

**DESIGNING PHYSICAL-DIGITAL ARTEFACTS
FOR THE PUBLIC REALM**

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**A thesis submitted in partial fulfilment of the requirements
of the University of the West of England, Bristol,
for the degree of Doctor of Philosophy**

**Faculty of Arts, Creative Industries and Education,
University of the West of England, Bristol
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APPENDICES

	Research Ethics Committee	Application to UWE for ethical review of research involving human participants
	Section of application form re: methodology	

As part of my research to date I have undertaken four studies. The approach taken was, and continues to be, iterative and cyclical, with theoretical perspectives, primary research observations, and critical creative responses all happening in parallel, as opposed to a linear structure.

In order to inform the research I propose to conduct a limited series of qualitative investigations into various ways in which people are engaged with physical-digital artifacts, and their approaches, (for example as makers, designers, users or commissioners). I shall undertake qualitative interviews with selected participants. Identification of relevant themes for open and loose questions for interviewees will occur after background research has been undertaken, and as the study develops. These investigations will seek to collect the subjective evidence required to inform specific stages of the research. The evidence will enable the production of a model design framework to be tested within multi-disciplinary workshop environments. This data will provide the basis for the development and production of a design framework, and set of principles, that contributes to the conceptualisation, research and design of physical-digital artifacts for the public realm. The first iteration of this model will test its viability in the first multi-disciplinary workshop.

The specific methods I am employing in order to undertake my research are:

Workshops: design practitioners and design researchers working with professionals from different disciplines to test and inform the iterative development of the design framework. Participation is invited and anonymous. Withdrawal is possible at any time throughout the process.

The aims of the workshops are to:

- test and develop the research findings to date;
- design and make unrefined physical-digital conceptual objects;
- study these conceptual objects.

Face to face practitioner interviews: The interviews conducted for this research project will all be performed using an ‘interview guide approach’, which does not specify particular questions, or turns of phrase, but outlines a set of common themes to be covered in each interview.

Participant observation in public space: in order to document people’s individual and collective behaviours in relation to the technologies of concern I intend to undertake notation, image capture, and audio recording. To ensure that members of the public understand the process I will have large format clear posters displayed detailing the purpose of the investigation. In addition I shall have a one page information sheet about the research, and contact details of Director of Studies Jon Dovey.

	Response to UWE Research Ethics Committee from Jo Morrison	Application to UWE Research Ethics Committee to undertake research with the public
		13 January 2012

Application title: Designing Physical-Digital Artefacts for the Public Realm

Research applicant: Jo Morrison, DCRC, Pervasive Media Studio

Response to the request for clarification from the Faculty of Arts, Creative Industries and Education Research Ethics Committee.

- 1. Clarification that this approval only refers to the interviews and the ethnography workshops.** The approval sought is for the interviews and ethnography workshops.
- 2. Clarification of consent at workshop.** As suggested, the researcher will ensure that a poster is clearly displayed prior to entry into the room such that people are aware that research is taking place.
- 3. Clarification concerning how the researcher will be identified at the workshops.** The researcher will be identifiable by wearing a badge, and as suggested by the Committee, by having a photograph on the main poster.
- 4. Clarification of copyright and commercial risks.** It is not envisaged that there will be any copyright or commercial risks involved.
- 5. Inclusion of some interview questions.** Example interview questions include:
 - What are the key user senses that influence your design process, and how do you address them?
 - Describe the ways in which you use sketches and models as a tool for design investigation.

- If I use the words ‘trust’ and ‘credibility’ in terms of your work, how would you interpret them?
- Does multi-disciplinary working affect your working process and the outcomes?
- When designing for a specific location, what are your considerations?

The above information has been shared with, and approved by, Prof Jon Dovey (Director of Studies).

