dwelling + design

exploring the potential for dwelling
to inform media design

with the installation

dark; and the light

meredith crowe

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Abstract

The theory of dwelling is a valuable topic for media designers to explore in order to further our understanding of the connection individuals make with designs. This research suggests that to promote dwelling successfully, digital design must prompt people to understand it in essence and balance, must encourage private or communal reflection and development, and must encourage people to connect meaningfully with the design; this manifests by people caring for it and being conscious of it. *dwelling + design* explores the theory of dwelling as research through design and research for design; through the interactive installation *dark; and the light*. Dwelling is discussed with reference to three main philosophers; Martin Heidegger, Christian Norberg-Schulz, and Pavlos Lefas. As a wider investigation of how dwelling can inform design practice, the theory is also investigated both as an informative theory for creative practice and an attitude that can be embraced by people when receiving or encountering creativity. *dwelling + design* finds that dwelling is valuable to designers as an attitude towards the design process, but has limited success as an informer of aesthetics or as an intended experience for participants.

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Introduction

This thesis looks at the potential for media designers to use the theory of dwelling to support their understanding of how individuals connect with design. Dwelling is the practice by which we connect with, and make sense of, spaces and objects. It requires thinking and creating or caring for the world around us, and making a connection with it that brings balance and understanding to our lived experience. Dwelling is both a theory that discusses our connection to places and objects, and a practice by which people connect with things meaningfully. This discussion of dwelling focuses on the work of three main contributors – Martin Heidegger, Christian Norberg-Schulz, and Pavlos Lefas. These philosophers are looked at in most detail because their work shows a progression of the theory from Heidegger's texts about dwelling first published in 1951 through to Lefas' *Dwelling and Architecture* in 2009. Norberg-Schulz's 1985 text *The Concept of Dwelling* bridges Heidegger's and Lefas' discussions, by focusing on more of the communal opportunities dwelling presents. Especially from the perspective of Heidegger, dwelling is a location-based activity. The home is the most commonly discussed facilitator of its practice, however at its core, the activity of dwelling is not limited to taking place in the home or in any single, or even physical, space. Heidegger believed it is by dwelling that we make sense of our world and take our place in it.

Media design is a relatively new discipline and its influence is growing very quickly. Using the theory of dwelling and the underpinnings of how dwelling allows us to make sense of our world, the installation that accompanies this thesis, *dark; and the light*, explores what can result from considering this theory through the process and execution of a media design installation.

In part, Heidegger, Norberg-Schulz, and Lefas use dwelling as a framework to talk about why individuals live the way that we do. As Lefas states, "Heidegger does not seem to imply that the gathering of earth and sky, divinities and mortals has happened, happens and will always happen in a specific manner, under some specific, invariable conditions. On the contrary, it is clear that the ability to dwell is not innate to people, but is gradually built up over time" (2009, pp.84). Heidegger believes that we belong to this world through our connection to it; through our understanding of its oneness; an understanding that we gain through dwelling. Norberg-Schulz suggests that if we do not dwell, we do not understand ourselves, or others, or places and objects; and we cannot live consciously (1985). While it is not realistic for the majority of people today to attain to dwell the way Heidegger suggested we do, Lefas believes that understanding the concept would enrich our lives. This means that while the environments and objects with which we dwell will have inevitably changed, the value of the practice has not lessened.

For the practice of dwelling to continue, it must be made possible for people through digital means. Designers must develop an understanding of how they can encourage and facilitate it through understanding it historically and how it can inform creative discourse today. Media design has been used to enhance personal space like the home to facilitate dwelling, as in the following exert from Didakis;

> *It seems that architectural practices increasingly promote the embedding of computational media within physical structures, in order to formulate post-human dwelling according to technological utilities that have the power to become fundamental extensions of selves and personalities.*
>
> 2011, pp.309-10

However, this analysis does not approach media design practice, but looks at it as a contributor to built space. *dwelling + design* looks at a much wider definition of *space* to include the non-physical and this allows it to highlight media design specifically.

dark; and the light uses the theory of dwelling both to guide the design process, and as tool for analysis of people's experiences. This research does not intend to prove that dwelling could be a universally applicable philosophy for media design to work with; rather, I seek to show the potential of finding theories to work with in design projects that create a feedback loop between the design and design thinking. This research outlines three criteria that media design can work with to promote dwelling successfully: prompt people to understand it in essence and balance; can encourage private or communal reflection and development; and can reward people's connection with design through thinking and caring. This research looks at dwelling both as an informative theory for creative practice and as an attitude that can be embraced by individuals when receiving or encountering creativity; both of these phenomena should be investigated by designers who intend to embody dwelling in their work.

Because of the complexity and individuality that dwelling demands, this research is most beneficial for designers working with briefs that allow them some flexibility in their attitude and process. For dwelling to be a valuable informer, the design process must be iterative, and allow for changes and reactions throughout the development of a project. Dwelling is not supportive of working single-mindedly towards a non-negotiable outcome.

Motivation

Media design currently has a very wide scope to impact people's lives. It is causing us to redefine our community and allowing us to navigate our interpersonal relationships from all over the world. Designers need a thorough understanding of the effects that media design can have on people; our cultural and social patterns. If, as Turkle believes, we are increasingly facilitating our interpersonal relationships through media design, we need to understand these digital spaces in more depth (2011). As Didikas states, "it seems that the destiny of technology is to access all of our intimate and secure places" (2011, pp.308). While dwelling is adopted mostly by architects as an underpinning to creative work, it is just as relevant to media design and other forms of creativity as long as we can accept that "places derive from things that make dwelling possible, and… dwelling is identified with man's being-in-the-world… place is where human beings are in-the-world" (Lefas, 2009, pp.122). And *where we are* currently, is a combination of arguably equally important physical and digital spaces. As Antonelli states, "there's no place like home, and in the networked age a familiar interface, with all its windows wide open… will do just fine" (2008b, pp.152).

Methodology

This project is a combination of qualitative literature analysis, research for design, research through design, and phenomenological research. The methodology of this project can be broken down into three main phases:

Phase one seeks qualitative analysis and synthesis of literature surrounding the theory of dwelling, in particular looking at the work of Heidegger, Norberg-Schulz, and Lefas. This includes the drawing of parallels between the work of these philosophers. It also looks at some of the challenges facing media design today, and starts to analyse how the theory of dwelling could help designers address these.

Phase two is designed to embody the knowledge gained in phase one and present it back for discussion through design and experience. It builds off Frayling's *Research Through Design* method, which focuses on the role of the design output as an instrument for enquiry; to formulate, develop and validate (1993). This phase also involves the finding and analysing of precedents to contribute to the design. It involves the design and exhibition of an interactive environment in an art gallery.

Phase three uses a phenomenological approach to conduct interviews and facilitate discussion with those who experienced the installation. The key themes identified will be combined with the initial research and any subsequent literature necessary to form the thesis.

Dwelling

The theory of dwelling looks at individuals' relationships with their environment; both built and natural, and potentially, digital. Dwelling is a practice we use to make sense of what is around us, places and things, and of ourselves. It concerns the semiotic connections we have with the world. It is also one of the ways through which we grow as people, by making choices, and seeing ourselves reflected back in those choices. "One of the basic human requirements is the need to dwell, and one of the central human acts is the act of inhabiting, of connecting ourselves, however temporarily, with a place on the planet which belongs to us, and to which we belong" (In. Tanizaki, 1977, pp.IV). It is this connection and sense of belonging that has brought dwelling to the centre of this research. This chapter looks at three theorists who discuss dwelling at length; Martin Heidegger, Christian Norberg-Schulz, and Pavlos Lefas.

Martin Heidegger

Martin Heidegger (1889-1976) is one of the most well known theorists to have contributed to the field of philosophy, and particularly dwelling. He was the first to discuss the notion of dwelling in any detail. In 1951 he wrote two key

texts, "Building Dwelling Thinking", and "… Poetically Man Dwells…" Core to Heidegger's theory of dwelling is the activity of building. He stresses the importance of man building in a way that connects him to, and brings him awareness of, his place in the world. Heidegger emphasised the particular and concrete taking precedent in our lives over the general or abstract (Lefas, 2009). This is where his discussion of dwelling stems from. He urges us to take measure of our lives among things, and believes that this is how we can make sense of our world. For Heidegger, the world "is not a mere collection of things – countable or uncountable, known or unknown - that are present at hand… world is never an object that stands before us and can be looked at." (1971a, pp.23). He believed that people and space are not separate; our experience of the world is our experience of lived-in space.

Heidegger first wrote of dwelling in a landscape of physical and emotional destruction and desolation in post WWII Germany. The final paragraphs of "Building Dwelling Thinking" state, "however hard and bitter, however hampering and threatening the lack of houses remains, the *real plight of dwelling* does not lie merely in a lack of houses" (pp.159). He believed that feelings of homelessness are not necessarily a result of being without a physical house. Here Heidegger draws the practice of dwelling away from any specific built space; he distinguishes between physical space and lived-in space. He believed a lack of housing was

a technical problem that could be solved practically; dwelling he discussed as a human condition. He argued that man dwells in places, not abstract or arbitrary spaces, and by doing so, Heidegger placed dwelling as the most important concept for consideration of the built environment. His views attracted attention in the second half of the twentieth century when the public felt that modern architecture was incapable of providing real homes for real people. The wide spread opinion was that modern architecture disregarded any emotional or historical significance, and categorised people as purely rational. It was seen as distant and utopian (Lefas, 2009).

The *Fourfold*

Heidegger believed that attaining to dwell is how people find happiness and peace. He emphasises the importance of balance, and insists that we understand, and are continuously aware of, the primal oneness of what he calls the *fourfold*. The *fourfold* consists of earth, sky, divinities, and mortals. In the following exerpt, Heidegger discusses what he means by the fourfold:

Earth is the serving barer, blossoming and fruiting, spreading out in rock and water, rising up into plant and animal…

…The sky is the vaulting path of the sun, the course of the changing moon, the wandering glitter of the stars, the year's seasons and their changes, the light and dusk of day, the gloom and glow of night, the clemency and inclemency of the weather, the drifting clouds and blue depth of the ether…

…The divinities are the beckoning messengers of the godhead. Out of the holy sway of the godhead, the god appears in his presence or withdraws into his concealment…

…The mortals are the human beings. They are called mortals because they can die. To die means to be capable of death as death. Only man dies, and indeed continually, as long as he remains on earth, under the sky, before the divinities.

When we speak of [earth, sky, divinities, or] mortals, we are already thinking of the other three along with them, but we give no thought to the simple oneness of the four.

Heidegger, 1971b, pp.148-9

While it is hard to envision dwelling by actively living in this balance in the modern world, understanding where Heidegger's concept of dwelling came from can help us move forward with it. He believed that when we dwell, we place ourselves in the *fourfold* by preserving what it is in essence, "in saving the earth, in receiving the sky, in awaiting the divinities, in initiating mortals" (1971b, pp.149). We would never be capable of staying true to the *fourfold's* nature if dwelling were as simple as staying on earth under the sky, before the divinities, among mortals. "Rather, dwelling itself is always a *staying with things*" (1971b, pp.149). This statement, staying with things is incredibly interesting when we look at how it can relate to media design. What exactly is it possible for us to stay with, when our *things* are digital? Or are digital *things* resigned to being facilitators and mediators for other connections.

Thinking and Building

In "… Poetically Man Dwells…" Heidegger places more emphasis on dwelling as an activity of thought. He believes that man can build and dwell, "only if he already builds in the sense of the poetic taking of measure" (1971c, pp.227). He believes to build or create is to contribute to the nature of something. This can be in the form of building something new, or restoring or caring for something old.

