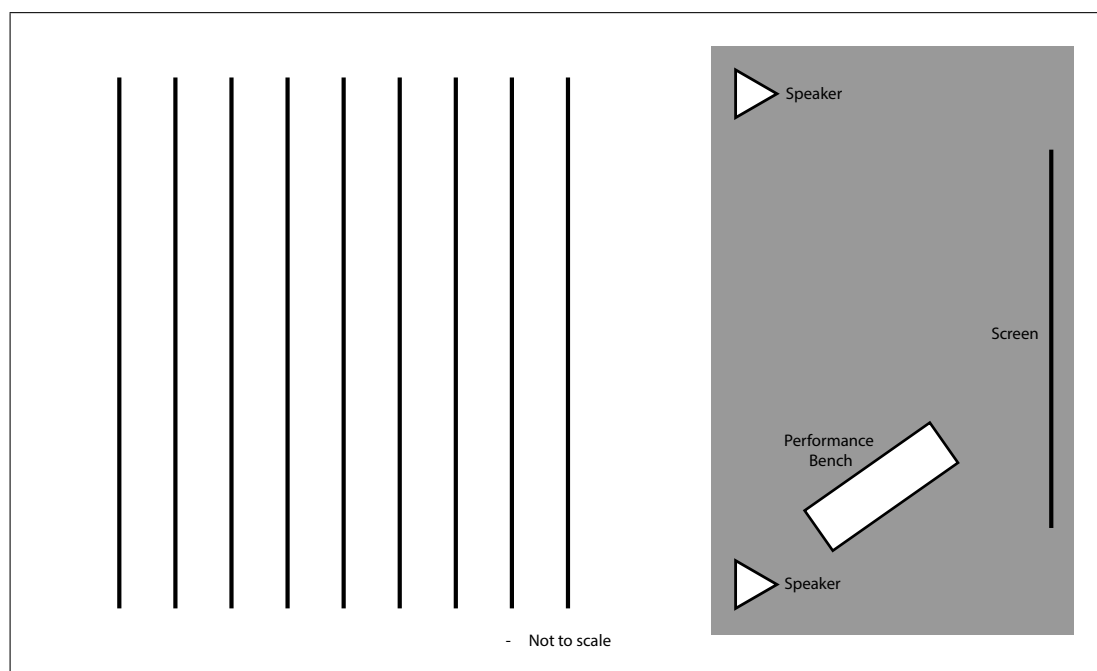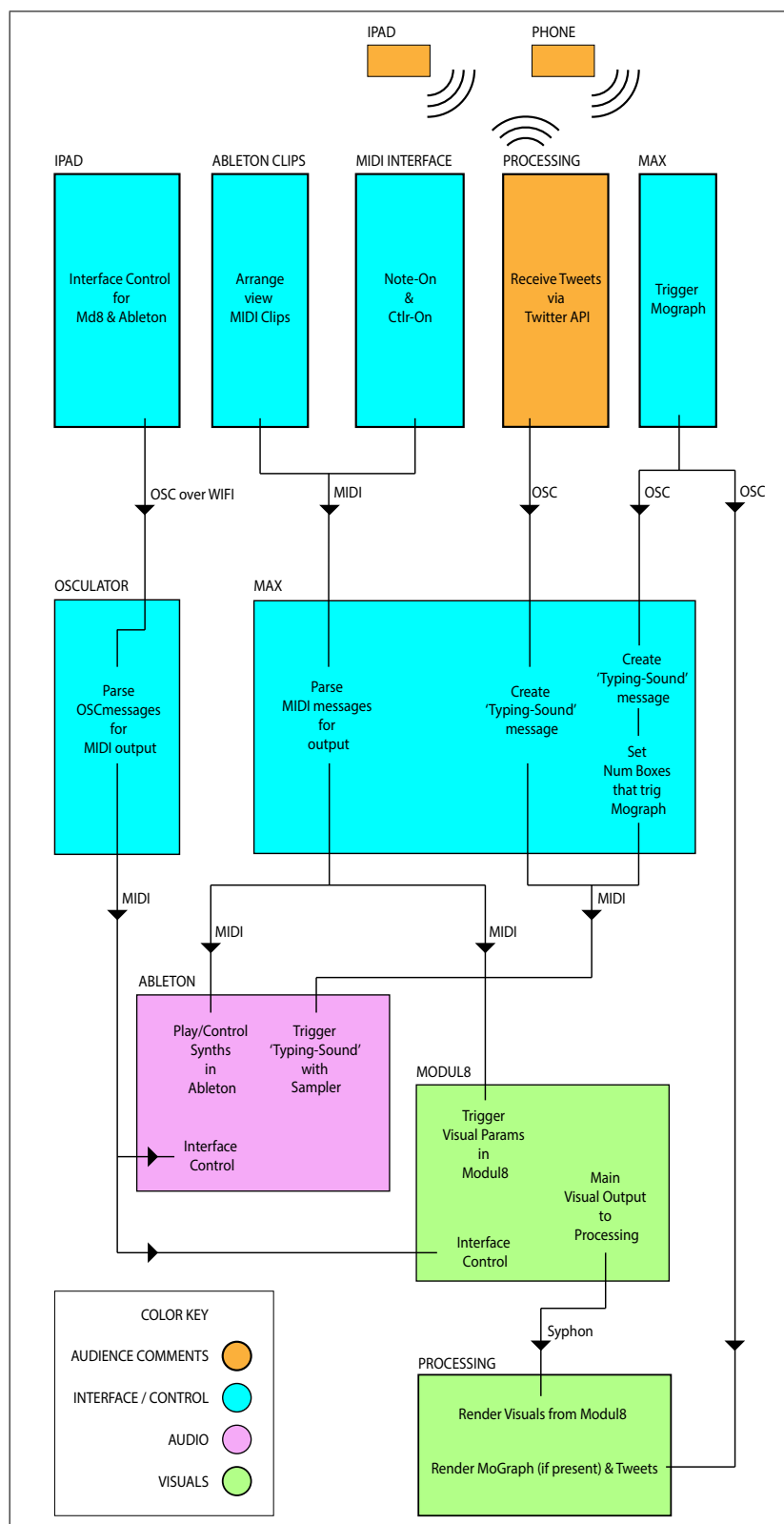**Figure 17:** - L. McC. *The Lisbon-Performance Stage Plan.* L. McC 2014

