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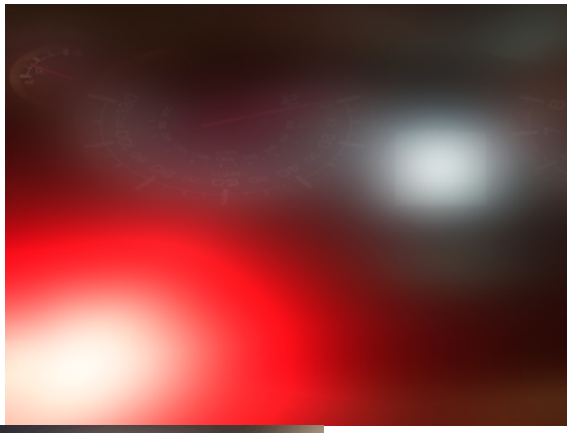
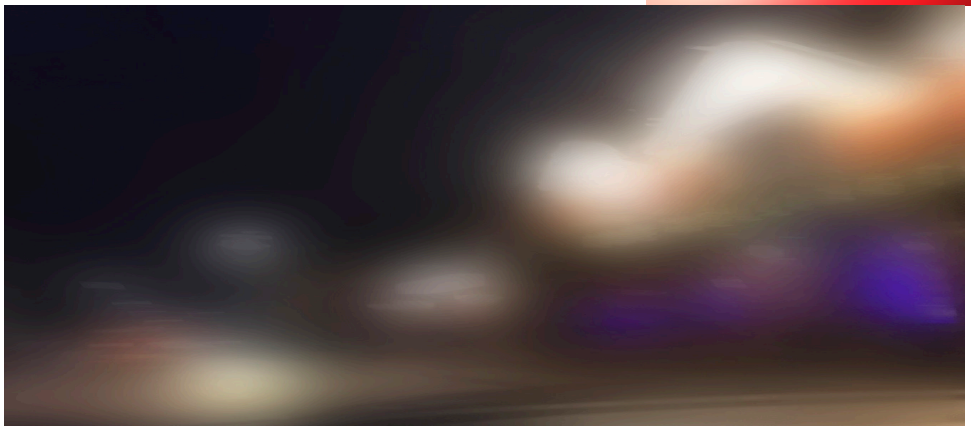
Unit 10: Consolidation

Friday 5th February 2021

Inclusive Inquiry: Deprivileging the Visual through Sensory Design Dialogue

How can sensory design practices overcome an ocular fixation to incorporate the visually impaired?





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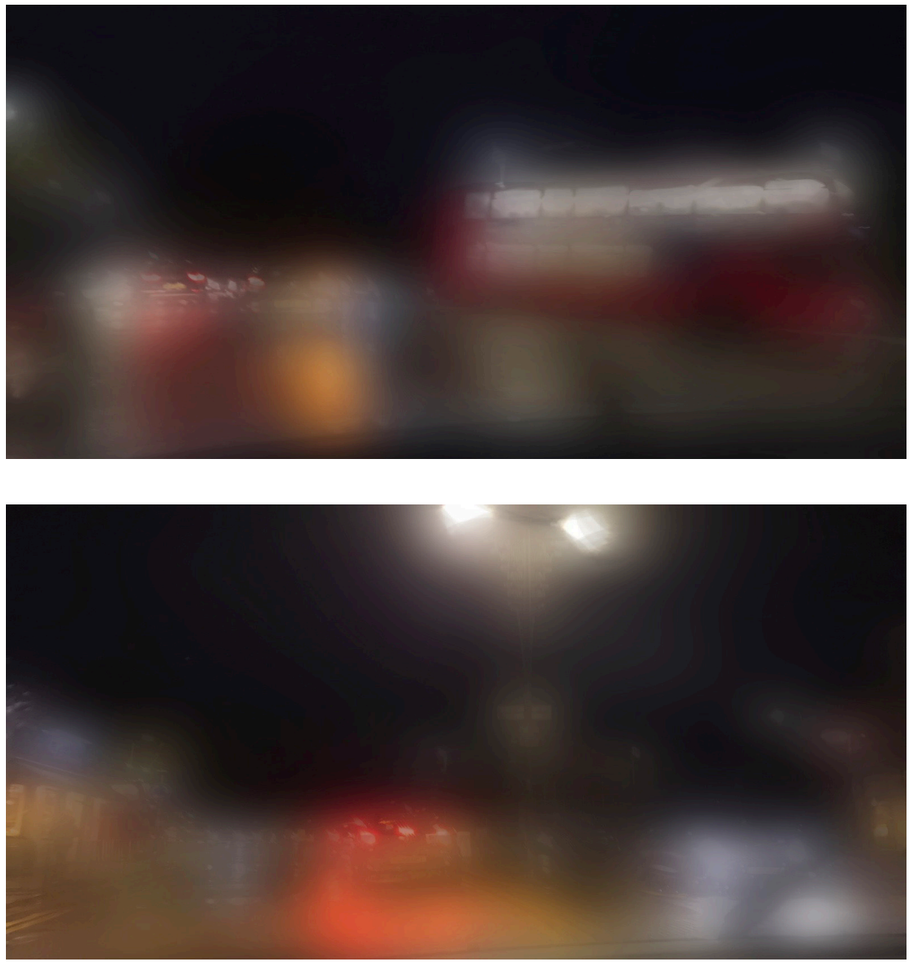