Lefas suggests that Heidegger does not make any comment on aesthetic or design because it was never his intent to dictate how we should build, or to formulate any rules for architecture or design. He speaks instead of how we come to creating, we "should take into account the concerns of the philosopher, that is, we should think on the real end of the building" (Lefas, 2009, pp.44). Heidegger believed that building should not only fulfil practical needs, but all needs associated with being-in-the-world, "today's houses may even be well planned, easy to keep, attractively cheap, open to air, light, and sun, but do the houses in themselves hold any guarantee that dwelling occurs in them? (Heidegger, 1971c, pp.146). I would argue that no design, digital or otherwise, can hold a guarantee to impact on people in a specific way, there always must be a two-way relationship where the design offers the opportunity for a kind of interaction and people respond. However, if the design does not offer anything more than efficiency and function then only a small minority of people, if any, will gain more than that from it. Designers need to be asking if the objects and media we are making today give people opportunities to connect with them in ways that are meaningful.

Christian Norberg-Schulz

Christian Norberg-Schulz (1926-2000) was a Norwegian architect, historian, and theorist. He is internationally acclaimed for his architectural theory and has published numerous texts that look towards a phenomenology of architecture and built space. In 1985 the first English version of his book *The Concept of Dwelling* was published. At the time he was the Dean of the Institute of Architecture at the University of Oslo where he had been teaching for twenty years. *The Concept of Dwelling* discusses his theory and emphasises focusing on the concept of place rather then abstract space.

Norberg-Schulz places dwelling as being a part of a community; "When dwelling is accomplished, our wish for belonging and participation is fulfilled" (1985, pp.7). Much of his discussion of dwelling focuses on the potential for communal interactions and growth.

Modes of Dwelling

Norberg-Schulz's *The Concept of Dwelling* (1985) discusses four modes, or stages, of dwelling – settlement, urban space, institution, and house.

Settlement is the stage where *natural dwelling* takes place, as to understand a settlement we must also study the given natural environment. Norberg-Schulz argues that an already existing place must also be understood as a settlement; that a new building within an old context is also an act of settling, it is "an answer to the original problem of finding a foothold in a given world" (1985, pp.13).

Urban space is a result of settlement, where people come together, and is, "essentially a place of discovery" (1985, pp.13). In urban space, man dwells in the sense of "experiencing the richness of the world"; of other people (1985, pp.13). Norberg-Schulz calls this mode *collective dwelling*. It is a place of informal gathering or accidental encounter.

In this urban setting, when choices are made between the people present, patterns of agreement are established. This facilitates a more structured kind of togetherness. Agreement between people requires complimentary values, and this forms the basis of a society. Such a place that houses and expresses these values is generally known as a public building or institution. Norberg-Schulz refers to the mode of dwelling it accommodates as *public dwelling*, where collective choice defines the nature of interactions there.

He goes on to say that, "choices, however are also of a more personal kind, and the life of each individual has its particular course", and that dwelling must also comprise of that withdrawal which is necessary to develop an identity (1985, pp.13). He refers to this mode as *private dwelling*, in the house or home. He describes the home as a place "where man gathers and expresses those memories which make up his personal world" (1985, pp.13).

Norberg-Schulz claims that these four modes constitute the total environment and that we must dwell in, and find balance in our lives in each of these modes.

Gathering

A consistent theme across Norberg-Schulz's discussion of the modes of dwelling is a gathering of people, and a development of meeting and choice. "What we need today is another kind of freedom which understands the settlement as a coming together of diversities, albeit with the respect for the shared *genius loci [spirit of the place]* as a common denominator" (1985, pp.50). He believes that sharing a common place with someone is enough of a connection for us to engage with that person. He stresses dwelling as a method for making decisions, and for the development of how and why we make decisions. Choice is very important to the concept of dwelling, especially communal dwelling. It is not enough just to be together, we must be together as our own individuals. He states that dwelling

allows us to understand and define our world, "in the sense of gaining an individual identity within a complex and often contradictory fellowship" (1985, pp.51). Dwelling encourages us to share in light of the diversity of people around us.

Pavlos Lefas

Pavlos Lefas is a faculty member of Architecture at the University of Patras. His 2009 book *Dwelling and Architecture* pursues his interest in architectural theory, using Heidegger's and other philosophers' and phenomenologists' concept of dwelling to discuss modern and contemporary architecture.

Lefas begins by outlining Heidegger's first dwelling focused text, "Building Dwelling Thinking". He compares the context in which this lecture was first given to the problems of a feeling of homelessness in our modern world. Lefas believes, "the sense of the unfamiliar, of homelessness that pervades modern man is due precisely to the fact that man no longer dwells in the full sense of the word (2009, pp.16). He believes that today, we misunderstand dwelling, that we don't see it as its own activity. To Heidegger, dwelling was how we *are* in the world, "it is by no means confined to living in a house" (Lefas, 2009, pp.17). Lefas goes on to discuss Heidegger's linkage of building with dwelling, "we do not dwell because

we have built, but we build and have built because we dwell, that is, because we are *dwellers*" (Heidegger, 1971b, pp.145). Dwelling does not take place after we arrange a set of existing objects into a structure, "dwelling is the result of human beings getting involved with things" (2009, pp.18). It requires us to invest in the world, to participate, to consciously and intentionally be engaged. While Lefas does not give the same weight to the *fourfold* as Heidegger, he does emphasize that dwelling requires creating a oneness, understanding the balance, and a staying with things.

Dwelling, Building, and Thinking

Like Heidegger, Lefas draws thinking as an essential part of dwelling. He believes that while it is by building that we make spaces and artefacts belong to us, it is by thinking that we make sense of them. "Thinking is not a detached mental activity of a distant observer, but a complex procedure by which man in his everyday life, involved with things, comes to know the world of which he is a part and his position in it" (Lefas, 2009, pp.38). Lefas also acknowledges that the lives we lead are more choice driven, and therefore, thought driven then in Heidegger's time. "The contemplative life may compensate to some extent for the authenticity of dwelling that we have now lost… thinking is the first step towards overcoming the dwelling crisis" (Lefas, 2009, pp.38). If we give thought to the elements of dwelling that we are lacking in our modern lives, they are no longer lacking to the same extent. Our giving thought to them brings them forward for us.

Lefas suggests that the only way we can orient ourselves in this world, the only way we can belong, is by creating, "the earth becomes a homeland only through the artifact" (Lefas, 2009, pp.41). We attain to dwelling in environments where we can feel the traces of our being there. He suggests that utopian building theories resulted in a de-individualising of people and this posed a huge threat to dwelling, which is reliant on each and every one of us being-in-the-world as ourselves. "Individualisation is the first step in the creation of what may be called the identity of a building – or a settlement – which is a rather ill-defined yet immediately recognisable aggregate of features" (Lefas, 2009, pp.80).

Some artefacts and buildings do not feel personalised or allow personalisation. It is these spaces that do not support dwelling.

> *Graffiti, vandalism, and the desolation we now see in neighbourhoods that were praised by architects and politicians in 1970's are, to some extent, manifestations of people's decision to make their presence visible. Scores of marginalized youths did so in the 2005 riots in the banlieux of Paris and other large French towns. Contempt for their physical environment – a symbolic act against a society that does not welcome them wholeheartedly, and which does not offer them the actual home that they*

need – was only intensified by the feeling that the only way to change it – that is to say to build – was it destroy its present configuration.
Lefas, 2009, pp.115

Building for dwelling is more about creating an identity or personalising than about actual construction; it is about participating and investing in the space or object. Lefas believes that this un-prescribed use of artefacts or spaces is a type of personalisation, a building through destruction of intended purpose. It is getting involved with an environment that brings us closer to dwelling; when we feel comforted and represented in an environment, we build it by caring for it.

Collective Dwelling

Lefas seems to agree with Norberg-Schulz about the importance of the role a community plays in dwelling, "staying… was achieved in a specific cultural environment; staying was achieved by a whole community in community" (2009, pp. 24). And on these grounds he states that being-in-the-world is also achieved by each society as a whole. He believes that belonging to a community is manifested in two ways – participating in collective activity, and, participating in independent but parallel activities. Lefas states that the building of a monument would be an example of the first, and the construction of family houses, the second.

He believes the challenge today is that our sense of belonging to a community now comes from a very different place. "The influx of images from advertising, from the constant movement of people and vehicles, from shop windows, from information of all kinds and forms, that succeed each other at a rapid pace, has rendered space, defined solely by physical elements and by architecture in the conventional sense of the term, irrelevant" (Lefas, 2009, pp.161). Our perception of collective spaces such as cities has become far less about experiencing a series of buildings and is now an experience of a series of events. This is important for media designers because with people attending to the digital spaces we inhabit as often as the physical, much of what we now look for to anchor ourselves in collective spaces is digital rather then architectural. The same core concepts of dwelling apply if we attain to dwell with digital rather then physical content. The designs must prompt people to understand them in essence, they must encourage private or communal growth, and they must reward people feeling connected to them through thought and care.

Technology and Dwelling

Lefas stands very strongly against attaining to dwelling by neglecting advances in technology and living in a simpler historic way. He believes that there would be no merit in returning to a building of more simple structures because it is not the physical skill of doing so that we lack. It is our "inability to stay, to live there, caring for and fashioning things, full of feelings and thoughts" (Lefas, 2009, pp.50). He

believes this inability is the result of our technological culture, but that rejecting this culture would not solve the issue. People may acknowledge their dependence on technology, but are unlikely to acknowledge their dependence on society (Lefas, 2009). Technology has moved us away from a lifestyle that relied on a community for building or hunting, and left us to withdraw into our own individual daily experience, we must find ways to dwell under these new conditions.

Lefas believes that creating and using technology is a natural development for curious beings. Heidegger talks of tools as a means to bring forth, but says that we destroy the essence of tools if we start to use them without any real reliance on them. If we use tools unnecessarily or frivolously, we fail to connect with what we are making. Lefas emphases that humans have always worked with tools, they are "a natural extension of [our] arms", and states that machines are an anticipated next step, "man would use machines as soon as he was able to make them" (Lefas, 2009, pp.55). The pivotal point is how it is we use machines and tools, whether we use them naturally and consciously or whether we abuse them. Lefas gives examples of what he calls "technological arrogance", namely huge glass structures in climates that enjoy many hours of sunshine. These buildings carry large environmental costs because of the energy consumed making them a comfortable temperature to live or work in. He states that these buildings could be seen as "being indifferent to local conditions (the earth), defiant of the climate (the sky), and an insult to what

might be considered the order of things in the world" (2009, pp.56). He goes on to say, "in a nutshell, they are seen as showcases of waste and absurdity. No dwelling in Heidegger's sense can ever be achieved in this kind of building" (2009, pp.57).

It is important, then, for people to understand technological advances so that we are in a position to make our own judgments about what to consider technological arrogance. Lefas emphasises that we must confidently make informed judgments if we are going to be able to dwell with any technology. Resnick, in his 2013 TED talk states, "young people today have lots of experience … interacting with new technologies, but a lot less so of creating [or] expressing themselves with new technologies. It's almost as if they can read but not write." He outlines the difference between consuming media, and producing something creative, and believes that to understand, or fully participate in media, we must do both. As architects have found a language of the built environment that they can use to communicate with people, media designers can develop a language that allows people to connect with, and understand digital designs.

For media design this comes down to the intent and thoughtfulness of the designer, and placing an emphasis on how the design connects with people. To facilitate dwelling, designers need to be making things that encourage people to be in the world attentively and thoughtfully.