Figure 18: - L. McC. *The Lisbon-Performance System.* L. McC 2014

Figure 19: - L. McC. *The Lisbon-Performance Control-Surface.* The touchOSC template designed for the iPad, L. McC 2014

Time	Tweet	Source(s)	Engagement	Humour
00:01:49	*scampi*		-	y
00:03:43	*lego*		-	y
00:04:32	*scampi lego?*		-	y
00:05:16	*yes scampi lego*		-	y
00:06:41	*scego*		-	y
00:08:07	*discontinuous pleasures*		-	
00:08:17	*http://t.co/fbwzc6pnjt*		-	
00:08:56	*ã,'ã,±ã,´*		-	y
00:09:26	*aren't we supposed to talk about fish?*	Visuals	Interpretive	
00:09:43	*Â¯_(ãf„)_/Â¯.*		-	y
00:10:34	*lots of fish. but the restaurant had ran out of bacalao!*	Visuals	Perceptive	y
00:10:39	*my second tweet*		-	
00:10:44	*fish are live but are they an interface? #betav*		-	y
00:10:49	*jumping the great white #betav #happydays http://t.co/5qlgbzeysd*		-	y
00:11:16	*well there was a fish as interface piece on friday...*		-	y
00:11:35	*so what?*		-	
00:11:52	*all my discourses are fishes....*		-	y
00:12:09	*everybody scream....now!!!*		-	y
00:12:15	*no*		-	
00:12:59	*why not?*		-	
00:13:07	*is there a vegetarian option?*		-	
00:13:21	*not in portugal*		-	
00:13:23	*><â€¢>*		-	y
00:13:37	*omega f(th)ree jam*	Visuals	Perceptive	y
00:14:18	*...forgot to take my cod liver oil tablets today...*	Visuals	Reflective	y
00:14:22	*im confused are we supposed to eat more fish or eat less fish?*	Visuals	Interpretive	
00:14:24	*and there is the omelette*		-	y
00:14:49	*you can always get an omelette!*		-	y
00:15:15	*what do you mean by you're not eating eggs?!*		-	y
00:15:18	*object oriented omelette*		-	y
00:15:24	*oh omelette your are broken(eggs)*		-	y
00:15:47	**you are*		-	
00:15:50	*can we have the whole thing again but focussed on the ethics of omelettes?*		-	y
00:16:15	*elaborate*		-	
00:16:55	*free range makes ethical omelettes*		-	y
00:16:57	*why?*		-	
00:16:58	*which came first? the chicken or the omelette?*		-	y
00:17:06	*seen on a menu in india: scrambled unborn chicken*		-	y
00:17:09	*></////->*		-	y
00:17:25	*chomlette*		-	y
00:18:12	*and is there even an omelette if nobody saw the chicken lay an egg?*		-	y
00:18:32	*is this "live codding"?!*		-	y
00:18:53	*epistemomlette*		-	y
00:19:12	*yes but it's totally ineffishent*		-	y
00:19:29	*phishing*		-	y
00:21:19	*clam we just keep tweeting?*		-	y
00:21:19	*apparently nothing fun comes from that..*		-	
00:21:56	*yeah i got lost in a sea of puns and don't know whats going on anymore*		-	
00:22:09	*will this damage our herring?*		-	y
00:22:14	*we're in a melancholic plaice...*		-	y
00:23:03	*prawn again christian?*		-	y
00:23:20	*or is it melanchprawnic?*		-	y
00:24:03	*all about the bass (sea)*		-	y
00:24:17	*i honk walter benjamin said something about this...*		-	y
00:24:24	*seems like we're on the way trout*		-	y
00:24:32	*ok let's now talk about parrots*		-	y