	Photographic documentation of ‘messy’ infrastructure revealed in public outdoor space	Bristol and London, 2010 - 2015





Chapter 1	Introduction	Street furniture inventory and wider view of practice
		January 2010 – August 2010

STREET FURNITURE INVENTORY

CATEGORIES

EXAMPLES

Milestones and mileposts	Guidestones, milestones, mileposts
Place name signs	Inn signs, warning signs, place name signs, road name signs, road numbers
Beacons and pedestrian crossings	Toucan, Pelican, Zebra, Puffin, Pegasus, Belisha Beacon,
Plaques and walker markers	Commemorative plaques, heritage trails, cultural plaques, information plaques
Animalia	Horse troughs
Water supply and sanitation	Pumps, drinking fountains, water fountains, wells, troughs, public lavatories, guttering covers
Bollards and posts	Collapsible posts, illuminated bollards, walkway bollards, interactive posts
Pavements and paving	Slabs, cobbles, mosaic tiles, tiles, stone, pre-cast concrete paving, tarmac, aggregate, glass, plastic
Hole covers	Gratings, coal-hole covers, tree grilles, fire hydrant covers, inspection covers for gas/electric cables/telecommunications/sewers/ water mains, pavement lights, indicator plates, posts and markers
General lighting	Gas lanterns, electric lanterns, street lamps
Lighting columns, extension brackets & lanterns	Octagonal column, post top lantern with canopy, tungsten lantern, sodium lantern, glass-fibre canopy,

	window lamps, pedestrian tunnel lighting
Bins and boxes	Litter bins – freestanding, fixed, basket, mounted, removable inner - grit bins, junction boxes, exchange boxes
Letter boxes	
Telephone boxes	Wi-fi hot-spots
Telegraph poles	Mobile phone masts, satellite dishes
Bus and tram equipment	Bus signage, tram power cables
Shelters and kiosks	Bus shelters, bus stops, cabmen’s shelters, tram passenger shelters, pedestrian shelters, commercial kiosk, car-park kiosk, information kiosk (digital or printed), internet access kiosk
Outdoor seating	Bench seat, combined bench and picnic table, steel bench seat, wall cantilever seat, bloc seats, double sided bench
Public conveniences	Fixed conveniences, portable conveniences
Traffic signs	
Traffic signals	
Signs	With fixed information, with dynamic digital information
Advertising display units	Media-facades, rotating trilateral display, trilateral display unit – double tier unit, four-sheet poster drum, poster stand, poster panel, internal illumination
Footbridges	Balance cantilever box spine, welded box beam, short span, long span, Warren braced, fabricated beam
Guard-rails, parapets, fencing & walling	Chain-link fence, pedestrian guard-rail system, balustrades system, handrails, retainer wall units, timber fencing
Public telephones	
Planting	Plant containers, soil chamber grilles, tree surround fencing

Clocks	Bracket clocks, digital clocks, bracket clocks, clock towers, sundials
Vending machines	Car-park, cash-machines, tourist telescope
Meters	Parking meters, access meters
Bicycle racks and stands	Single mounted stand, fixed multiple rows, 'Boris Bikes'
CCTV	Cameras
Other	Space Signpost

At the time of undertaking this research, I was also conducting the investigation of street surfaces. Therefore I had a heightened sensitivity to the dynamism and sensorial properties of the street surfaces. For this reason 'pavements and paving' was included as a category; its inclusion also acknowledges the embodied sensory experience of walking in the urban environment, and can thus be interpreted as in-keeping with the notion of providing comfort and convenience. This inventory is not intended to be definitive nor exhaustive, rather it is indicative of the main types of street furniture present during the study. Questions remain about the appropriateness of some categories e.g. planting, although for the objectives of the Scoping Study the inventory contained sufficient contextual information.

Physical-digital artefacts: types

In 2010 physical-digital synthesis in outdoor public space was occurring in a number of ways. In order to situate the prevailing practice of that time and to inform the focus of my work, I undertook a short study of ways in which physical-digital synthesis was occurring. I coded and categorised the gathered data for analysis, settling on the following three themes: street furniture; installations; media facades.