Non-Place Based Dwelling

Towards the end of his book, Lefas forms a theory of non-place based dwelling. His argument centres on the idea that many of us, in today's world, are not bound by specific places for any extended period of time, yet we manage find ways to be happy, to grow as people; to dwell. Referring to Bauman's 2003 book *Liquid Love*, Lefas questions the following;

> *Peoples relations in the modern age are distinguished by the ephemeral, by an inherent inability to endure in time. The demands of mobility, the vast number of worlds that compete for our attention and of possible choices have certainly undermined our inclination and ability to devote our attention to specific people, specific activities, and specific relationships. Has it perhaps also undermined our inclination and abilities to form ties with a place?*
> 2009, pp.163

If this is the case, that we no longer form ties with a place the way we used to, has this made us incapable of dwelling, or are we finding new ways to achieve it? "How can we be at home at all in a world in which the continual movement of goods, people, and information continually erodes all sense of permanence from any place?" (Betsky & Adigard, 2008). Lefas thinks we are moving towards a situation

"in which we feel our home could be everywhere, and most importantly for any given time span – for a whole life time or for a couple of days; or even scattered among many places" (Lefas, 2009, pp.170-1).

Lefas goes on to say, "a large number of things we used to identify ourselves with that were located "at home" can now be carried in our bags or pockets: personal archives, favourite books and music, pictures of loved ones. Our references to the past and our aspirations to the future can move with us" (2009, pp.168-9). We can communicate with our families from across the world, and send them photos or videos of what we are doing; essentially we can share our experience with them without needing to share physical space. If this is the future of dwelling, then media design becomes its facilitator, and media designers become the authors of how this content is exchanged. It is not within the scope of this thesis to explore this thoroughly, however much of the way *dark; and the light* was informed by dwelling could also extend to the design of such systems. Also for design to move forward in this area, facilitating dwelling through media design installations and objects could prove to be a step that must be taken before people are open to dwelling in purely digital space.

dark; and the light has a different approach than these mobile devices. Devices like cell phones and tablets have been helpful in that they have begun to accustom

people to dwelling with digital media, but they rely too heavily on the owners memories and associations to embody dwelling at its core. The dwelling that occurs with them has very little to do with the design of the item; it is facilitated by the technology, and the person. This means that all of the work is being done by the person, rather then the design leading them to expand their thinking, which in turn means the scope of the development for the person is limited. While it is still a valuable practice for people, there is more that media designers can do to improve the likelihood, and quality of dwelling that can be facilitated by our outputs.

Bringing Dwelling to Media Design

From these philosophers, there are core concepts that this research explores, and uses to develop the installation *dark; and the light*. *dwelling + design* develops three criteria that media design needs to address in order to bring dwelling forward.

Firstly, the design needs to prompt people to understand it, and its context in essence. This means asking people to be aware of, and attentive of their environment and its other inhabitants, and the conversations that happen between these things. This is referring to Heideggers *fourfold*, and Lefas' argument that having this attentiveness will allow people to live more in balance.

Secondly, the design needs to encourage private or communal growth and understanding. Following on from the first point, the design must allow the participant to take their knowledge and experience of the design, and analyse it alongside themselves or their community. This is an expansion of being aware or attentive of their environment, and means the design must embody enough familiarity to provide people with a context, but also ask them to question this. Norberg-Schulz places strong emphasis on dwelling within the four modes that he outlines as a way to develop as a person. Particularly in *private dwelling*, reflection is essential to this development (1985). Heidegger also discusses dwelling as a *taking of measure*, and gaining understanding of the world around us through thought and creation (1971c).

Thirdly, the design needs to welcome a meaningful connection with people; needs to welcome people to *stay with things*. To bring dwelling forward the design must prompt people to use the thought and consideration from the previous two criteria, and channel this back into a connection with the design through creativity or care or through developing their understanding of the object or environment further. These criteria ask people to appreciate the object or environment and to acknowledge its place with the person. This third criteria is the most challenging, as media design embodies a certain inherent intangibility, in that people are used to

being able to *cut-and-paste* media designs, and don't see them as individual objects the same way that many physical objects are. This makes it harder for designers to bring this connection forward from people. If all three of these criteria are present, this will create a feedback loop of thought and creativity between the person and the design.

The following chapter argues that it is important for design, and media design in particular, to follow an informed and conscious practice. It discusses what dwelling can reveal about research for media design.

Design and Connection

This chapter will discuss why it is important for designers to seek understanding of the connections formed between people and designs.

Media Design

Much conflict exists between current definitions of design. Faust defines the term *media design* as, "designing within the digital arena, and it is more or less designing when there is a computational system involved" (2012, pp.112). *dwelling + design* highlights media design, but does not separate it from other types of design. It isn't helpful to isolate it because media design is always related to other forms of creativity.

While a fixed definition of design is problematic, what is not under debate is the importance of good design and informed design decisions. There is increasing recognition of the large impact design has on our lives, and how ingrained it is in everything we do, "in highly industrialised societies, design appears to have replaced nature as the dominant presence in human experience" (Buchanan, Margolin, 1995, pp.xii). There is a growing emphasis on the responsibility of

designers to practice ethically. The design theorist John Thakara in his book *In the Bubble* (2005) states, "we may not have meant to do so, and we may regret the way things have turned out, but we designed our way into the situations that face us today" (pp.1). Thakara does not seek to blame designers for the worlds problems, but emphasizes that everyone involved in the design process has some responsibility; including consumers.

> *We are surrounded by images and objects produced by designers with deliberate intent to shape our experience and influence our actions. However, even our actions are often channeled into activities or supported by services that are designed for the purposes of work, play, learning, and daily living. For individuals, the discovery of how pervasive design has become in the contemporary world is often a revelation.*
>
> Buchanan, Margolin, 1995, pp.xii-xiii

With people beginning to realise how directly design shapes all of our lives, there is increasing pressure on designers to produce good, conscious products. Most of this pressure is in regards to creating safe products, and resource management, and largely media design is left out of the criticism; but just because careless decisions by media designers do not have the same potential environmental costs does not

mean it is acceptable to make without thinking. Media designers should be most concerned with the details of how our outputs interact and connect with people, something that this research seeks using the theory of dwelling. This thesis asks some of the questions that the theory of dwelling does, particularly, what it means to *stay with things* when those things are digital, and how can designers approach these sensitivities.

Most parts of individuals lives are now influenced by media design in some way, with growing complexity; from LCD interfaces on our refrigerators to the weekly newspaper automatically downloading to our e-book reader. "Over the past twenty-five years, under the influence of such milestones as the introduction of the personal computer, the Internet, and wireless technology, we have experienced dramatic changes in several mainstays of our existence, especially our rapport with time, space, the physical nature of objects, and our own essence as individuals" (Antonelli, 2008(a), pp.16). We are coming to rely on incredibly complicated systems to do every day tasks, "often, the face for today's product or service is, at first touch, an interface" (Blair-Early & Zender, 2008, pp.85). Sherry Turkle, a psychologist whose research focuses on the relationships we have with technology, believes, "we are shaped by our tools. And now, the computer, a machine on the border of becoming a mind, [is] changing and shaping us" (2011, pp.X). Antonelli suggests that if people are not conscious and careful with their use of technologies,

they can be dominated, and allow themselves to become defined by them.

It is important for media designers to understand this phenomenon; ultimately to understand that we are responsible for the content we deliver. When we create promotional material or accessibility to information, or enable connections between people; we are responsible for their general use and influence. In the same way that a biographer makes an intentional and conscious decision when they choose a subject, we are authors, not merely narrators of the content that we work with.

Media Design and Connecting with People

Media design is now used in the design of many objects and environments, and in some cases this has brought with it a lack of connection between people and designs. Having a meaningful connection with a space or object is vital to the practice of dwelling.

Borgmann (1995) believes that something of the beauty and value in design has been lost by the designer's focus shifting further and further towards quantity rather then quality of objects, and more then anything, efficiency. Some of this has been caused by the integration of digital technologies into objects and the multiple functions this enables. In *The Depth of Design* he uses the example of the development of sound production, "the original Victrolas had an intelligible

and dramatic shape and required constant and careful attention from their users" (Borgmann, 1995, pp.14). Today, the possibility of listening to music is usually a feature of our cell phones or tablets rather than an object specifically for its purpose, "the designers scope [is] reduced to making these surfaces as pleasing and the programming device as portable and functional as possible" (Borgmann, 1995, pp.14).

Sudjic, in *The Language of Things* (2008) looks at the first Bakelite phone to be made by Ericsson, designed by Jean Heiberg in the early 1930's. Sudjic believes that this phone is an archetype, informing design ever since. He thinks the success of the form of this object is mostly about the innate understanding we have of its use; the form of the handle indicating which end was the mouthpiece, and the simplicity of the dial. He believes this intuitiveness "implies communication … [and] has made the form of the telephone in itself a symbol representing communication" (2008, pp.77). Though the cellphones designed today are a small rectangular screen, the telephone with a rounded dial and headpiece is the graphic we use and understand semiotically. Borgmann argues that perhaps as designers we should be worrying about the "disappearance of engagement," a term he uses to specify the symmetry that links humanity and reality (1995, pp.15). As the number of designed things we encounter every day has increased, our engagement with them has decreased. It is important for designers to acknowledge our part in this

phenomenon, and to accept that we could address this if we sought to. This comes back to the idea that designers are authors, not merely narrators of content.

If for example, we aim to design solutions that eliminate housework from a persons routine in the home, we encourage a step towards disengagement; disconnection. We make the claim; that a home is made by the accumulation and arrangement of things, and voluntary interaction with them, rather then through maintenance and care of this personal environment. Obviously this idea exists on a scale rather then in binary opposition. For example, we could also criticise designers and architects for encouraging people not to build their own homes with their hands anymore, thus being less engaged with it. The important thing is that we acknowledge in which instances we need to cherish connection as designers, and how we intend to do it. As Thakara argues, "as well as designing people back into the picture, we need to design ourselves more time to paint it" (2006, pp.4). Efficiency is not always important, and it is rarely more important than engagement.

If media design continually produces things that people feel no connection with, then people will come to expect this lack of engagement from our outputs. With a stronger focus on connection, and more analysis and experimentation with how we can encourage the forming of connection, like this research of dwelling, we can make things that people wont throw away quickly and without thought.

Media designers need to actively choose to focus on connection with people, and then explore methods to inform it. Considering the responsibility designers have as authors of content, it is vital that we take ownership of our discourse. It is not that designers know what's best for people, and it certainly wont do any good if we behave like we do. It also doesn't do any good though, if designers make every possible thing that we think people could want. There needs to be a different kind of conversation happening between designers and people; one that creates a feedback loop between people and objects, and also between this loop and designers.

The following chapter discusses some of the possibilities and challenges of using dwelling to inform media design.

Media Design and Dwelling

One of the current challenges for media designers is to set ourselves apart as professionals. There are many tools that people can use to make websites or film, or edit photographs, and in many cases it is difficult to see the difference between the work of a professional and that of an enthusiast. If media designers use dwelling or a similar theory as a platform, the difference between professionals and enthusiasts can come from a more thorough and clear process, understanding, and intent. David Orr, an educator and writer about environmental design (2004), states, "our sense of proportion and depth of purpose has not kept pace with our merely technical abilities" (pp.3). This could be a designer's point of difference. Designers could embrace the personal stamp we give to content: "the form given to content is revealing of both the author's thinking and the presumed audiences' experience" (Blair-Early & Zender, 2008, pp.87). If we do not do this, we can not expect to create meaningful connections between design and people, as outlined by the third criteria for digital dwelling.

Challenges to Dwelling with Media Design

Thakara states "technology has become at best a commodity, at worst an infringement on personal space – a form of trespass even, or pollution" (2005, pp.3). He believes that we abuse technology as Lefas describes it, that we use it frivolously and without a vision for how it could be used to improve people's lives. To avoid this trespass, designers can look to the three discussed criteria, outlined for digital design that uses dwelling as a platform, particularly the first criteria; understanding in essence and balance. As Antonelli states, "the most contemporary of design theory is devoted to the quest for an environment, whether virtual or physical, built in human proportion… designers who believe in this preach simplicity, and they labor to give objects souls and personality and to ease their communications with people and with other objects" (2008a, pp.19-20). This human proportion that Antonelli talks about is the proportion that the theory of dwelling exists within; in the lived experience of the individual. If media design is to avoid continuing on the path that has prompted criticism from theorists like Thakara, this is the proportion that we should consider when creating.