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Introduction

On a first approach to architectural practice, it can be argued that design information is mostly passed through the visual paradigm. From the position of designers, the dominant visual sense is often privileged in assessing functionality, in addition to the quality of aesthetics this is determined by. However, when a visually impaired individual experiences space, the visual is not an establishing factor of the person's spatial comprehension. A creative proposal that begins with an array of sensory design techniques to hand can make a vast difference in the lived outcomes of the eventual space.

The aim of this dissertation is to explore the capabilities of unorthodox design techniques, centred in sensoriality and bodily phenomena, and their impacts on the visually impaired demographic, within the design realm. This inquiry will explore the overcoming of a linear narrative, an inquiry which not only seeks functionality, but empowerment also through a multifaceted design dialogue, that considers all bodily senses.

In my individual experiences, all coherent visual memories have been made possible through the intervention of corrective lenses. Having the classification of extreme myopia alongside astigmatism, corrective lenses exposed me to standard vision, in juxtaposition to my natural short-sightedness on a daily basis. This provoked my interests into how those with highly severe forms of visual impairment and legal blindness find coherence in their surroundings. The relevance of architecture in a visually impaired persons' relationship between body and world is direct; as designers, the creative processes we engage with engineer the usability and meaning found in spatial experiences. Included also is a photographic journal into the visual abstraction of how daily activities would change without the aid of corrective lenses, to reflect my initial interests in the area of study.

To enrich the quality of research into designing from a visually impaired perspective, a self-initiated interview with a partially blind architectural student has been conducted. Poppy Levison, Central Saint Martins, discusses the inconveniences she faces as an aspiring designer in a field that puts visual culture on a pedestal. The interview structure intends to gain insight into her personal experiences, regarding her introspective design practice and also her feelings about the design community. Her commentary on what

difficulties she faces as an aspiring designer (and user of the built environment) provides valuable insight into the notions being pinpointed in the dissertation.

In order to provide sufficient contextual framework, historical, social and philosophical theory will provoke discourse on attitudes towards disability- more specifically, on the value that visual experience holds. The social model of disability will provide a contemporary foundation upon which hypotheses of inclusivity and accessibility can be formulated. The presence of the seemingly visual bias will be analysed in its impacts, bringing into question the power that ocularcentrism holds in our cultural conventions. The repercussions and the historical journey of visual power will be analysed, in correspondence to the eventual conditioning of contemporary design discourse.

The primary case study examined will be the U.S. Veterans Affairs Blind and Polytrauma Rehabilitation Centre in Palo Alto, California, designed by Smith Group and the Design Partnership. Assessment of this site will be assembled in three parts. The first will investigate the effects of late-blind contracted architect Christopher Downey's contributions, in correspondence to social ideologies of the disabled community. The research programme will consider how the design of the space is executed to grant authority to impaired directors of educational programmes - how they can become authoritative figures in their own experiences will be a determining factor. The second part of the analysis will spark an enquiry into multi-sensory design methods Downey introduced in the creation of the centre, with a focus on philosophical investigation into the changing body and altered spatial knowledge. These design techniques will inform a dialogue regarding Downey's own experiences of his changing senses, and the unique relationship he substantiated between his body and the site in the conceptual stage of design. The third section of the case study will work in chronology with the one before it, this time acting as an inquiry into the success of the sensorial implications of these methods. The accessible non-visual sensations engineered in the centre's configuration will be evaluated accordingly. The structure of the research will yield a correlation between Downey and the eventual user of the space, regarding the shared bodily transformations through visual impairment. The analysis will also recognise the existence of this relationship to be an instance of increasingly inclusive social attitudes towards the disabled community.

A comparative intervention into the case study's wayfinding approach will occur, in the contemplation of information accessibility at the forefront of their cause; Christopher Downey addresses 'blindness and visual impairments' as a 'unique situation for accessibility. You can get around physically just fine. What we don't have access to is information to get around' (Downey, C, 2010). Pertaining to this 'unique[ness]', a philosophical understanding of how we attain information using alternative senses is a key factor in the impacts of the design methods examined. These methods will be analysed in an educational context also, respective of the centre's aim to rehabilitate and teach the visually impaired how to re-establish a relationship with their new perception of the world, in a sensorially communicative and empowering environment.