Street Furniture

It appears from the inventory that many of 2010's technological objects and their associated systems were providing functional services similar to existing artefacts, only 'upgraded' e.g. 'smart' parking meters and interactive information screens, i.e. they had some form of autonomous or interactive functionality. Whereas public transport timetables were once electromechanical split-flap displays, now they are

often physical-digital boards. Today we can see alphanumeric information displayed on bespoke buildings such as the University of Munich's meteorological tower that was constructed in 2010 to collect and display weather data using sensors, actuators and LED displays (Technische Universitat Munchen, 2010). There were limited examples of new categories of objects as a result of physical-digital synthesis, although the functionality and user experience of the Space Signpost could place it as a new type of object in public space.

At the time of writing, bicycle stands and bicycle rental businesses were a familiar part of urban transportation infrastructure, but new ways of hiring bikes were made possible through physical-digital integration, e.g. Springtime's fully automated bicycle vending machines, and London's 'Boris Bikes' rental system. Furthermore, digital and material technologies were being used to subvert conventional infrastructure to enable new instantiations of street furniture, e.g. StarSight International created a solar-powered street lighting system using wireless network infrastructure that delivered lighting and wireless capabilities to large cities, and the rural developing world (Black, 2008). Hence, the combining of digital technologies and materials not only provides 'smarter' types of existing street furniture, but also enables new systems and engagement models that alter the ways in which objects can be accessed and function.

Installations

Artists were appropriating familiar street furniture and imbuing them with creative technologies, e.g. Tim Simpson created the site-specific installation 'Subversive Sightseeing' on London's Hungerford Bridge as a provocation to the user (Design Museum, 2007). It consisted of a coin-operated tourist telescope, modified to show an alternative panorama that responded to the telescope's movements by showing a digital film of superimposed catastrophic incidents. Changing the original role of existing street furniture whilst maintaining the infrastructure and interaction functionality, was also a feature of the 'Donation Meter Program' produced by Denver's Road Home (2007). It used non-functioning parking meters as 'piggy-banks' for the donation of money to help the city's homeless people. Both of these examples show the re-appropriation of familiar objects,

and whilst maintaining the object's form and interface, the user experience is extended or altered.

In addition to working with existing fixed objects, artists and designers were creating artworks using the same materials and digital technologies as found in many smart information displays mentioned earlier, e.g. sensors, actuators, and programmable or responsive LED light boards. Two instances of these were fixed coded structures, by United Visual Artists (UVA) and another by Peter Freeman. In 2006, UVA installed 46 LED light columns in the V&A Museum's garden that were programmed to respond to the visitors' movements (United Visual Artists, 2006). Whereas Peter Freeman's 'Travelling Light' art installation, located next to the M5 motorway by Weston-super-Mare, is a single column of 2,000 pre-programmed digitally controlled LED lights (Freeman, 2010). Both examples represent a diversity of approaches to the creative exploration, production and use of material and digital artefacts in public space. Freeman's work is unusual as it has remained in situ, due to being commissioned to represent a 'gateway beacon sculpture', whereas most examples of artistic installations appear to be temporary in nature. In addition, physical-digital synthesis in the urban outdoors was also being used creatively to address a range of themes, e.g. Soda's (2004) 'Energy' light installation explored participatory practices within an educational setting, and Lehni and Franke's (2002) 'Hektor' spray paint computational sprayed text onto the building walls, as a new form of public publishing tool.

Media Facades

Hausler (2009) produced seven technical categories of media facades in an attempt to define the 'screens' that pervade contemporary built environments, e.g. illuminated, mechanical; display. These can be permanent or temporary, attached to stationary or moving structures, or freestanding. Often the same technological ingredients are used as mentioned in the sections above. For example, Tatsuo Miyajima's (2003) 'Counter Void' in Japan was a glass piece that surrounded a large part of the Asahi building, and featured a black LCD clock counting from 9 to 1. Further creative examples of embedding media in architecture included Julian Opie's double-sided monochromatic LED display screens featuring his cartoon characters in public

spaces, and Troika's interactive experimental works. These creative practitioners are all producing work mediated by physical-digital objects, whereas through 2D and 3D visual projection technologies other artists and designers are exploring and challenging the relationships between materials and digital technology that can change people's perception and experience of the built environment.