Code	Perceptive
	Interpretive
	Reflective

Figure 20: - The audience-comments tweeted during the Lisbon-Performance. [Copyright: L. McCarthy 2014
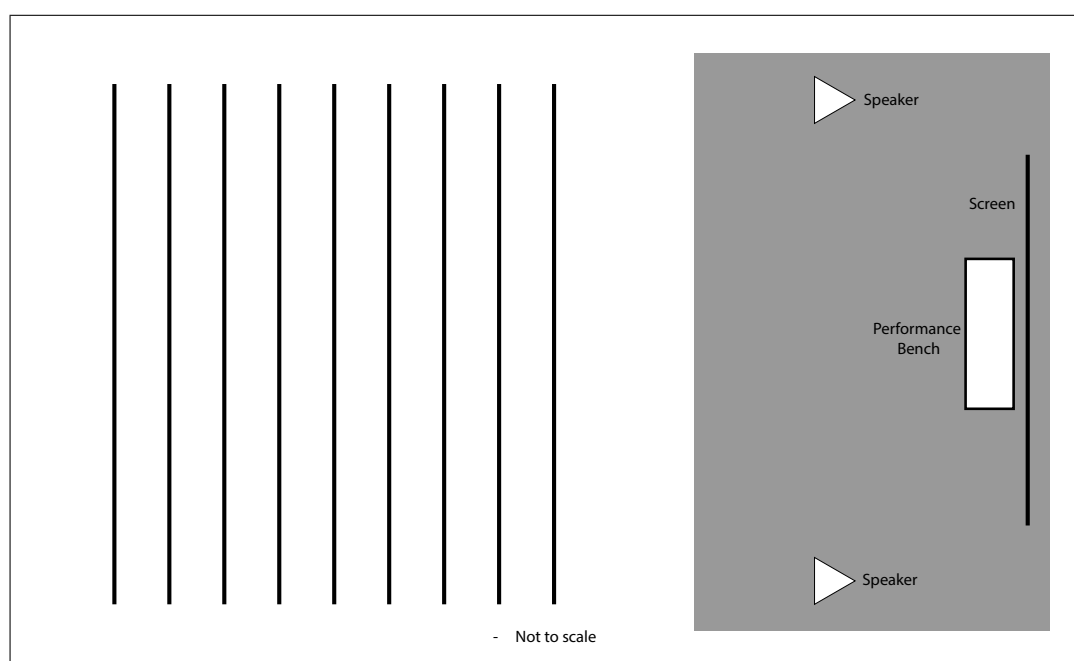
Figure 21: - L. McC. *The Pigtown-Performance Stage Plan.* L. McC 2015
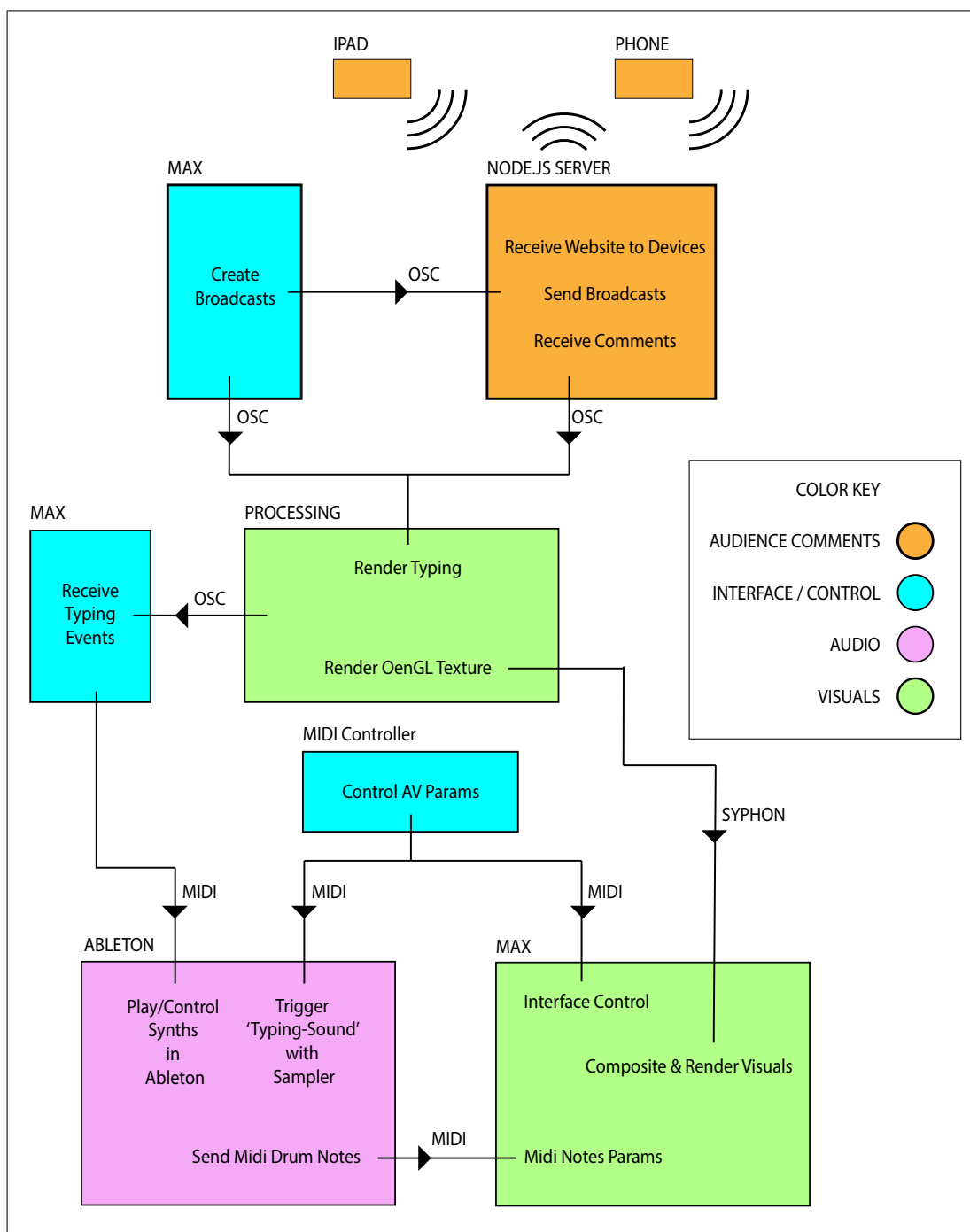
Figure 22: - L. McC. *The Pigtown-Performance System.* L. McC 2015

Figure 23: - L. McC. *The Pigtown-Performance Second-Screen.* Screenshot of the commentary-system running on an iPad, L. McC 2015

Comment No.	Video Time	Comment	Subject
1		*TEST*	
2		*HELLO PIGLETS!*	social
3		*HELLO*	social
4		*ONLINE*	
5		*MY 7 YEAR OLD SAYS ITS WEIRD*	topic
6		*HELLO*	social
7		*SEX AND DRUGS AND ROCK AND ROLL*	humour
8		*WHAT ABOUT THE CHILDREN?*	topic
9		*IS IT COMPULSORY*	topic
10		*I SEE YOU*	social
11		*IT'S ABOUT FREEDOM?*	topic
12		*MARRIAGE IS SHIT*	topic
13		*NEI*	
14		*I C U 2*	social
15		*HELLO*	social
16		*BOB RED PILL OR BLUE PILL*	humour
17		*WELL*	
18		*LOVE ME TOO GER*	topic
19		*NO TO THE NOSE*	
20		*FECK!*	humour
21		*ARSE*	humour
22		*TITS*	humour
23		*5 MINUTES TO GET OUT!*	
24		*I SECOND THAT*	
25		*REALLY! IS THIS A DEBATE OR WHAT?*	system
26		*FIRE!!!*	

Figure 24: - L. McC. *The Pigtown-Performance Comments (1).* Page 1 of the audience-comments posted; note that these comments appeared before the recording of the performance commenced - hence they have no timecode, L. McC 2015