Media Design as Inherently Replicable

If media design intends to bring people to dwelling through the design of digital objects and spaces, we must displace the attitude that they are all common and

endlessly replicable. People are used to being able to endlessly edit, multiply, share, and replace media designs. It is very rare for individuals to feel that media design outputs are unique, and so we feel less apprehensive towards getting rid of them; knowing that we could probably find something very similar again if we were to seek it. If as an industry we highlight connection with people as a goal, we also need to reduce the frequency of people discarding our objects, otherwise we could end up conditioning people to become attached, and release attachment without consideration.

The differences between sharing physical and digital games with friends highlights some of the challenges in connecting with digital design. With online games, it is easy to email someone a link to a game they would enjoy, and once they have played it as much as they want to, they can simply stop clicking the link to remove the game from their life. To give someone a physical game to play requires more effort and thought from both people, and it affects their personal space in a way that digital games do not. Going through the physical motions of playing a board game is a very different kind of sensory stimulation then engaging with one online through sound and clicking a mouse. Physical game pieces also often link us with other times or places and can have value to us beyond the actual experience of playing with them, like an old family chess set. Physical objects inherently feel more tangible and more unique to people. We are familiar with how easily a digital

file can be duplicated or manipulated, and we are also used to receiving digital media through different devices like a laptop and cell phone, without the device itself impacting on our experience of the media. The technical capabilities of these devices, not the devices themselves will affect us.

Likewise, Busch (2005) is critical of the form of modern phones, “the taupe, neutral, squared-off form of the cordless phone in my kitchen attests to a bland, interior life, and the cell phones my sons use have a similar banality; there is no doubt they are gender neutral. Their ever diminishing size suggests an equally sparse emotional content” (pp.92-3). She goes on to critique the interchangeable styling and function of most mobile phones and in turn, the interchangeable way that we use many of them. Especially a throwaway phone (or prepay phone) Busch believes “lend[s] itself to a gesture... casual and hostile – simply being discarded, an act that conveys an implicit message about the dispensability of human exchange” (pp.93-4). Even though it may be an attractive idea in terms of ease of use to be able to throw away the phone, the unavoidable linkage it has to our treatment of communication means that this kind of product can be incredibly damaging.

This is media designs biggest challenge in seeking to encourage people to dwell, especially in the mode of *private dwelling* that Norberg-Schulz describes. *Private dwelling* is about bringing things from the world inside with us, into our personal

space, and reflecting with them. For this to happen, people need to feel that their relationship with the object or space is unique, and belongs to them. It is difficult to imagine feeling this way towards a media design that we also feel we could replace without much effort. The relationship we have with media design currently has a lot to do with our personal information that they can house, like a calendar or a photo whereas the relationship we have with a physical object, a favourite mug for example, comes from our built up experience of it, something that cannot be duplicated or projected on to another object.

To explore dwelling, media designers need to find ways to connect with people through the essence of what a media design is and displace some of the idea that digital work is replicable.

Inhabiting Creative Space

The concept of dwelling encourages people to live in ways, in spaces, and amongst things, that are meaningful to them, and to understand and interact with the world in a way that is conscious and thoughtful.

The theory of dwelling stands as a direct counter argument to the concept of

Existenzminimum. Existenzminimum was a German architectural doctrine that sought to define a persons minimum physical requirements for living (Bevilacqua, 2011). It is this approach to architecture that is criticized by Lefas (2009). He argues that the space needed for living is not defined by the physical space needed for livable activities. This comes from the idea that people need physical room for expansion; room to be creative, in order to grow and develop. Renowned science fiction writer William Gibson insists that people must lead "a rich inner life" (Neale, 2000) in order to be creative, and this is more difficult without room for physical expression. Existenzminimum was designed to be a fiercely efficient, neutral space, where anyone from any level of society would thrive (Antonelli, 2008b); but this was not the case. People don't enjoy living within their minimum physical requirements; it was not an environment that allowed them to flourish.

Some architects involved in the movement such as Alexander Klien attempted to include the human psyche in their considerations of livable space, but with limited success (Bevilacqua, 2011). Existenzminimum came to be identified with "a lower-quality version of high-density life, and it became unintentionally responsible for famously unlivable projects on the outskirts of cities worldwide" (Antonelli, 2008b, pp.154). The wide spread opinion was that modern architecture disregarded any emotional or historical significance of man, and categorized man as a purely rationally thinking being (Lefas, 2009). Media design is in a position

where we could become as un-engaging, simply used as a means to an end. Media design could be accused of designing for minimum functional requirements, and leaving no room for people to grow in the digital spaces we create. There are some situations where efficiency and ease of use are the dominant requirements for the design, like filling in forms online, or looking up a bus timetable. But there are other times when a users engagement with digital media welcomes something more; a more personal connection.

To think about designing for minimum needs in media design is difficult to measure, but it is comparable to understanding the implications of a lack of dwelling in built space. People recognise quickly whether a space can facilitate physical and emotional needs. We feel uncomfortable or uneasy in spaces that make no personal connection with us. In the same way, people become frustrated or bored when interacting with media designs that do not engage them.

Media designers could be creating digital spaces that people use to relax or to explore, spaces that change and react to their environment; either activity on the internet, or the foot traffic in their city, or the weather conditions. One such Web space is We Feel Fine by Jonathan Harris and Sep Kamvar, which collects sentences from blog posts that include "I feel", or "I am feeling." The site then looks for words such as "fine," or "happy," in the same sentence, checks the posters profile

for information such as age, gender, and location, and presents it back to the audience as bubbles of data. The result is a kind of interactive graph that presents the thousands of anonymous bloggers online as snippets of feelings, making the internet behave like a friendlier, more human space. The reason I use this example is because of the design of the website. All of its interactivity and motion is smooth and consistent, and the use of it is instinctive which creates a playful, empathetic space. Harris and Kamvar state that their mission is to make "the world seem a little smaller, and we hope it helps people see beauty in the everyday ups and downs of life" (2006). The site is a successful example of a digital space that encourages dwelling because it fills the three criteria we have discussed. It brings a participant understanding of what people are feeling in the blogging space, it offers private and communal growth through bringing people to be attentive to the wider digital world, and giving them an opportunity to reflect on themselves and their environment, and it encourages people to connect with digital information through interacting with the data, and personalising it in a way that is meaningful to them. As Harris and Kamvar state, it also brings people closer to digital information by reminding them that though much information online exists in arbitrary digital space, this information comes from people (2006).

Digital Community

This potential for personal engagement is especially interesting along side the shifting definition of community, as prompted by media design developments.

The design of digital spaces effect how people behave; what kind of relationships they form and how. *The MIT Media Lab* uses the term *community* in their online overview to describe a persons network, and they use it in a way that suggests media design is changing the way we define a community in our lives. It used to be that your community was the people who lived near you, and often who your family spent time with. Most of us today will have people we consider to be part of our community who we have never met; who we are not connected to through physical ties. Antonelli (2008a) discusses the concept of community in a way that is vastly different from the traditional collection of houses. She states, "communities… today are groups whose homogeneity is no longer easily described by historical definers of age, gender, race, class, region, or religion, but rather by a shared interest or passion. Design supports them by providing the modeling data, the language and the objects that give access to connective networks" (pp.152). In the same way that different physical spaces affect the practices of the community who meet there, different virtual spaces affect the way that online communities interact. Under Norberg-Schulz' modes of dwelling, digital communities would be

considered as designed for *collective dwelling* and *public dwelling*. *Collective dwelling* is fuelled by unintentional discoveries and interactions with spaces and people, whereas *public dwelling* is premeditated, and founded on deliberate encounters where people choose and affirm values with others, (Norberg-Schulz, 1985). Whether media designers are creating purely digital spaces, or working with digital technology within physical space, both of these modes of dwelling are possible. With installation work similar to *dark; and the light*, *collective dwelling* would be more likely if people were to walk in off the street without any knowledge of the design, and could be prompted by being near, or talking to other people in the space in an informal way. If they were to stay a long time and their conversation were to turn more specific they would be moving into *public dwelling*. Likewise, if a group of people were to come to the installation together with the intention of discussing it, this could fuel *public dwelling*. There is no guarantee that dwelling would occur though; it is dependent on the experiencee's openness to dwelling, and the quality of the design.

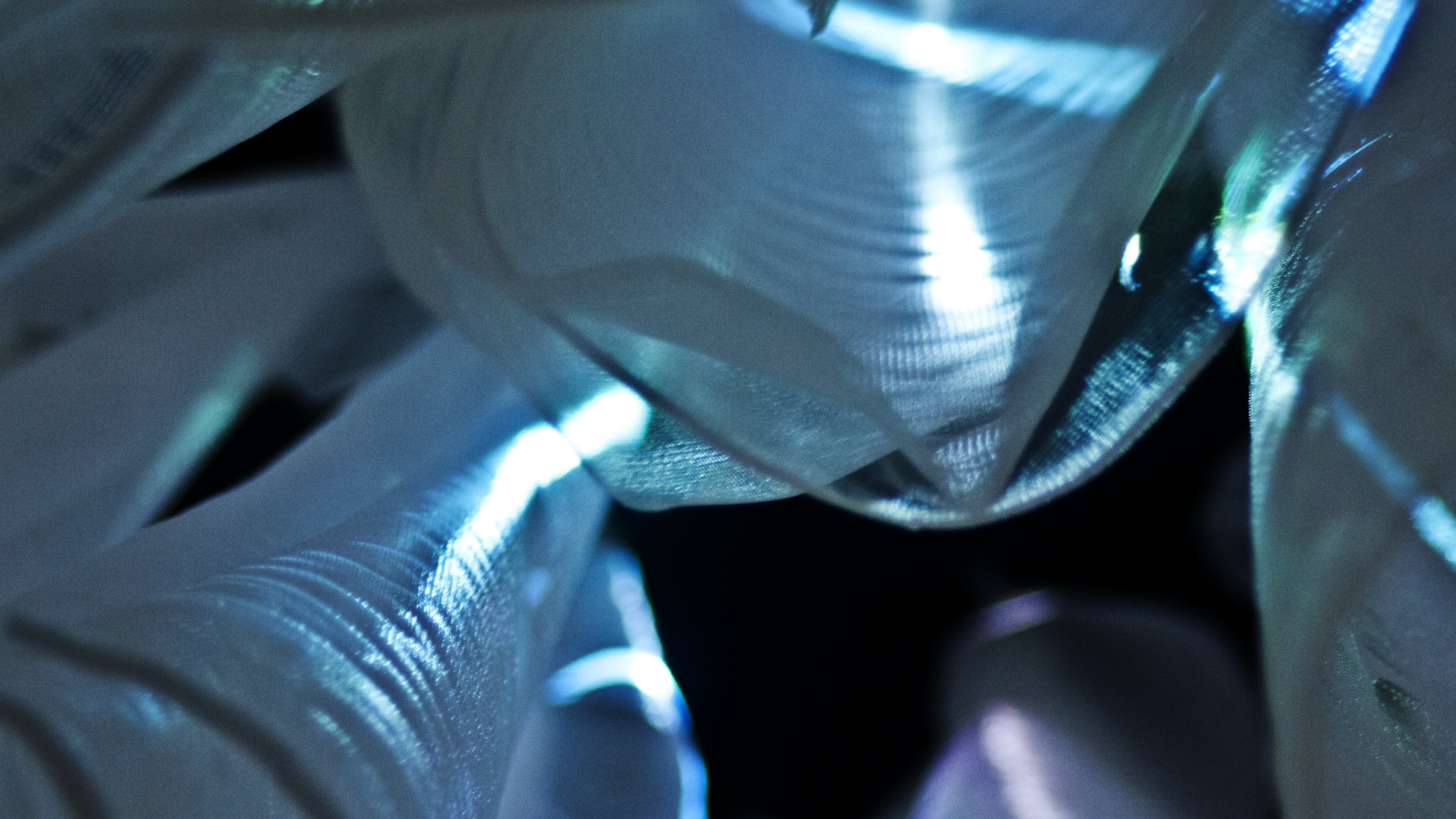
Dominated by the Digital

Media design is also affecting the way we interact with our physical communities. Antonelli believes "One of the most compelling phenomena in the evolution of society is what happened to the balance between the individual and collective spheres" (2008b, pp.152). Media design has allowed, and even encouraged us to

create multiple aliases, "through screen names and virtual alter egos, we build parallel-universe relationships that are sometimes more engaging or dangerous than the ones we can have as our real selves" (Antonelli, 2008b, pp.152). Turkle (2011) agrees with this, believing that already some people prefer online company to physical company, and they prefer to understand themselves as who they are online rather then offline. Media design can often disengage us with our physical world and as Antonelli suggests, if we allow it to, media design can dominate our personal rhythms, and streamline and categorise who we are (2008a). We also no longer have to be consciously present to where we are in the world; to give our attention to a physical space. Instead we can log-on to a cyber network though our cell phone or laptop, and give that space our attention.