Whilst projections are not physical, they can be seen as part of the physical-digital landscape due to the material fabric of the urban outdoors being used as a canvas or a screen, e.g. Graffiti Research Lab's LASER TAG (2007) - a large scale graffiti system that allows individuals to write with light directly on to buildings and Troika's (2003) 'Guerilla Projector' that converts phone texts to projected images on urban surfaces. Karolina Sobecka also used buildings as a canvas when creating the project 'Wildlife' (Sobecka, 2006); by putting a projector inside a moving car she devised a system that allowed the animations to be synchronised to the car's movement. Moreover, our perception of physicality and materiality can be altered by recent 3D projection technologies used by artists such as AntiVj (2006). A completely different take on projections in the environment is the 'Puffersphere' that puts projectors inside inflatable spheres to create 360 degree display surfaces that can be fitted as a multi-touch interactive system (Wired, 2010, p.87). These examples prompt questions regarding the affective evolving relationships between materials, digital technologies and space.

Chapter 4	Multidisciplinary Creative Designers Field Study	Self-Assessment form
		Conducted: 2010 and 2011

Name:

Learning Outcomes:

1. Demonstrate effective use of the online learning environment for gathering and sharing information, communication and reflection.
2. Ability to identify, interrogate and communicate conceptual, practical and emerging connections between specialisms, and individual's practice.
3. Evidence of reflection used to identify scope for enhancement within your own practice.
4. Ability to collaborate with peers to manage group activities.
5. High levels of self-direction, originality, reflection and informed decision-making in tackling and solving problems.
6. Ability to present your work in a professional context.
7. Ability to reflect upon the research activity and feedback in a considered and constructive way.

Chapter 4	Multidisciplinary Creative Designers Field Study	Design Explorations: V&A presentation transcription: Spatial Group
	Excerpt from presentations	Conducted: May 2011

Participant B and I have decided to look at a theme which we call Body Space and I will show you how. My project Daily Haptics looks at reconnecting people with tactility in our increasingly digitised world because we are not paying attention anymore to our senses in general, in particular to our sense of touch. I am creating experiences that the user basically has to engage physically with my design to experience the world... Skin is our largest sense organ and its ability to perceive touch sensations allows us to perceive the world that we live in.

This is due to different factors, obviously technology is usually the first one that we think about because we are not really interacting with the digital devices. We are losing our senses of touch in particular. People can just say, "Okay maybe it is the future of humans, we are all losing our senses and that is it." But no this can't work because without our sense of touch we just basically can't read.

I am trying to answer the question, "How can I reconnect people with tactility for as much lose our sense of touch." I started by documenting a typical haptic day I took a picture every time I touched something new during the day, this is just an assemble of the 2000 pictures that I took that day. And I

realised that even those basic objects we are interact with are really missing sensory interactions or sensory experiences. From there I kept on developing tactile experiences on daily objects and especially cups. All this has a purpose to try and train people's senses.

Chapter 4	Multidisciplinary Creative Designers Field Study	‘CSM Design Explorations Research Questionnaire - 2011’
		To be completed by 15 June 2011

CSM DESIGN EXPLORATIONS RESEARCH QUESTIONNAIRE

NAME:

Questions:

1. Please describe in detail what you feel you have learnt from participation in this research project.

2. Please describe how / if you feel your approach to your design practice has changed by participating in this research project.

3. List three strengths of the research project, and describe why you see them as strengths.

4. List three weaknesses of the project, and explain why you see them as weaknesses.

5. What could be improved in the future, if this research project continues?

6. Would you participate as a graduate? Would you act as a mentor to current students?

Any other comments about any aspect of the research project?

Chapter 5	Physical-Digital Artefacts: Four Case Studies	Creative writing pieces: Space Signpost Pelican Crossing iPlus Points
		Authored: 2010-2013

The Voice of the Space Signpost

I am rooted, exposed, ready to perform. At once unique and familiar.

I belong to one, to many, to all.

My strength is my vulnerability.

I live in a perpetual state of willingness and anticipation. Rewarded as the sun shines.

People gather around me.