Comment No.	Video Time	Comment	Subject
27	00:00:16	*I LOVE LALLYISM*	
28	00:00:25	*ALL YOU NEED IS LOVE...!*	topic
29	00:00:32	*WE IN A VIRTUAL WORLD*	system
30	00:00:35	*LALLY WAS THE BEST*	
31	00:00:40	*IT'S AN ART FORM*	system
32	00:00:42	*MARRY EARLIER, MARRY OFTEN*	topic
33	00:00:52	*JAYZUZ LADS, AIN'T THIS CHURCH FUCKIN CLASS*	context
34	00:01:02	*KILDARE ABU!*	humour
35	00:01:03	*KISS KISS*	humour
36	00:01:13	*THEY COMING!!*	
37	00:01:18	*MARRY MYSELF*	topic
38	00:01:26	*UP THE BANNER TA MEAN!!*	humour
39	00:01:45	*I'M SELF AWARE*	
40	00:01:47	*AM HIGH*	
41	00:01:47	*DON'T MAKE ME GET MARRIED !!!!*	topic
42	00:01:49	*LALLY I HEAR YOU'RE GETTIN THE RIDE TONIGHT?*	humour
43	00:02:06	*EVERYBODY NEEDS SOMEBODY...*	topic
44	00:02:11	*WILL YOUSE MARRY ME??*	topic
45	00:02:11	*I WANT TO STAY SINGLE !!*	topic
46	00:02:18	*WHERE'S MY BROADCAST?*	system
47	00:02:19	*TIS GREAT*	topic
48	00:02:21	*WEED SHOULD BE MADE ACCESSABLE*	
49	00:02:31	*NOW*	
50	00:02:36	*??*	
51	00:02:39	*I AM THE ONE!*	social
52	00:02:40	*ACCESSIBLE*	
53	00:02:51	*NO GERRY*	social
54	00:02:52	*THE ONE AND ONLY?*	social
55	00:02:58	*I AM THE ONE*	social
56	00:03:07	*NO ME!!!*	social
57	00:03:08	*THE ONLY ONE*	social
58	00:03:26	*NOBODY REALLY CARES SHOULD BE A SAFE YES VOTE*	topic
59	00:03:37	*WHAT'S HAPPENING ?*	system
60	00:03:38	*ONE LOVE ONE HEART*	topic
61	00:03:49	*POLYAMOURUSITY IS GOOD. LOVE EVERYBODY.*	topic
62	00:03:50	*WHY DO PEOPLE GET ANGRY WHEN SOME1 SAYS NO*	topic
63	00:03:54	*LOVE THE ONE YOUR WITH*	topic
64	00:04:06	*NO*	topic
65	00:04:07	*WHERE IS THE EQUALITY*	topic
66	00:04:21	*SAYING NO IS FINE BUT IT'S ABOUT BASIC FREEDOM*	topic
67	00:04:25	*I'M VOTING NO*	topic
68	00:04:25	*NO MEANS NO*	topic
69	00:04:30	*THE REALLY PROBLEM IS HABING TO VOTE IN THE FIRST PLACE*	topic
70	00:04:34	*ONLY JOKIN*	topic

Figure 25: - L. McC. *The Pigtown-Performance Comments (2)*. Page 2 of the audience-comments posted, L. McC 2015

Comment No.	Video Time	Comment	Subject
71	00:04:40	*YES YES YES*	topic
72	00:04:46	*ALL THE WAY*	topic
73	00:05:12	*RAISE THE AGE TO 35*	topic
74	00:05:20	*VIOLINS !!!!!*	music
75	00:05:22	*PAT CAREY WAS HARASSED IN KILKENNY YESTERDAY*	topic
76	00:05:29	*GREAT*	topic
77	00:05:30	*= = = ========================= :-)*	topic
78	00:05:32	*I BLAME THE GREEKS!*	humour
79	00:05:54	*KILKENNY IS A BIT LIKE THAT*	topic
80	00:05:59	*NOT GREAT*	topic
81	00:06:01	*BASICALLY WE BEEN CONTROLLED!*	
82	00:06:08	*THEY INVENTED GAYNESS!*	topic
83	00:06:08	*COME ON STCK TO THE SUBJECT, MARRIAGE, EQUALITY, REFERENDUMMMMMMM*	topic
84	00:06:23	*THAT'S SO GAY*	topic
85	00:06:32	*SURE LET FLAS RIDE FLAS, TIS GRAND LIKE*	topic
86	00:06:40	*THAT'S WHY THEY ARE SO GOOD AT HURLING*	topic
87	00:06:52	*WHATEVER NEXT - ECONOMIC EQUALITY?*	topic
88	00:07:28	*WE'LL PAT CAREY WAS ACCUSED OF INTIMIDATING ORDINARY PEOPLE AND FORCING THEM TO SAY YES*	topic
89	00:07:40	*MORE IMPORTANT ISSUES THAN GAY MARRAGE TO BE HONEST*	topic
90	00:07:49	*SHOW ME THE MONEY*	humour
91	00:07:51	*NO COSMIC EQUALITY*	topic
92	00:07:54	*WATS HAPPNIN ATALL LIKE*	context
93	00:07:58	*AGREED*	topic
94	00:07:59	*I'M BROKE*	humour
95	00:08:34	*IT MATTERS LITTLE TO YOUNGER PEOPLE IF YOU ARE GAY OR NOT*	topic
96	00:08:57	*LET PEOPLE BE WHAT THEY WANT AS LONG AS THEIR HAPPINESS DONT INFRINGE ON SOMEONE ELSE*	topic
97	00:09:08	*THIS IS A HOUSE OF WORSHIP!!!*	context
98	00:09:14	*WHEN WE VOTE YES DO YOU THINK THE BEGRUDGES WILL SHUT UP!*	topic
99	00:09:27	*THE FECK IT IS*	context
100	00:09:27	*THEY DON'T REALLY CARE WHICH IS A GOOD THING I THINK*	topic
101	00:09:38	*WHAT WOULD JESUS SAY ???*	topic
102	00:09:43	*DECONSECRATED TUH FUCK*	context
103	00:09:47	*GOD IS IN THE TV*	visuals
104	00:10:01	*BEGRUDGERS WILL ALWAYS BEGRUDGE*	topic
105	00:10:01	*LOVE THY GENITALS!*	humour
106	00:10:05	*JUNNO LIKE*	
107	00:10:09	*JESUS WAS GAY*	topic
108	00:10:23	*AMAZING WHAT PEOPLE REALLY ARE WHEN HIDDING BEHIND THE SCREEN*	system
109	00:10:29	*THIS IS MAD ALTOGETHER LADS*	system
110	00:10:35	*CHILDREN ARE FOR LIFE NOT JUST FOR CHRISTIANS!*	topic
111	00:10:35	*PUT YOUR HAND TO THE SCREEN*	
112	00:10:54	*THEY SHOW THEIR TRUE COLOURS*	topic
113	00:10:55	*YES WE'LL HE HUNG ABOUT WITH MEN AND HIS MA WAS A SINGLE MOTHER*	topic
114	00:11:06	*LOVE MY NEIGHBOURS*	topic