Turkle has a strong emphasis in her research that we rely too much on technology and that this reliance has the potential to ruin our interpersonal skills: "we bend to the inanimate with new solicitude. We fear the risks and disappointments of relationships with our fellow humans. We expect more from technology and less from each other" (2011, pp.XII). This is not what media design should affirm, and it is certainly not what using dwelling as an informer would encourage designers to do. Design cannot replace people and should not aim to do so. Thakara believes that, "the danger in our infatuation with digital communication is that we feel compelled to reduce all human knowledge and experience to symbolic form. As a result, we undervalue the knowledge and experience that we have by virtue of having bodies" (Thakara, 2005, pp.63). As an industry we should have our own unique methods for connecting with people that do not mimic relationships we have with people or other things. To dwell with an object does not mean to cut ourselves off from everything else, it means to consider and come to truly understand that object within the world. Likewise, to dwell with the digital does not mean to remove ourselves from the physical, but bring forward the connections between them and the potential for these connections. This dwelling would encourage people to make more specific choices about what they want from digital technologies and prevent people being dominated by them as Antonelli suggests.

In terms of using media design to communicate with other people online, there are some instances when efficiency is all people are looking for, for example, arranging with a friend to have a cup of coffee at lunchtime, because the arranging is not the main part of this communication. If we look instead at talking to a friend or family member who lives far away over *Skype*, both parties would welcome a stronger connection to the media design, and therefor to the experience of communicating with each other through it. This would make the enjoyment and value of such technology rely less on the person's memories and own associations, like Lefas' discussion of mobile technology does, and have the design contribute something stronger to the experience.



Dwelling and Creativity

This chapter looks at creativity according to dwelling and other aligning phenomenological works such as Bachelard's *The poetics of space* (1994). The act of creating is an integral part of dwelling, and by further understanding how it informs dwelling, we can see how it could be drawn on as a philosophy for design practice. While the conclusions of this thesis are limited to the aspects of dwelling drawn upon in *dark; and the light*, this chapter also explores some of the wider lessons dwelling could contribute to design. To design in a way that seeks to accommodate dwelling, it is important to have this understanding.

Creativity; The *fourfold* and Balance

An important part of dwelling (especially *private dwelling*, where we alone make judgments and decisions to take through into our actions) is seeing your thinking manifested in some way, but first, thinking must lead you somewhere personal, open, and reflective. Bruderlin (2009) states "our Western rational thinking constantly distinguishes between matter and spirit, being and nothing, signifier and signified, form and content. It is difficult for us to grasp a thing in its being" (pp.141), suggesting therefore that to grasp a thing in its being, or the essence of

something, is to understand it within the scales that sit between these oppositions.

It was a lack of understanding of the essence of a home that made Existenzminimum so unsuccessful. Architects and designers did not acknowledge that a home needs to be a space that houses safety, but also encourages personal development. Some of the elements that contribute to how people experience places and objects are immeasurable in this way. As Heidegger emphasized, no physical solution could ever fix anything but a technical problem (1971b). Most of the connections we make with our environment and artefacts are not made for technical reasons. Designers and theorists argue the advantages of having objects and other design interactions that we fully and intentionally understand beyond a technical need. Orr discusses this idea from an ecological standpoint, "the goal is not total mastery but harmony that causes no ugliness, human or ecological, somewhere else or at some other time… its not just about making things, but rather remaking the human presence in the world in a way that honors life" (Orr, 1994, pp.4). Orr argues that our ecological goals should not be ones that are quantifiable in a data sheet, but are evident in the way people live.

Tanizaki emphasises the importance of understanding context and relationships, "we find beauty not in the thing itself but in the patterns of shadows, the light and the darkness, that one thing against another creates" (1977, pp.30). Heidegger

believed that people cannot separate themselves from environment; that we cannot look at the world or at objects as separate from ourselves (1935). In turn, this means that the world *is* as it is lived by us. At it's most basic then, the world is not neutral from how we live; if we live without care, then the world *is* without care. The design process sometimes compartmentalises what we think about design and how we live in the world; and we dont use the connection between them to improve our designs. Using dwelling as a precedent would not allow us to do this. If we learn to understand, and embrace a design *in its essence* then we would make what we thought truly belonged in the world with people.

For designers, understanding things in their essence means thinking through products and ideas properly, and deciding whether what we are making will help people; whether, if a consumer had all the information we did, would they truly, and honestly, want what we are offering for themselves, and for the world. As Thakara states, "means and ends have lived apart too long in discussions of innovation. Understanding *why* things change – and reflecting on how they *should* change – are not separate issues" (2005, pp.4). He is asking designers to take more ownership of how they want products to influence people.

Creating; Reflection and Understanding

Dwelling requires thinking and making in equal capacity. The act of building or creating is central to Heidegger's dwelling; any kind of creating that allows the creator or receiver to take measure of themselves and their world. The purpose of doing both together is that we can think about the world and our place within it, then make something from those ideas, and then be able to step back and consider them. Lefas believes that while it is by building that we make spaces and artefacts belong to us, it us by thinking that we make sense of those spaces, and, in turn, ourselves. In the same way, if we connect with a creative output made by someone else, we can see ourselves as well as him or her in the object, and through caring for it, refine our thoughts and explore the connection we have to it.

If we return to the idea that designers are authors of the content that we create and the projected use of that content, then there is great potential for us to grow through our work. Having ownership of content brings with it responsibility and pressure, but also opportunity. "Designers give life and voice to objects, and along the way they manifest our visions and aspirations for the future, even those we don't not yet know we have" (Antonelli, 2008(a), pp.15). There is the possibility for designers to intentionally learn and grow through our work and find new ways

to communicate and connect with people as people. In turn, we facilitate personal growth for users.

Seeking this development is incredibly difficult though, especially seeking to design or develop towards such a goal for others. When designers and artists do manage to create works that could only be described as providing a sublime experience, the results are spectacular. Didi-Huberman states the following about an installation by James Turrell -

> *Perhaps what James Turrell desires, in essence, is to produce spaces which would offer the always unmasterable experience of a secret balance between symmetrical abysses. Between the loss of self implied by sleep and that other loss of self provoked by awakening. Between the void of absolute night and the all-too populated space that agitates us vainly beneath the sun. Balancing these two bedazzlements or blindnesses would be a rare experience: a paradoxical time where nothingness yields to a thickness made of almost nothing, where light withdraws from the things which it illuminates to appear by itself, differently, as tactile. Like a paradoxical place which would combine otherness, distance, the absolute exteriority of*

> *a luminous expanse, with the mortally singular unfolding of our corporeal existence, and the astonishment at our own power of seeing*
>
> 1999, pp.50

The experience of Turrell's work has prompted this incredible clarity and depth of thought by Didi-Huberman, and among others, there are similar testimonies about Eliasson's *The Weather Project*.

Creations; Meaningful Connection

Many phenomenologists use the house as a subject of this discussion of the personal connection that people have with spaces and objects, and particularly how these connections are navigated and understood through action. The house is the space that Norberg-Schulz aligns with *private dwelling*. Sharr states, "the residence should be understood through tactile and imaginative experience; not as a detached object," and it should also be designed as tactile and imaginative (2007, pp.46). Lefas believes that when we come to building we "should take into account the concerns of the philosopher, that is, we should think on the real end of the building" (2009, pp.44). In *The Poetics of Space*, Bachelard uses the metaphor of a house to discover humanness (Stilgoe, In Bachelard, 1994).

Bachelard states –

> *The real houses of memory, the houses to which we return in dreams… do not readily lend themselves to description. To describe them would be like showing them to visitors. We can perhaps tell everything about the present, but about the past! The first, the oneirically definitive house, must retain its shadows. For it belongs to the literature of depth, that is, to poetry.*
> 1994, pp.13

Without this understanding of lived experience, the design process is incomplete. Design and creation must come from an understanding that the final form given to something is only one moment in its life cycle, and far from being the richest. Didakis states, "dwelling occurs only when residents leave their personal traces in the poetic substance of their interior space. The personalisation of this built environment – the thing – should be implemented to the expressional and creative domain of its occupants" (2011, pp.309). Designs that don't facilitate personalisation and connection rob users of the opportunity to see themselves in the object, and to dwell with it. This does not have to be physical personalisation, in fact, any scripted personalisation is very unlikely to work. Designs need, though, elements that aren't prescribed, that invite the investment of time, care, and creativity. "After frequent use, a domestic space reveals a significant level of

personalized information; psychoanalysis of a space would easily expose attributes of its residents' substance" (Didakis, 2011, pp.309).

Designing this *wearing-in* for digital objects and spaces is somewhat problematic. Any digital wearing-in happens as familiarity and development in a users understanding; any physical wear is usually seen as a flaw, a scratch on a screen or DVD, with exceptions like personalisd USB drive casings. Once a digital object like a cellphone gains vintage like status, it usually becomes sculptural rather then functional because the hardware cannot keep pace with peoples software demands; unlike a vintage piece of clothing that can still keep us covered and warm. This means for a digital technology to wear-in it must connect with people in a way that makes a lasting impression and their understanding and reflections will develop over time. It must prompt people to become so familiar with interacting with it over time, that using it begins to feel more like a conversation then a function.

Being with the Made

Norberg-Schulz believes that we must be open and aware to the four modes of dwelling that he outlines for us to grow as people.

> *First, [dwelling] means to meet others for exchange of products, ideas, and feelings, that is, to experience life as a multitude of possibilities. Second,*

it means to come to an arrangement with others, that is, to accept a set of common values. Finally, it means to be oneself, in the sense of having a small chosen world of our own

Norberg-Schulz, 1985, pp.7

Though there are ways that designers can invite dwelling, benefiting themselves and consumers alike, ultimately no amount of creativity alone can lead a person to dwell. The final responsibility lies with individuals to seek and use opportunities. It is not that people must build or create from scratch to dwell, caring for, or personalising objects is a form of creation, and in some cases, thinking carefully about your connection to something could be seen as creative in the way that your understanding of that object contributes to your lived experience of it, and therefore the subject itself. Bachelard talks about coming to a creative work that you truly connect with, to the point that we begin to take ownership of it, "It takes root in us. It has been give to us by another, but we begin to have the impression that we could have created it, that we should have created it… it is at once a becoming of expression, and a becoming of our being. Here expression creates being" (1994, pp.XXIII).