The bold walk purposefully toward me. The shy hang back, lurking, unsure.

I surprise, I inform, I entertain.

I am a performer. I'm Fred Astaire and whoever requests Venus, for that moment they become, without realising, my own Ginger Rogers.

Day or night I am here. I judge no-one. I refuse no-one. I reject no-one.

For drunk revellers – I move.

For school-kids – I twist and roar.

For workmen in hard-hats and reflective coats I point to Uranus.

But when it's grey, and raining, and the Saturn I have pointed to for the past three hours has brought a sense of melancholy to the environment – I become a wallflower, peculiar, awkward. I want to retreat.

I am rejected. Time and again.

But, DO NOT press my screen as some act of pity, scurrying off after the charitable deed.

Do not expect me to dance alone, I loathe to dance alone.

I shall remain poised, keen, ready to charm and embrace.

Would you care to dance?

Creative writing research method, 2010

The Pelican Crossing

I am The Conductor

standing straight and proud, intent on the performance.

Tap, tap, tap, my batton, my magician's wand.

Bach, Debussy, Rachmaninov – I know each note.

I am ready to direct each orchestral player.

Upon occasion the symphony is exquisite, in complete and transcendent harmony.

They listen, I lead, every actor hits their cue.

A unified magnificence.

Alas this is rare.

Who will turn up? I never know.

Tap, tap, tap. No one notices.

They start, it's mayhem, no order, no score.

I persevere, hopeful a melody will emerge.

I despise jazzzzz.

Improvisation breaks my heart. I am compelled to continue.

The system knows no dissent.

The actors play free-form.

Wait! There he is, regular as clockwork.
He listens. Hears. Watches. Plays.
My spirit is lifted - he's pitch perfect.

Tap, tap, tap...

Creative writing research method, 2011

Absence, presence and obsolescence: the testimonial of a web-kiosk

"I was implicated in the political, social, financial and cultural systems of government and commerce. Before the contracts were signed, my fate was sealed. My own assemblage blighted by the potent smartphone ecosystem.

How could I compete?

How?

I was obsolete.

Situated technology at a time and in a place of mobility. I was fixed. Static.

Shackled.

How could I compete with the network operators, hardware, software, operating systems, mobile apps – MOBILE APPS – content, services and advertising? I was an iPlus web-kiosk. No more.

Never was I more alive than when on paper.

Never were more eyes on me than when immaterial.

Never was I more present than when absent.

When the Council, the government and commerce were in synchrony, I was visible – online, in documents, blueprints and brochures. I was negotiated, promoted and

celebrated. I extended democracy, equality and social inclusion. I was legible. I was a strategic victory.

But when present, when actually *there*, it all changed. Alongside the lamp-posts, bins, random metal boxes, sign-posts and bus stops, pedestrian crossings and bollards. Outside a pub garden, next to a pancake kiosk and beside a bike stand. I was where everyone was moving from.

I was born obsolete. *Designed* obsolete. Present, yet never more absent. Overlooked, an uncertain object, frequently broken and never understood.

How could they create me? Invisible. Dull. Designed to fade. What were they thinking?

Most of the time I was alone. Ignored. Abandoned. Absent.

Never was I less present than when I was there.

I was absent in my presence, and obsolete. YOU DESIGNED ME TO BE OBSOLETE.

You designed me to be obsolete.”

Interview terminated.

Creative writing research method, 2013

Chapter 7	Urban Interaction Design Workshop	Participant information brief
		January 2015



Workshop Participant Information Brief

Project: Designing Physical-Digital Artefacts for the Public Realm

You are being invited to participate in a workshop concerning how practitioners and researchers from multiple disciplines can improve the design of physical-digital artefacts located in the public realm. As this is research leading to published work, it is important that you understand what you are being asked to engage in. Please can you read the following information clearly before you agree to participate.

What is the purpose of this research? This workshop aims to develop and produce a design framework, and set of principles, that contributes to the conceptualisation, research and design of physical-digital artefacts for the public realm. Through interviewing and designers, commissioners, makers and users of physical-digital artefacts as case-studies, this research will inform the development of the design framework. This work will support designers of physical-digital artefacts to produce pieces that are better designed, and more closely appreciate the needs and values of users, and the environmental context of the artifact.