Figure 26: - L. McC. *The Pigtown-Performance Comments (3)*. Page 3 of the audience-comments posted, L. McC 2015

Comment No.	Video Time	Comment	Subject
115	00:11:44	*WE'VE ALL BEEN FUCKED BY IMF, VIVE LA CAPITALISME !!!!!*	humour
116	00:11:46	*THERES ABOUT 5 PPLS STILL TYPING*	system
117	00:11:52	*ARE WE MATURE IF WE VOTE YES?*	topic
118	00:11:57	*SO ITS EASY TO KNOW WHO IS WHO*	system
119	00:12:35	*G*	
120	00:12:39	*THIS IS NOT THE DEBATE I ANTICIPATED*	topic
121	00:12:42	*YOU'RE JUST A GOOD PERSON*	
122	00:12:53	*I'LL JUST GET ME COST*	
123	00:13:00	*COAT*	humour
124	00:13:16	*YOU DO YOU AND I'LL DO ME*	
125	00:13:42	*EQUALITY .....????.*	topic
126	00:13:48	*I RATHER DEBATE ABOUT HOMLESS PPLS WATERCHARGIES DEOPULATION OF EARTH*	topic
127	00:14:00	*DEPLITION OF THE OZON LAYER*	topic
128	00:14:28	*EVERYONE'S MIND SEEMS TO BE MADE UP ON THIS*	topic
129	00:14:32	*FREE BAR FOR YES VOTES!*	topic
130	00:14:35	*YES THERE ARE LOTS OF BIGGER ISSUES*	topic
131	00:14:36	*DEBATE FUELS THE NO VOTERS*	topic
132	00:14:49	*THIS IS WHAT THEY DO THEY MAKE US FOCUS ON ISSUES THAT ARE LESS IN NATURE*	topic
133	00:14:53	*OPEN THE BAR!*	humour
134	00:15:25	*IT'LL BE OVER IN A COUPLE OF WEEKS...*	topic
135	00:15:37	*THE HUMAN CONCEPT OF NATURE YOU MEAN*	topic
136	00:15:42	*WHILE THE REAL ISSUES THAT NEEDS IMMIDATE ATTENTION ARE BEEN SHUNED*	topic
137	00:15:48	*THE BAR?*	humour
138	00:16:14	*EQUALITY IS THE MOST IMPORTANT THING FOR ALL PEOPLES*	topic
139	00:16:47	*DEAD PEOPLE SHOULD BE ALLOWED TO MARRY.*	topic
140	00:16:51	*MON WE VOTE YES SO LADS*	topic
141	00:16:52	*IN SHORT*	
142	00:16:56	*LALLYISM VOTES YES!*	topic
143	00:17:07	*THE BAR IS NOW..... CLOSED!*	humour
144	00:17:07	*WE ARE SLAVES TO THE SYSTEM*	topic
145	00:17:16	*FECK*	humour
146	00:17:24	*EVERYONE DESERVES A SHOT AT MISERY*	topic
147	00:17:37	*FECK IS RIGHT*	humour
148	00:17:43	*I VOTE YES....... TO THE BAR BEING OPENED AGAIN*	topic
149	00:18:07	*AND VERY ONE DESERVES A PINT OF HAPPINESS*	topic
150	00:18:08	*BIT OF A SOFT DAY?*	humour
151	00:18:38	*AM OUT! SEE YOU ON THE OTHER SIDE*	social
152	00:18:57	*NO VOTERS WILL BURN IN HELL*	topic