In terms of living among things and dwelling in the home, the final form that a creator gives to something can be incredibly insignificant. The things that we bring into our homes or other private (not necessarily physical) spaces become the things that we are most familiar with in the world, and while it might be that the *final design* of something is what draws us to these objects in the first place, it is not what connects us to them or allows us to dwell with them. As Ingold states, "building… is a process that is continually going on, for as long as people dwell in an environment. It does not begin here, with a pre-formed plan, and end there, with a finished artefact. The 'final form' is but a fleeting moment" (2000, pp.188).

In a round-about way, this means that the inherent intangibility of media design doesn't matter. It may impact negatively on people's decision to bring media designs into their private space to dwell with in the first place, but once there, it can be just as powerful as its physical counterparts. If we design things that we could see people wanting to take into their private space there is no guarantee that they will do so; but at least there is the potential.

dark; and the light

The interactive installation *dark; and the light* showed at The Russian Frost Farmers Gallery in Wellington City, July/August 2012. It consists of three downward-facing projectors attached to the ceiling, that project through spirals of hanging white fabric. The installation uses the software *processing* and infra-red cameras to measure the amount of movement happening around each projector. If there is a lot of movement, the projection becomes stimulated; changing colour, and increasing speed.

< http://www.therussianfrostfarmers.com/meredith-crowe/>
< http://leagueofmakers.org.nz/projects/dark-and-the-light/>
<https://vimeo.com/60432296>

Precedents

dark; and the light draws on three main designers whose works are interesting to analyse against the theory of dwelling, and the three criteria outlined for digital dwelling.

The *fourfold* and Balance

James Turrell is an American artist who works with individuals relationship with the land and sky through perception of light and form. His installation work is particularly interesting if analysed alongside Heideggers concept of the *fourfold*, as while vision is the central sense for Turrell's pieces, he works with the idea that vision can not be isolated from the body.

> *Nature is inside, quotes phenomenologist Paul Cezanne. Quality, light, color, and depth such as we find in front of us are only there because they evoke an echo in our bodies, because their bodies can receive them.*
> In. Bruderlin, 2009, pp.133

Heidegger's intention when referring the *fourfold* in his discussion of dwelling is to emphasise that we must understand ourselves in balance among things and places, not in isolation. And likewise, we must understand things and places as being with

us. Much of Turrell's work embodies this concept, particularly *Roden Crater*, "an extinct volcanic area in the San Francisco Volcanic Field near Arizona's Painted Desert. Turrell is turning the landscape into a work of art, carving tunnels and chambers into the earth where people can be with the sky.

> *As soon as we enter the magic light spaces of James Turrell's Roden Crater, as soon as we perceive and experience these unprecedented yet familiar spatial consolations with our body and mind, at the very latest then, if not before, a surprisingly new dimension opens up, an new "insight" into our existence between the present and the past, between sky and earth. And only upon entering are we able to comprehend the sweeping, female curve towering proudly over the open, picturesquely colorful landscape as an unusual experiment and adventure in contemporary art.*
>
> Noever, 1999, pp.11.

Turrell's work embodies the importance of understanding things in their essence that comes across in the theory of dwelling. In Turrell's words "my works are about light in the sense that light is present and there; the work is made of light. It's not about light or a record of it, but it is light. Light is not so much something that reveals as it is itself revelation" (In Birnbaum, 1999, pp.229). Looking at light itself, not in isolation but as it is with you, where you are at that time, aligns with

the theory of dwelling at its core. *dark; and the light* seeks a similar thing; getting people to experience media design as media design. As a combination of light, sound, space, interaction, materiality; *dark; and the light* does not highlight any of these elements specifically, but asks people to experience the whole.

Many of the responses to Turrell's work also suggest that the writers experienced a profound connection to it in a way that was very personal and unique.

> *Turrell's works often begin by imposing an act of closure or privation. But the intent is always the gift of experience dispensed in light; and therefor the works allow, in the end, an act of opening. In an extraordinary enlargement or displacement, it is like the intimate act of closing one's eyelids which allows to open one's vision to the place - and to the images or objects - of the dream. Closing the eyelids, here: the act of "deadening", of deactivating any visibility of aspects. And thus, of submitting the disquieted vision to a field of perception void of objects and planes, a field where the light is so heavy, homogeneous, intense and sourceless, that it becomes like the very substance - compact and tactile - of the place in its entirety.*
>
> Didi-Huberman, 1999, pp.46.

Didi-Huberman's recollection is one that has come from much thought and reflection on his experience of Turrell's work. He has engaged with it, and has used it to reflect on closed-ness and open-ness, and the images and dreams that can happen with this. He talks about how Turrell successfully surrounds him with light as its own medium. This is the kind of thought and reflection that *dark; and the light* seeks.

Reflection and Understanding

Aaron Koblin works with large sets of data and crowd sourcing to make visualisations that are incredibly personal. According to Bostwick (2010) "Koblin is used to seeing the big picture," and likes his data to be "messy" (pp.50). His data visualizations make art out of floods of information—SMS exchanges that create a digital skyline of Amsterdam, flight patterns across the U.S. that sketch out a glowing map of the country, or millions of particles that swarm into a portrait of Radiohead band members.

Central to Koblin's work is his ability to communicate very human ideas through using numbers creatively. He is interested in the patterns that every day data can create, and peoples reactions to these when they are in a format they can understand and connect with. Koblin believes "The possibilities for creation and insight are endless… as we get more transparent with data sets about infrastructure

and systems management, I have a feeling we'll see big changes in how we think about complexity and our relationship to our actions" (in Warren, 2010, pp.144).

One of Koblins pieces, *The Johnny Cash Project*, is a website tribute to Johnny Cash. People are invited to contribute by drawing a single frame from the video shot for Cash's *Ain't no Grave* and submit it. Each frame is then collated by the website, and combined to make a full-length music video. Users can watch the video as drawn by Cash's fans, and select different styles of frame to customise what style of drawing makes up the version they are watching. The films director Chris Mink states "Ain't No Grave is Johnny's final studio recording. The album and its title track deal heavily with themes of mortality, resurrection, and everlasting life. *The Johnny Cash Project* pays tribute to these themes. Through the love and contributions of the people around the world that Johnny has touched so deeply, he appears once again before us" (2010). This project is the combined effort of hundreds of people from all over the world.

This project is an exercise in the building of a community in the way that Antonelli describes it, and as Norberg-Schulz suggests a community might dwell together. Koblin states, "everyone knew what they were doing and that they were working collaboratively" (in Warren, 2010, pp.144). Norberg-Schulz would describe this kind of community as *public dwelling*, where people have come together

intentionally, to act together. Koblin facilitates this by making the creative process incredibly open, and interactive with others work. Along with the very intentional output of their creative labour (though some drawers ignored the original frame all together), this openness contributed to the teamwork present in the project. All participants knew from the beginning that their contribution would not stand alone, but would be a part of a greater collection.

Similarly to how Turrell works with light as a medium, Koblin highlights media technologies such as crowd sourcing or *The Mechanical Turk* as a medium. His outputs are focused on the technology, but his presentation of it is completely people centred; about showing people something about the technology or data. His work takes the data or other information that people have contributed, and gives it back to them in a completely human-scaled way; in a way that they find interesting and beautiful. *dark; and the light* sought the same kind of transparency and honesty, and also draws on Koblin's ability to show people something of themselves in his work.

Meaningful Connection

Olafur Elaisson is a contemporary artist who emphasises our experience of time and how it is important we take responsibility for the impact we have on the places and people around us. His most well known work is *The Weather Project*

(2003/2004) at *Tate Modern*. Eliasson mirrored the ceiling of the huge space, and installed a glowing golden semi-circle against the mirror on one wall. The effect was like being in a room with a huge, warm sun. People could also see themselves in the reflection if they looked up at the ceiling. Eliasson comments, "the whole idea was to make the space tangible… people start to see themselves in the space" (2009). Eliasson emphasises this theme of responsibility by looking at how being there in a space with a work of art makes a difference to how we fell about it. He believes it is the artists challenge to navigate this concept "how do we configure the relationship between our body and space, how do we then reconfigure it, how do we know that being in a space makes a difference" (2009).

The text *Surroundings Surrounded* edited by Peter Weibel was published in 2001 as an accompaniment to Eliassons 1998 – 2000 work shown in the *Neue Galerie am Landesmuseum Joanneum* in Austria. The collection of essays "investigate our understanding and perception of spatial relations, physical environments and other time-space related structures and concepts" (Ione, 2003, pp.162). Eliasson insisted that the record of the work be accompanied with the knowledge of how it communicates with people. In the text, Bek discusses how Maurice Merleau-Ponty was one of the first to investigate this new perception of mans creation of reality with his theory of perception. He inserted man as the beholder into the world of things seen instead of him being the observer from the outside. He

evolved a theory of mutual visual exchange existing between the beholder and the surrounding world "in which the overlapping of things … functions as an indication of depth, the most vital dimension in man's acknowledgment of being placed in a reality of things in space" (2001, pp.76). Parallel to Merleau-Ponty, James J. Gibson also redefined his theory of the psychology of perception. He proposed that man was moving about in space among various objects, not only part of his surroundings, but actively involved in the passing of time amongst these objects, seeing some from different perspectives and angles, and some mostly from one side; such as mountains (In. Bek, 2001). This idea is central to Elaisson's work; that how the world around us affects us, is consistent with how we affect it. We must acknowledge our place among things; we must also see ourselves in what we are seeing. *dark; and the light* adopts Elaisson's emphasis on making art and design that people feel they are a part of and to which they are important.

Another Eliasson installation *Green River* involved dying the rivers in LA, Stockholm, Tokyo, and Norway, a very unnerving florescent green. Eliasson commented that it looked frightening but also beautiful in that "it shows the turbulence of these places" (2009). Broeker states that Eliasson's "goal is to integrate art into society, so that it will once more have the function of helping sensual orientation in a world where technology and media have forced nature into the background" (2004, pp.7). He asks people to see the natural world along side the built environment, and acknowledge its value. He comments that *Green River* was about "showing people that a space has dimensions, a space has time… the water has a kind of ability to make the city negotiable, tangible, negotiable meaning it makes a difference whether you do something or not" (2009). Eliasson believes that allowing people to feel like they are part of a work of art, like they are active in it, also gives them a sense of responsibility for it. In the same way, in moments when people feel their own presence as part of the world, they are responsible for it; places and other people.

> *It makes a difference whether you have a body which feels a part of a space rather then having a body which is just in front of a picture… is there a sense of consequences, if I have a sense of the space, if I feel the space is tangible, if I feel there is time… I also feel that I can change the space. It makes a difference in terms of making space accessible… its about community, connectivity, its about the sense of being together.*
>
> Elaisson, 2009

Elaisson emphasises that we can create spaces that are sensitive to both the individual and the communal, when we focus on experience, "taking part in the world, sharing responsibility" (Elaisson, 2009).

Description

Alpha Installation

Six weeks out from the exhibition opening I negotiated with the gallery to have an alpha installation over a weekend. My installation technician and I spent a day installing a single projector and isolated rig that supported some surrounding fabric. I hadn't yet managed to get the camera tracking to work, so that was out. But something else about it was off. I was standing back, looking at what we had achieved over the day with this feeling of unease in my stomach. And then I realized, actually, even though everything had come together as planned, once it was actually in front of us, it wasn't very interesting. It was my vision, and I wasn't interested in spending any time with it. It wasn't ugly, just unspectacular.

That night I went back to the drawing board, and realized that I had neglected possibly the most important part of doing installation work in any space, particularly if drawing on dwelling, and that was the space itself. As a stand-alone design what I had made was fine, but things never actually stand-alone. It was a beautiful moment of realization of the disappointment that accompanies failing to practice what I was preaching.

I sketched a rough floor plan of the gallery, and planned where all my hardware needed to connect to, and re-designed according to the space I had available. I took this new concept to my installation technician the next day and he just laughed at me. It required two more of all our hardware (projectors and rigs, infra-red cameras, hard drives, monitors, and various cables and converters), an extra 150 meters of fabric, and an estimated 5 x the build time.