Why have I been invited to participate in this workshop? Your experiences and opinions about the creation and use of physical-digital objects are important to inform this research. You are not obliged to participate in an interview but if you do you will be given this information sheet and asked to sign the interview consent form. You are free to withdraw at any time and without giving a reason.

What are the possible benefits in taking part? This work will have positive implications for future design and experience of physical-digital artefacts in public spaces.

Will what I say be kept confidential?

Your name may appear in future academic publications or conferences unless you state otherwise, in which case, you are ensured complete confidentiality. Secure storage of data (limited access and encrypted protection) is ensured. We aim to adhere to the highest standards of research integrity and ethics.

Contact for further information? Feel free to contact Researcher, Jo Morrison, j.morrison@csm.arts.ac.uk, or Director of Studies, Professor Jonathan.Dovey@uwe.ac.uk for any further details about the project. If you have

concerns about the way the study is conducted you may contact an independent person within UWE who will respond. See Mandy Rose, UWE, Director DCRC, mandy.rose@uwe.ac.uk.

Date: _____

Chapter 6	Urban Interaction Design Workshop	Participant consent form
		January 2015



University of the
West of England

Consent for the use of data

Thank you for agreeing to participate in the University of the West of England, Bristol research project or event described below. Please complete the following form to confirm your consent to participate.

Title of research: Urban Interaction Design Workshop - Designing Physical-Digital Artefacts for the Public Realm

Date: January 23 & 24 2015

Partner organizations: _____

Please circle your answer for the following questions:

I am happy to take part in this workshop & interview and I am aware of the nature of this discussion: Yes | No

I consent to be recorded in the following media:

Images| Audio-visual | Audio Only | Note-taking

I would like my identity to be concealed in any subsequent writings: Yes | No

Requested pseudonym (optional): _____

Please sign to confirm the consent you have granted above. You have the right to withdraw your participation in the research at any time.

Name: _____ Date: _____

Signature: _____

Chapter 6	Urban Interaction Design Workshop	Workshop posters
		23 – 24 January 2015



Urban Interaction Design Workshop



Affording users a rich multisensory experience that requires a sensitivity to surroundings might be a useful starting point for investigating what types of material properties, perceptual qualities, contextual aspects and direct actions are needed for conceptual and practical research in interaction design.

Chapter 6	Urban Interaction Design Workshop	Participant Questionnaire
		Completed: 24 January 2015

**Urban Interaction Design Workshop 2015
Participant Questionnaire**

Participant Name:

1. How valuable for your project/your practice was the workshop overall?

5
 4
 3
 2
 1

Briefly explain your answer:

2. How valuable for your project/your practice was the MATERIALITY session?

5
 4
 3
 2
 1

Briefly explain your answer:

[The following questions were presented in the same format as above, and continued on from the two questions above].

3. How valuable for your project/your practice was the MULTISENSORALITY session?

4. How valuable for your project/your practice was the ASSEMBLAGE session?

5. How valuable for your project/your practice was the EMBODIMENT session?

6. Do you think the approaches of MATERIALITY, MULTISENSORALITY, ASSEMBLAGE and EMBODIMENT would be useful for designers from multiple disciplines to research and design physical-digital objects for the public realm?

7. Did the term SET OF CONCEPTUAL MATERIALS FOR DESIGN make sense to you?

Briefly explain what alternative terms you think would make more sense to workshop participants and others involved with designing for urban interaction?

8. How valuable for your project/your practice were the CONCEPTUAL MATERIALS?

9. How would you rate the usefulness of the conceptual material: VULNERABILITY?

10. How would you rate the usefulness of the conceptual material: CONTINUITY?

11. How would you rate the usefulness of the conceptual material: HYBRIDITY?

12. How would you rate the usefulness of the conceptual material: CREDIBILITY?

13. How would you rate the usefulness of the conceptual material: MUTABILITY?

14. How would you rate the usefulness of the conceptual material: MOBILITY?

15. Which CONCEPTUAL MATERIALS did you choose to work with, and why? Please describe how the CONCEPTUAL MATERIALS have impacted upon your thinking and making at the workshop?