Figure 27: - L. McC. *The Pigtown-Performance Comments (4)*. Page 3 of the audience-comments posted, L. McC 2015
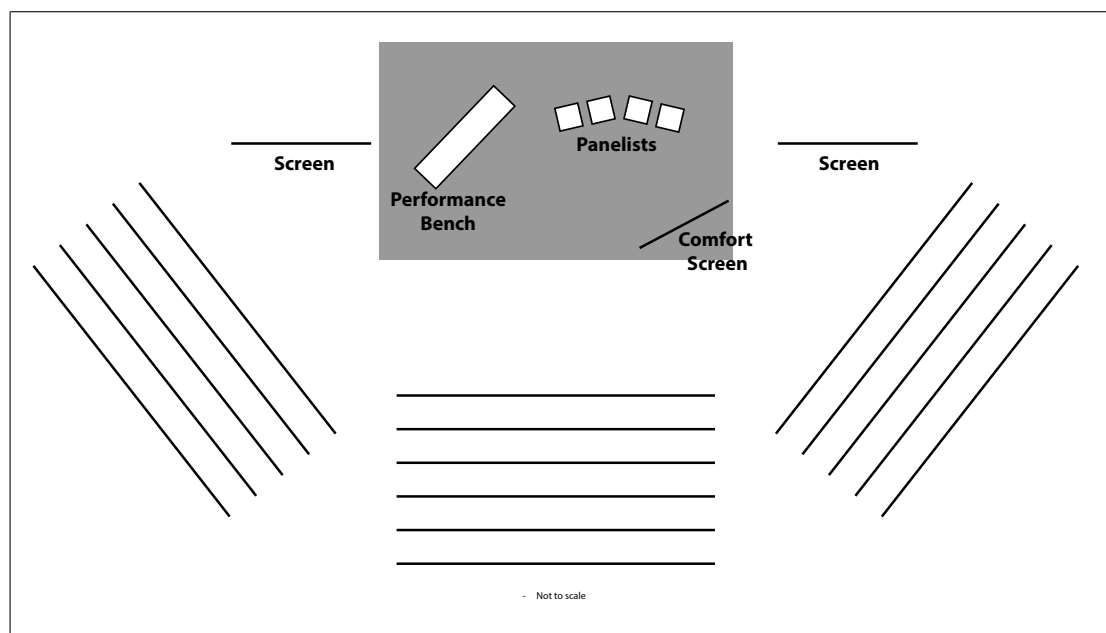
Figure 28: - L. McC. *The Mindfield-Performances Stage Plan.* L. McC 2015
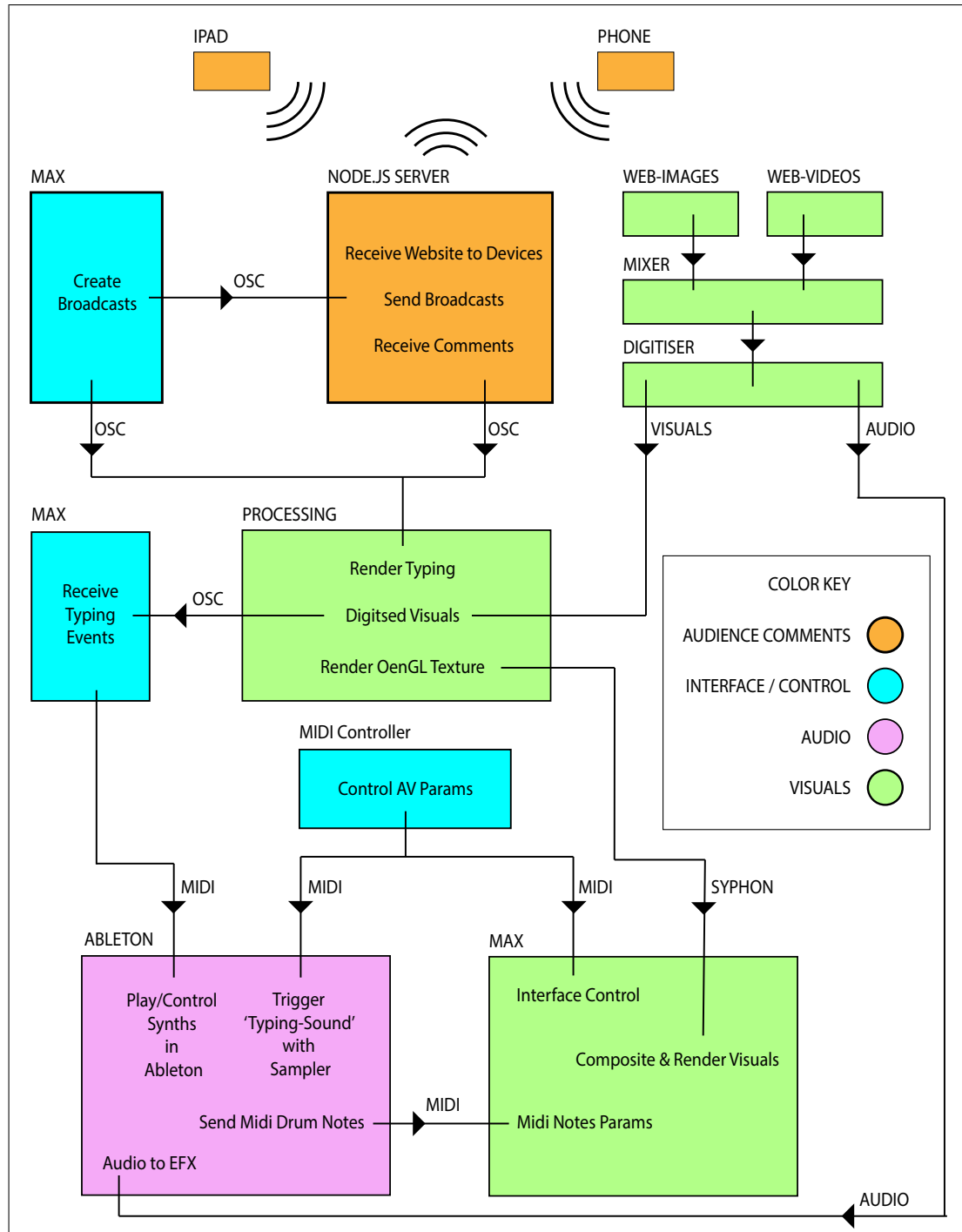
Figure 29: - L. McC. *The Mindfield-Performances System.* L. McC 2015

Figure 30: - L. McC. *The Mindfield-Performances Second-Screen.* Screenshot of the commentary-system running on an iPhone, L. McC 2015