Technical Description

The installation was set up in a 4.4m x 5m x 2.75m space, sectioned off from the "tech bunker" area using a dark, light absorbing, fabric. Three projectors were positioned on the ceiling, facing towards the floor, and projecting onto sections of hanging white fabric. The fabric was secured by invisible thread to the roof, and hung nearly to the floor. The effect was that collectively, the fabric pieces looked like they were floating an equal distance from the ceiling and the floor. Fabric obscured all the edges of the projection, but some of the image could be seen on the concrete floor. The projectors were the only source of light in the installation space.

The projectors each had an infra-red camera connected to them through the software *processing*, and were all independent from, and unique to each other. When the software received no movement feedback from the cameras, the projection was idle, generating a series of grey-azure, slowly rotating arcs. If the camera picked up on movement in the space, the projection would start to move more quickly and change colour, moving through the blue spectrum to purples, and finally a scarlet red. One projection could be fully stimulated while the other two remained idle.

Audio

The audio was quite simple, and intended only as atmosphere sound. Especially in more abstract installations, it is common for the audio of a piece to dominate the visual and spatial design, and I did not want this to be the case with *dark; and the light*. After a couple of minutes it was easy to forget it was even playing. It was adapted from a previous composition of mine, written for cello in the program *Sibelius*, and reworked in *GarageBand* and *Audacity*. My intention with the audio was to reinforce the unfamiliarity of the space, and to get it to seem bigger through sound. It used a low pitch, and slow tempo, and simple harmonics.

Visuals and Coding

The projections were completely generative and unique every time each projector was set up. Each consisted of 10-30 arcs of different thicknesses, lengths, and radiuses, and with slight hue and transparency variations. The arcs rotate at a unique speed around the centre point of the projection and occasionally change direction. This speed increased as the projection was stimulated by movement feedback from the camera. The more movement the camera saw, the more the colour would change; moving from blue through into purples, and to a scarlet red when fully stimulated. The projection closest to the entrance was quite easy to stimulate and most people would activate it when they first entered the space.

Camera Tracking

Finding a solution of how to measure movement in a space, in the dark, was quite a challenge. Each projector was connected to its own hard drive, and home-hacked infrared camera. The cameras were webcam's that I opened up and removed the small glass infrared filter from, and they worked incredibly well. Each camera was positioned so it correlated with one of the projections, but not so it could see the projection itself. This would have formed a self perpetuating loop, with the camera seeing more and more movement as it sent stimulated feedback to the hard drive.

Fabric

The fabric that was projected onto was a very light, netting-like nylon blend. It was semi-transparent, and reflective. It was cut into triangles with a longest edge of 2m - 2.6m. One of the shorter edges was then rolled towards the centre, which gave the "spiral effect" to the bottom of the sections. It worked well for this installation because it reflected some light, and allowed some to pass through it to colour the panels behind it. The spiral effect was also good for blurring the edge of the projection lines on the floor. It took 100m of the white fabric to fill the space with the hanging panels for projection, and 50m of dark, light absorbing fabric to black out the walls and minimize the light coming in the gallery door and windows.

Installation

It took almost a full week to install all the hardware and calibrate the interaction. The hanging white fabric had to be cut and measured individually as it came off the roll, and we only had the use of two ladders to install on the ceiling. Mounting the projectors was hazardous too because not all of the roof was solid enough to hold them. The best thing about installation week was that I invited some students from the papers that I tutor to come and give me a hand over an afternoon or so, and many of them took me up on it. They said it was really good first hand experience to see what it actually takes to create a public installation, and they were all surprised at how long it took us to do even simple things.

Concept Description

All digital work has physical interpreters; it is usually communicated to people through a screen or projector. It is not that the method of communication is physically present in installation work, and not physically present in screen based work; they are simply different, not opposites. *dark; and the light* is a both physical and digital installation that explores the three criteria for digital dwelling; the *fourfold* and balance, understanding in essence, and meaningful connection.

As this research outlines, one of the main challenges for media design being informed by dwelling is its inherent intangibility. Most media design outputs are interacted with by users through a keyboard or mouse, and visually through a screen. If we think about the core concepts of dwelling that this research has focused on, there are several conflicts that occur with this screen as a mediator; the strongest being that a screen is not what media design is in its essence, and unless the designer is very intentional about how they navigate the user/screen relationship, the screen isn't usually considered. *dark; and the light* sought to be understood as a media design installation, not as the different elements that contribute to it. That's not to say that it can not be broken down and analysed, but while experiencing it the space needs to encourage people to be with it as a whole, to understand it in the sense of *standing under* or among it. Looking again

at Turrells work, Bruderlin comments that what is involved in his investigation of light and perception is "seeing with the whole body, indeed a sensual and spiritual total experience that puts space and light, body and spirit in a reciprocal inverse relationship. In this, the medium itself, meaning light, becomes the message" (2009, pp.133). *dark; and the light*, like Turrells work, must be experienced as a whole, by the whole body.

Concept; The *fourfold* and Balance

Heidegger's and Lefas' discussion of the *fourfold* is central to understanding the kind of balance, or oneness, they insist people be conscious of before they can dwell. It is also interesting to explore the *fourfold* aesthetically, even though Heidegger doesn't at all in his introduction of it. Lefas (2009) believes that Heidegger did this purposefully because it was never his intention to prescribe how design or architecture should be, and while it would be unhelpful to make sweeping statements or judgments about aesthetics, looking at how a particular space or object has responded to the *fourfold* can be valuable.

dark; and the light has a feeling of being in the middle, or between things. This is mostly because of the fabric hanging roughly an equal distance from the floor and ceiling. There are also elements that reference the ground or earth. The projections that touch the floor, especially when the installation is idle, have connections with

water, particularly moving water. This is achieved through the colour, and gentle swell-like movement. The projectors talk about a source of light being high, like the sun or stars. These references to the natural world don't refer to any physical location in particular so that the installation doesn't have a narrowed scope for connecting with people. This is also why the projections never go green; because the moment someone thought it looked like a forest, that is what it would be to them from then on. The space had to refer to the fourfold abstractly so that people's interpretation of it wasn't narrowed by them linearly recognizing a specific location within it.

Referencing Heidegger's divinities and mortals happens thorough the interaction as much as the aesthetics. The projections come across as organic but alien. The life in the space comes from the ever-changing movement and shifting light, giving it a sense of unpredictability. The interactivity invites movement from experiencees, but only up to a threshold. A person would not have to exert themselves to trigger the installation to be fully stimulated. People are, therefore, discouraged from behaving erratically, just as they would be discouraged to do around other people or animals. This threshold for movement asks people to be careful and considered of their behaviour if they wish to experience the full spectrum of the installation. In the same way, dwelling asks us to be attentive of how we are in the world, and whether we are in balance.

Concept; Reflection and Understanding

To encourage people to think and reflect in the space, the installation comes across as unfamiliar, but not unfriendly; different, but not alien. The space creates moments of recognition that would provoke people to think about themselves and their environment, without dictating to them something specific to dwell on. Recognizing moments of the installation in their day-to-day lives is how people would remember the experience and think about it again after they had left the exhibition. The unfamiliarity also means that people gave it their full attention because they could not subconsciously categorise it, and know about it by comparing it to other things they had seen. To be engaged with it, people had to build their understanding mostly from what was in front of them.

dark; and the light is designed to be experienced both individually and with others. Experiencing the installation alone allows a wide range of interactions with the projections. It is possible to fully stimulate all three projections, or to focus on tuning interaction with one of them. As a solo and group experience, the installation invites people to play with it. The cameras are not mechanical in the amount of movement they measure, and likewise the projections can behave slightly differently to the same amount of camera feedback. This means that people can get the impression that the installation is favouring certain people in the way it reacts, and as a result, treat it more as personality then a machine. For the same

reason, each projection is calibrated to react to different amounts of movement. What may work to stimulate one, may not be enough for another. This behaviour draws peoples attention to the details of how they interact with their wider environment.

Concept; Meaningful Connection

Physically touching the installation is vital for people to feel connected with the space. The idea of people taking part in installation and gallery work is not a new one, but people often still treat it apprehensively. *dark; and the light* encouraged people to be physically active with the space because each projection responded more strongly when people moved the fabric to trigger the cameras, especially if they were wearing dark clothing and found it difficult to stimulate the projections by moving their bodies. Because the fabric hung more densely in areas, experiencees could dictate how surrounded they wanted to feel by standing in different places. The fabric guided people to move through to the back of the installation, furthest from the door where there were larger gaps between the hanging pieces. When people first step into the installation the fabric was quite invasive, but thinned out and became less so as people walked further in. This also meant that people could stand towards the back and see more of the overall aesthetics of the piece. This created the feeling that as you persevered, and moved through the fabric, and became more familiar with it, you were rewarded with a wider view, or understanding, of the space.

The whole piece is a negotiation between users, the projected image, the hanging fabric, and the floor surface and these phenomena are equally important to the experience, but this was only evident to people after they had engaged with the piece. If experiencees move around attentively, and sometimes even watched other people in the denser clusters of fabric, they were rewarded with gaining understanding, and making a connection with the work.

dark; and the light and people

In order to understand a work of place, one must begin by turning toward a phenomenology - and not a psychology - of perception. Towards a thinking which would not attempt to explain the magic of perceptual effects, but would seek rather to implicate something which is not at all an effect: namely a being, a subject opening himself to the place. One must conceive of this visual place beyond the visual forms that circumscribe its spatiality: one must see beyond the eyes, since in dreams we also see, but with closed eyes. This is also why a phenomenology of the waking vision begins with the visual experience of the night.

Didi-Huberman, 1999, pp.48.

Experiencing *dark; and the light*

The interviews with participants were conducted with approval from the Victoria University Human Ethics Committee. All names have been changed.

Experiencing; the *fourfold* and Balance

While experiencees certainly would have struggled to put a name to the *fourfold* considering how infrequently the term is used today, most people got a sense of the balance and togetherness that the installation embodied. Most suggested that the space used water as a precedent, and despite my intentions, some compared the hanging fabric to a forest. Most people commented that space came across as organic, alive but not lively; one interviewee compared it to being like a plant, but not like an animal. What did not come across from people was a sense of mortals and divinities, although it may be that people understood it in a more indirect way. As Lefas argues, it is not common for people to actively live in the balance of the *fourfold* or to readily acknowledge it within an environment (2009).

Sam is a young professional working in Wellington in his early thirties who I didn't know before he came into the gallery. He kept as still as he could in the installation. He said he liked it the best when it was idle, and he could stand amongst it, and be still with it. He said he sat down for some of the time, but this made him nervous

because he didn't want anyone to catch him sitting on the floor. He liked watching all three projections when they were idle because they were all still different, and the closer he watched them the more different from each other they looked. He said that being in the installation gave him a feeling of easy stillness.

Aesthetically, the balances that exist between the earth and the sky, and mortality and immortality were not discussed in much depth by any of the interviewees. Some people spoke of where the installation had lead their thinking, around balance and life, but no one could articulate what, visually or aurally, had made this happen for them.

Experiencing; Reflection and Understanding

If people walked in off the street and I was in the gallery at the time, I didn't tell them that it was my work. When Sam came in I was sitting behind the reception desk. He asked what was on, and I said it was a media design installation, and he walked through to the interactive space. He spent 2-3 minutes in there, and came back to ask me if I knew it was interactive, and what else he could get it to do. We talked about it for a while, before he went back in for another 5 minutes. When he came out the second time, he asked me if I knew the artist, at which point I had to admit that I was the designer or I would be lying to him outright.

Sam thought it was a great idea not to tell people that it was my work because he didn't feel like he was under any pressure to like it from the beginning.