16. Do you think that the SET OF CONCEPTUAL MATERIALS FOR DESIGN would be valuable to help improve the design of physical-digital objects in the public realm?

16. How valuable for your project/your practice was the multidisciplinary community of inquiry?

Chapter 6	Urban Interaction Design Workshop	Semi-structured interview: Stage 5 group plenary transcript
		Conducted: 23 January 2015

DESCRIBE EXPERIENCES of what you learnt about your work should your work be placed there or similar place? How did it contribute to your work?

“I thought that my adapted basket-lattice digital piece would respond to sunlight and wind etc, but in that space it would be a transformative piece that senses fear and despair, so it’s about protecting those people from what is maybe a violent space in the evening, so it can also sense heightened testosterone and protect the violent. So that is a direct response.”

“It showed that my project would only work in very specific sites effectively. It would give a very flat, not particularly read out in that space, and I would have to change the input of inhabitation rather than dust”

“I would have to change the scale of mine and make it multiple, rather than just one small thing. You would either have to have it work on a massive scale or work in multiple within that space”.

“From walking around the space, I felt like it was designed with a respite in mind, a big convivial lawn area which invites people to stop. It made me think about site specific sound triggers with the purpose of complete sonic tranquillity, a break in the flow of business.”

(MUTABILITY DISCUSSION)

“This time seemed more alive at certain times. Is there a point where certain levels of interaction can be added? Is there anything connected with the water that is outside of the water that children can interact with, but connect to the water in some way that will allow an interaction all the time with the material, both direct or indirect interaction, how do you extend the water out?”

“It’s a space that has been designed to be very adaptable, but if it’s not being adapted it’s nothing”

“We are thinking about our cultural relationship with an underpass, people seeking shelter not as a crossing place, but as a stopping place or sleeping place...”

Chapter 7	Urban Interaction Design Workshop	Semi-structured interview: participant 4, transcript
	Excerpt from transcript	Conducted: 24 January 2015

JL Absolutely. I must admit that I didn't expect to get so much out of it, and it's raised really obvious flaws in my own project, but then it has got me to think far more about the emotional element of design, which I think I was quite aware of but working with a multidisciplinary team has raised lots of different possibilities for me, so yeh I found it great Really enjoyed it.

JM Conceptual materials - how did they affect your thinking? (credibility etc)

JL Taking VULNERABILITY into the space out there, and positioning my object within that has had quite a powerful impact, and this is because the element that I can't believe I've missed, I've been talking about these living growing structures, but I've not considered whether they have an emotional identity of their own, and if they do, what that emotional identity is. And if you put my kind of object into a public space it forces those sorts of questions, so vulnerability forces those sorts of questions. SO, vulnerability was very powerful for me.

I think HYBRIDITY and MOBILITY I kind of brought with me, but hybridity has been expanded by looking at other people's practice, particularly with regard to sound, because sound isn't something that I had considered before but again I'm working with what I hope to be a kinetic object and possibly with a set of materials that have their own sound qualities, so it's really encouraged me to think about that.

MUTABILITY, this is the bit that I'm still working on with my project because it's so conceptual, and almost has to be realised in the digital before I can replicate it in the physical so having an actual space to conceptualise it in was really helpful as I have

to consider how it is going to manoeuvre around in space, in real space.

CONTINUITY, that memory element, its got me thinking if I'm going to position myself in the future I'm essentially creating a memory, it's become a bit complex but that's very useful for my own work.

JL In terms of the actual framework and the elements therein, they have really covered alot of the principles and the objectives in a range of multidisciplinary design so it was a language that made sense to all of us yet we've all come from very different backgrounds so that was really helpful.

JL Architecturally, conceptual material makes sense to me, in my overall understanding of the design process that makes sense to me.

	iPlus Points Internet Kiosk	Photographic documentation
		Bristol, 2011