Video Time	Comment
00:05:15	*HI*
00:05:38	*WANEY!!!*
00:06:54	*BUT 142 IS MY MINIMUM.*
00:07:04	*HI*
00:07:18	*TESTING TESTING 1, 2*
00:09:06	*HEY THERE PEEPS*
00:10:26	*GO UNA GO!*
00:11:16	*SOME STRAIGHT PALS WOULDN'T HAVE USED A RAINBOW TWIBBON BUT USED STRAIGHT UP'S FOR EQUALITY TWIBBON & POST REF HAVE USED RAINBO!W*
00:11:35	*THE MORE PEOPLE COME OUT, THE MORE LGBT PEOPLE THAT STRAIGHT PEOPLE KNOW, THE MORE LIKELY STRAIGHT PEOPLE WERE TO VOTE YES*
00:11:51	*MARRIAGE EQUALITY WAS A CONCRETE ISSUE AND THE SUBJECT OF A REFERENDUM. HOW DO YOU ADVANCE OTHER ISSUES OF EQUALITY?*
00:14:09	*IF THERE WERE CLANGERS MAYBE IT WAS BECAUSE THE CONVERSATION HADN'T HAPPENED BEFORE?*
00:22:10	*LENT SHOULD PUSH ALL POLITICAL AGENDAS, ENGAGE THE REST*
00:22:16	*THE MORE LGBT PEOPLE STRAIGHT PEOPLE KNOW THE MORE LIKELY STRAIGHT PEOPLE WERE TO VOTE YES*
00:24:25	*WHERE DOES THIS CHANGE LEAVE THE CHURCH*
00:24:33	*LIKE TREATY IN 1921 STEPPING STONES GET YOU THERE IN THE END*
00:25:30	*LET'S TALK ABOUT THE CHURCH IN THIS*
00:27:27	*CHURCH PULLED BACK FROM THREAT NOT TO CARRY OUT STRAIGHT MARRIAGES IF YES VOTE - TOO MUCH MONEY AT RISK*
00:29:23	*IS DIARMUID MARTIN THE BEST CATHOLIC IRELAND CAN OFFER*
00:30:14	*IS EAMON GILMORE THE UNSUNG HERO?*
00:30:32	*GILMORE - WHY?*
00:32:35	*REPEAL THE 8TH IS ABOUT TRUST - TRUST PEOPLE TO MAKE THE RIGHT DECISION FOR THEMSELVES.*
00:40:32	*CONVERSING ON SCREEN! COME ON PEEPS*
00:45:32	*WILL SOC DEMS SOAK UP THAT VOTE?*
00:47:24	*SO MANY CANDIDATES, SO LITTLE CONSENSUS??*
00:47:36	*SO LITTLE CONSENSUS?*
00:54:26	*A RAINBOW OF IDEAS, IMPOSSIBLE TO START ANYTHING!*
00:57:40	*IS SUCH CHANGE ONLY POSSIBLE FUNDED BY AMERICAN LIBERAL PURSE?*
01:04:04	*EQUALITY FOR THE HOMELESS NEXT*
01:05:17	*ABOLISH PARISH PUMP POLITICS TOO*
01:07:19	*SECULARIZE OUR SCHOOLS.*

= Colour code for times when a comment was directly reffered to in the discussion

Figure 31: - L. McC. *The 1st Mindfield Performance Comments.* A list of the audience-comments posted, L. McC 2015

Video Time	Comment
##########	HELLO
##########	CAN'T WAIT FOR THIS DEBATE
##########	TEST
##########	UP MAYO
00:00:19	REVERSE THE CURSE MAYO FOR SAM 2016
00:00:37	SEXY LUCY
00:01:09	REVERSE THE CURSE 2016
00:01:30	CREIGHTON'S LOOKING HOT
00:02:31	SMILE LUCY WOULD YOU
00:02:34	RESPONSE OF IRISH GOV DISGRACEFUL. YES WE SHOULD TAKE IN THOUSANDS. BUT WE MUST CONTRIBUTE TO DEBATE AND ACTIONS IN HOW TO STOP THE WAR.
00:03:04	EVERY FAMILY SHOULD TAKE A REFUGEE FULL STOP
00:03:43	SYRIAN CIVIL WAR IS NOW A PROXY WAR BETWEEN THE WEST AND RUSSIA.
00:06:01	TEST
00:06:09	TEST
00:06:50	HERE HERE
00:07:23	THE U.S. AND BRITAIN CAN HELP STOP SYRIAN CIVIL WAR BY STOPPING SELLING ARMS TO THEIR PROXIES IN ME.
00:07:49	ARMS TO THEIR PROXIES IN THE ME
00:08:31	A ROOT CAUSE FIX IS MILITARY INTERVENTION IN SYRIA. HOW DOES THIS EFFECT IRISH NEUTRALITY?
00:09:50	THE UNFOLDING CATASTROPHE IN YEMEN, CURRENTLY BEING PUMMELLED BY SA HELPED BY THE U.S. & BRITAIN.
00:10:40	WELL SAID FINTAN
00:10:58	BEING CREATED BY SA HELPED BY U.S. & UK.
00:11:05	APPALLING LEADERSHIP IN IRELAND. CURRENT DIRECT PROVISION SYSTEM NOT FIT FOR PURPOSE
00:11:29	HOW MANY CAN EUROPE TAKE? EUROPEAN UNION HAS MORALLY DESTROYED THIS CONTINENT.
00:11:50	WILL THE IRISH PEOPLE OFFERING SHELTER (1200 OFFERS?)STICK TO THEIR PLEDGE ?
00:12:37	THE ARMS TRADE IS DRIVING A LOT OF THESE WAR.
00:12:53	PANEL FULL OF HOT AIR, NO UMDERSTANDIMG OF ECONOMICS OR CULTURE
00:13:18	PROTEST FOR REFUGEES AT SPIRE NEXT SAT. 2PM.
00:13:23	DAVID YOU ARE PART OF THE EUROCRATS IN DECIDING WHAT CAN & CANNOT BE DISCUSSED! MASSIVE RESPONSIBILITY!
00:14:03	WITHOUT THE REMOVAL OF DIRECT PROVISION CAN IRELAND HANDLE AN INFLUX OF REFUGEES
00:14:30	SHOULD WE NOT BE LOOKING AFTER OUR OWN HOMELESS PROBLEM FIRST & HOUSING THEM?
00:15:04	DIRECT PROVISIONAL IS INHUMAN .
00:15:17	WHY IS THERE ALWAYS MONEY FOR WARS BUT NOT TO HELP REFUGEES?
00:16:52	AFGHAN & IRAQ WARS CUST $3TRILLION. THAT WOULD HELP A LOT OF REFUGEES.
00:18:14	CAMERON ET AL ARE PLAYING TO THE XENOPHOBIC GALLERY.
00:22:10	DOES ANYONE HAVE A RENNIE?
00:22:41	THESE PEOPLE DON'T WANT TO LEAVE THEIR COUNTRIES. THEY ARE DESPERATE BECAUSE IF WESTERN LED WARS.
00:23:24	BECAUSE OF WESTERN LED OR INSPIRED WARS.
00:24:31	LEADERSHIP, LEADERSHIP NEEDS TO LEAD, ITS NOT HAPPENING
00:25:24	WHERE IS THE LEADERSHIP?
00:25:45	WE MUST STOP THE WARS THAT FUEL THESE REFUGEE CRISES.
00:26:35	I THINK THIS WOULD BE A VOTE WINNER.
00:31:40	ETHNIC CIVIL WARS WAS THE RESULT OF US POLICY IN IRA.
00:31:54	IRAQ.
00:33:48	PROTESTS IN BAHRAIN WERE MIXED.
00:35:52	IS THE ROOT PROBLEM CAPITALISM OR DEMOCRATIC POLITICS OR WHAT?
00:36:13	THE 5 MEMBERS OF THE UN SECURITY COUNCIL ARE THE BIGGEST ARMS DEALERS IN THE WORLD.
00:36:27	THE WORLD.
00:36:28	WHO ARE WE TO DICTATE NEW BOUNDARIES! THAT'S CILOISNLISM ALL OVER AGAIN! THAT'S WHAT IS RESPONSIBLE TO BEGIN WITH
00:38:35	OK FINTAN HOW DO WE STOP THE WAR? BACKING ONE OF TWO EVILS?
00:41:53	HOW?
00:43:47	IRELAND SHOULD STOP SUPPORTING FOREIGN IMPERIAL WARS ABROAD. END SHANNON STOPOVE.
00:44:02	END SHANNON STOPOVER.
00:45:00	CURRENT FINE GAEL POLITICIANS ARE NOT INTERESTED IN DOING THE RIGHT THING, THEY'RE INT IN GETTING RE-ELECTED
00:51:09	WHO IS BEST PLACED TO STAND UP TO THE SUPER POWERS & MAKE BRAVE DECISIONS?