> *Yea it would have been different if I had known that you made it. I probably wouldn't have wanted to talk to you.*

And while I was sitting at the desk over the weeks, a few people didn't like it, but probably would have been subtler if they had known it was my work. It was really interesting for me to think that just having me present as the creator would have devalued Sam's experience of the space in a way. He would have felt under pressure to behave with it in a more prescribed way, and would have been less likely to feel the space was personal for him.

Gen is in her mid twenties, is not a designer or artist, and has very little knowledge of interactive design. She spent about half an hour in the installation, some on her own, and some with other people. She said she spent most of her time in the space with her arms outstretched, walking through the centers of the projector clusters where the fabric was hung most densely. It reminded her of swinging on the washing line and running through the hanging sheets when she was a child.

At one point I got myself completely disoriented and couldn't remember which way the door was, and I had this massive moment of panic, and then realized it completely did not matter, and just continued playing with it.

Gen actually didn't realise that the space used motion tracking, or was reacting to her at all. Despite this, Gen's experience with dark; and the light was exactly what I had hoped it would be able to offer people. Images and ideas from the installation stayed with her for a long time afterwards, and she kept developing new thoughts and reflections about the experience and other things that it reminded her of.

Experiencing; Meaningful Connection

Gen's response to dark; and the light was centred on the connection she made with the space through the materiality.

I loved being able to touch it. I've been told off before in a gallery for touching things and it was such a shame!

In the interview she talked quite a lot about a dress that she was trying to sew, about the fabric being a bit slippery, and her old sewing machine not coping with it very well. It was like getting her body in amongst the fabric in the installation prompted her to have a conversation with it about her project; to think through it.

The connection that Sam made with *dark; and the light* came from him feeling like the installation was teasing him, or challenging him.

I spend ages looking for some kind of pattern loop, like they were playing the same thing over and over again, but I couldn't find one, and they never did the same thing, I think they had different numbers of circles each too.

Sam enjoyed the fact that he couldn't predict the space, and that he was able to disprove or affirm some of his initial assumptions by spending time with it. He felt rewarded for his time investment, and this made his experience really positive. Sam didn't use the installation to reflect back on himself to the same extent that Gen did.

Brett is in his mid forties comes from a computer science and information technology background, and during the interview he wanted to talk mostly about the processing code that generated and controlled the projections. Brett didn't feel the installation was personal for him, and made no meaningful connection with it. He said he liked the installation but was disappointed that the interactivity didn't come across more clearly,

It could have been more game-like, more like a challenge somehow.

Brett wanted to be able to win it. When I suggested he could have tried to get all three projections the same colour through continuous movement; or set himself a goal somehow, he didn't think this was a very good idea. The following is a short exert from our interview –

> **Why didn't you set your own game?**
> *But then how would you know that I had won?*
> **You could have told me?**
> *But that takes the shine off winning, completely. That would be like trying show off about winning a race to someone who doesn't know what running is, they just wouldn't get it and so why would they be impressed.*

For Brett, because the interactivity invited no hierarchy he wasn't very interested in it. Motion tracking is being used extensively in game development at the moment, and that was what Brett was interested in, not my more subtle use of it. He wanted *dark; and the light* to offer him an opportunity to show other people that he could figure out exactly what it was doing, and exploit it. But as Sam and Gen's experiences show, it didn't matter if you "got it" or not, and for Brett this was frustrating.

Conclusions

This project would have benefited from some initial ethnographic research into how people currently dwell and understand dwelling, rather then drawing this information only from literature. In a way, it was positive because it made my entire investigation of dwelling a creative challenge, but it has meant that the interviews were limited in their ability to measure the success of the installation. If I had gained a more thorough, practical understanding of how people dwell today before holding the exhibition, I could have compared this to the experience of *dark; and the light*, and I also would have had more experience with terminology that people would use today to describe an activity like dwelling rather then having to interpret what people said, and translate it into the kind of language that Heidegger, Norberg-Schulz, and Lefas use.

Reflections; the *fourfold* and Balance

The space carried a sense of harmony between the organic feeling aesthetics and audio, and the digital technology it relied on. There was also an interesting conversation that happened between the incredibly soft fabric, and the hard, austere reception of the gallery. These contrasts worked well in bringing into focus the balances between these kind of extremes, and setting people up to understand the themes coming through from the *fourfold*.

The audio was an incredibly important contributor to getting people to change their mindsets as they entered the installation. While it was not discussed thoroughly by anyone in the interviews, it was important for setting up the right atmosphere. The audio could be heard from the reception area, before people could see any of the fabric or projections and it acted as a teaser for what was to come. It also foreshadowed the overall feeling of slowness and darkness of the piece.

The aesthetics were successful in engaging people, but I could have taken more of a risk when trying to embody the *fourfold*; particularly mortals and divinities. The reason I was cautious in my concept for this was that it is difficult to embody these without themes like "supernatural" or "death" immediately dominating anything else present in the space. However, relying on the sense of the installation being organic and talking about life in balance was not strong enough to carry these themes. I think this could have been shown to experiencees more literally without losing the mystery of the installation.

Reflections; Reflection and Understanding

When I realized in Gen's interview that she didn't know that she was responsible for the projections changing colour and speed, I decided not to tell her; I felt like it would be the wrong thing to do. I didn't want to ruin her enjoyment by saying, "well actually you didn't get it." But on reflection it was more then that. I didn't

want to undermine her experience by trying to say that my intent, my delivered content, was more important then her lived experience, or even that it was important for her to be aware of what I was trying to do as a designer. Because for her experience, anything from my agenda that she didn't get from the design is completely irrelevant. Especially since I conducted the interview after the installation had closed; what would either of us have to gain by me telling her. The reason that Gen made me reconsider what understanding something in its essence has to do with dwelling was that despite her not acknowledging the interactivity, her experience of it was described to me as being more like dwelling then anyone else I interviewed. While this might not always be the case, in this instance, Gen came the closest to dwelling because she had the most in depth understanding of what the installation meant to her. She used it as an act of *private dwelling*, was able to analyse the core of her relationship with it.

Being in the installation on your own was completely different to being in there with other people. Many of the people I interviewed learned about the interactivity by watching others, and some said that they didn't believe they would have worked it out on their own if they hadn't seen someone else doing it. Most people said they were less inclined to try and trigger the cameras when they were in there on their own. This shift in atmosphere was rewarding for those who came more than once, or who spent a long time with the piece. The dual characters made the space

more engaging in the sense that people felt like they were experiencing something unique.

Drawing on Eliasson's emphasis that we create spaces that encourage us to take care of the world and each other, the interactivity was powerful for those who knew how it worked. It encouraged and rewarded attentive, considered participation. While many people engaged with the space in ways other then by playing with the interactivity (like both Gen and Sam), it elicited thoughtfulness and lightness in those who did play with it. The installation was successful in encouraging reflection and understanding because experiencees had choice in how they were engaged, whether with the fabric like Gen, or with the installation while idle like Sam. This meant that people immediately saw themselves in the work because they actively authored their relationship with it.

Reflections; Meaningful Connection

Having to touch the fabric to move in to the space was really successful. The immediate tactile connection set people up to be open to being engaged, and demanded attentiveness. I also observed many people using the fabric to trigger the cameras; grasping it and waving it around, particularly if they were wearing dark clothing and found it difficult to trigger the cameras using their bodies. Many people said they enjoyed touching the fabric, and moving through underneath the

projectors and letting it run over them. Like Gen commented, it is not something you are usually encouraged to do in a gallery and people found it engaging and powerful.

The installation would have benefitted from more vertical space so the projections could have been bigger. The limitation was how far away the projector could be from the projection surface, and when projecting downwards, this means the height of the ceiling. Having a wider throw on the floor would have meant that people could stand right in the projected area without feeling to large for it. This would have created another dimension to the installation, and could talk about *private space* in the sense of experiencing that withdrawal from common space. It would also have made each projection bigger in presence as well as size, which would have encouraged people to feel a certain reverence towards them.

It was a shame to me that Brett couldn't see past the part of the installation that he was an expert in, to see it in its entirety, but he was quite an isolated case in this way. Many people who came to the gallery were specialists in audio, or programming, or spatial or installation design, and were not disappointed that their specialty didn't take precedent over the other elements. Many of them were impressed with seeing their field contribute to the whole experience, which is indicative of dwelling on community and environment, and they certainly seemed

have a more positive time then Brett did. It seems to come down to the realization I had about my conversation with Gen, and not telling her about the interactivity. It went against what I wanted to do, not to tell Gen, and while in hindsight I'm glad that I didn't, at the time I was only able to convince myself not to by being incredibly rational; by telling myself it would not contribute positively to either of our experiences, but even then I still wanted to tell her. Perhaps if Brett was able to let go of what he thought *dark; and the light* should have been, he would have been able appreciate what it was, and would have learned something through embracing something new rather then protecting something old.

Where *dark; and the light* was successful in creating a meaningful connection with people, it did so through providing an experience that was positive, but that people felt they didn't fully understand in a way, which meant they gave it further thought and analysis after they had left the installation. This meant that people would start to associate other experiences with *dark; and the light*; one interviewee who I didn't get to talk to until a couple of weeks after the exhibition said that she spent a long time thinking about it when she was sitting by the Wellington waterfront one day.

Dwelling and the Design Process

This project has been a personal exploration of informing media design through the theory of dwelling. The integration of dwelling into my design process and output was an incredible challenge, and while I think it could have come across more strongly in the installation, using it definitely set me up to work more consciously. While the scope of this research may be seen as limited because it is so heavily influenced by my own values and personal frame of reference, it was not my intention to argue for a universally applicable philosophy. Rather, I sought to show the benefits and opportunities of finding theories to work with for an individual design project, and hope to encourage other designers to do so. This project should be seen as a critical experiment.

I approached designing, executing, and interviewing for this project as my own pursuit of dwelling. The biggest change that dwelling posed to my design process was that I had to embrace many iterations and changing ideas as my reflections and understanding of my goals developed. It dramatically changed my perception of the installation as a final, finished piece. I feel that the project is still developing, and will continue to do so for me as I dwell on it in the coming months. Having the opportunity to write this research along side developing and executing the design phase of this project has enabled me to reflect on it well beyond what I

expect others who saw the installation have done, but feedback from the interviews suggests that some have experienced moments of reflection and thought not unlike dwelling.

It is difficult to comment on how this creative work being digital affected the influence that the theory of dwelling had on it. As I have outlined, I was hyper-aware of things like the projection surface and intermediary space, but mostly the theory of dwelling effected my own creative process, and my treatment of the work in the interview phase; and in a more limited way – the aesthetics of the installation. This makes sense alongside Heidegger never commenting on aesthetics, and rings true with the idea that finding dwelling is about attitude and connection more then the aesthetics of spaces.

The biggest influence that the theory of dwelling had on this project was drawing my intention towards this idea of *getting involved*; both as the designer and as the consumer, or in this case, experiencee. Without seeking this investment from people, none of the three criteria for digital dwelling could have been successful for this project. This research has solidified my belief that active participation in the design process is critical for creating people centered, good design.

Lastly,

Seeking to be influenced by dwelling was not in any way a folly experiment. While I don't think it would be possible to design dwelling places for everybody, in pursuing it my knowledge and appreciation of the subject has grown along with my understanding of my own and other possible design processes, and more then anything, I designed and provided an experience not unlike dwelling for some experiencees. I have a new appreciation for the value of working with a bigger intention or framework in design; be it dwelling or another theory.

I actively avoided treating this theory as a coat of paint that I could apply to an installation, rather I sought to understand it; to give my work a stronger meaning, and to communicate it in a way that held true to what I had discovered. If I believed that everyone who experienced *dark; and the light* could find dwelling there, then my understanding of dwelling would be lacking, no matter how good the design. Dwelling is different for everybody and found in different places.

This project has firmed by belief that the theory of dwelling can inform media design practice, and in doing so enhance the connections between people and objects and media.

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