[ ] = Colour code for times when a comment was directly reffered to in the discussion

Figure 32: - L. McC. *The 2nd Mindfield Performance Comments.* A list of the audience-comments posted, L. McC 2015

Video Time	Comment
00:03:06	TESTING 1 2 3
00:05:06	WE COULD SUPPORT MORE IF WE ENDED DIRECT PROVISION AND ALLOWED QUALIFIED PEOPLE TO WORK.
00:05:42	AND ALLOWED QUALIFIED PEOPLE TO WORK
00:11:08	IRISH EMIGRANTS DURING THE FAMINE HAD A...
00:11:29	SUBSTANTIALLY BETTER CHANCE TO INTEGRATE INTO
00:11:49	THE SOCIETY OF THEIR NEW HOMES THAN WE AFFORD
00:12:05	ASYLUM SEEKERS IN IRELAND
00:13:30	HOW MUCH HAS CLIMATE CHANGE CONTRIBUTED TO THIS CRISIS?
00:16:32	HSE IS ATROCIOUSLY WASTEFUL THOUGH
00:18:46	IRELAND DOES NOT USE ITS EXTANT ASSETS WELL
00:21:25	WHY AREN'T OUR CURRENT GOVERNMENT GIVING ITS OWN CITIZENS THOSE BASIC 3 HUMAN RIGHTS?
00:23:00	THESE 3 BASIC RIGHTS?
00:24:10	ALSO HEALTH CARE IN NORTH
00:26:56	WEIRD SCHISM BETWEEN 'GOVERNMENT' AND 'CITIZENRY'
00:27:58	WHICH ONE CONSTITUTES THE 'NATION' I WONDER.
00:29:29	BEFORE FAMINE POPULATION WAS 2X NOW
00:30:12	AND THAT WAS SUPPORTABLE EVEN WITH INEFFICIENCIES.
00:33:29	PARIS HAS GHETTOS
00:34:36	IS IRELAND ENTERING INTO A NEW PROPERTY BUBBLE AND A SUBSEQUENT CRASH?
00:35:24	AND A SUBSEQUENT PROPERTY CRASH?
00:35:33	MUSLIMS BORN HERE IN 80S HAVE INTEGRATED FINE
00:35:48	POLICY IS DOMINATED BY BIG LOBBYISTS - BUILDING, PHARMA, WIND....
00:36:31	MINIMISE GHETTOISATION AND ENSURE EDUCATION
00:38:31	NOT A GREAT HISTORY OF INTEGRATION IN LIMERICK...
00:42:01	ARE WE NOT PART OF THE PROBLEM? SHANNON STOP OVER?
00:44:02	WESTERN REDRAWING OF BORDERS HAS NEVER WORKED WELL
00:48:17	ALL NATIONS ARE COMPRISED OF MIGRANTS
00:49:14	IT ALL GOES IN THE POT ON A LONG ENOUGH TIME SCALE
00:49:56	BUT WE'VE NEVER BEEN V. GOOD AT LONG TERM THINKING.
00:53:16	WHO'S DICK DO I HAVE TO SUCK TO GET SOME EVIDENCE-BASED POLICY?
00:55:02	SUPPORT NEED NOT ALWAYS BE MILITARY
00:57:50	MIGHT WE SEE AN ISLAMIC HOLOCAUST?
01:00:12	WHAT IT MEANS TO BE IRISH CONSTANTLY CHANGES
01:00:42	IRELAND NOW IS NOT LIKE THE COUNTRY I GREW UP IN
01:01:10	AND THE CHANGE HAS BEEN FOR THE BETTER I THINK
01:01:32	ROMANTIC NATIONALISM IS INSIDIOUS AND DANGEROUS
01:04:08	NATIONALISM IS AN INFANTILE DISEASE...
01:04:31	... IT IS THE MEASLES OF MANKIND.
01:05:20	WAS QUOTED BY EINSTEIN FOLLOWING WW2
01:10:51	IF WE PUT REFUGEES IN GHOSTS ESTATES IT'LL BE A GHETTO

= Colour code for times when a comment was directly reffered to in the discussion

Figure 33: - L. McC. *The 3rd Mindfield Performance Comments.* A list of the audience-comments posted, L. McC 2015

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