The research conducted will draw connections between the social discourse and cultural preconceptions that orchestrate our understanding of disability, specifically visual impairment. This research will provide a theoretical framework, in which Downey's contribution to the Blind Rehabilitation Centre can be examined in the fulfilment of its socially empowering and sensorially versatile means. This is a goal most relevant to the thesis, as the aim is to identify non-conforming design strategies that can empower visually impaired individuals and reduce existent inequalities.

Chapter One: The Models of Disability

The dispositions, sympathies and apprehensions toward those in the disabled community are informed mostly by a concoction of medical terminologies that speak to what it is to be an individual with a disability - the medical model of disability. Troubleshooting within the medical model identifies 'disease and injury [as the] cause' (Pfeiffer 2003, p. 99). At face value, these notions aren't to be proven or disproven, and are simply observations taken from ones' state of being. The Union of Physically Impaired Against Segregation initiated the growing critique of the medical model, provoked through perspectives of marginalisation from disabled members of society and their allies (fig. 5)

"In our view, it is society which disables physically impaired people. Disability is something imposed on top of our impairments, by the way we are unnecessarily isolated and excluded from full participation in society. Disabled people are therefore an oppressed group in society" (UPIAS, 1975).

(fig. 5) The first UPIAS meeting (Union of the Physically Impaired Against Segregation) took place at the Le Court Leonard Cheshire Home.

Evidently, the social model stands in disagreement with the causes and solutions defined by the concept of disability that the medical model accepts. The issue is located, rather, within the shared attitudes our society holds towards the disabled, that often result in marginalisation in one manifestation or another. The structural shortcomings of the built environment enforce these shared attitudes, amalgamating to create the cultural conventions that disable individuals. Through these cultural conventions, certain outlooks towards the disabled develop; Pfeiffer (2003, p. 102) discusses how disability 'comes into existence through social interacations'. Further, he concludes, 'If there is no discrimination, there is no disability'.

Proposed in 1983, Michael Oliver set in motion the ideology behind 'attitudinal barriers' (Den Houting, J, 2018, p. 272) being responsible for the disabling of those who have a physical impairment. In *The Social Model of Disability: Thirty Years On*, Oliver provides a contemporary outlook on the model's evolution in anticipation of the twenty-first century, drawing comparisons between actions taken in light of his propositions, and his initial intent for the model. Oliver (2013, p.1024) claimed that for professionals, the model highlighted the relevance in reorientating practices for the needs of the disabled. In an architectural translation of these notions, the built environment is a divisive vehicle, wherein there is 'failure to accommodate needs' (Oliver, M, 1996, cited by Den Houting, J, 2018, p. 272). In 're-orient[ating] their work to a framework based upon the social model' (Oliver, M, 2013, p.1024), designers have opportunity to envision more inclusive spaces.

In response to the *International Classification of Impairment, Disability and Handicaps* submitted by the World Health Organisation, the social model disputed the proposed sameness found within official definitions of 'impairment' and 'disability'. Terzi (2004) critiques the somewhat ambiguous description that 'disability as referred to in the restriction of ability to perform daily tasks' (World Health Organisation, 1980), in observation of the polarity of this statement. Furthermore, Terzi illustrates in her writing the dangers of assuming a 'casual relation between individual impairment, seen as a departure from human normality, and disability, seen as restriction in abilities to perform tasks' (Terzi, 2004, p. 142). Consequently, individual impairment being explained as the primary cause behind disability encourages authority figures and able-bodied citizens to adopt a fatalistic attitude in catering to those with impairments, in mitigating their barriers to daily tasks.

Designers, in this case, would not be an exception; the idea of disability stemming from individual impairment alone permits them to conceptualise the built environment with little consideration towards the disabled, thus disabling them further in their disregard.

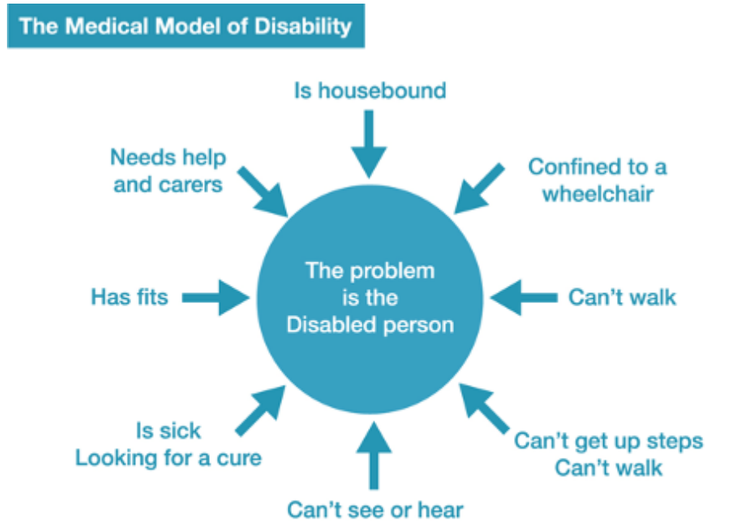
An emerging school of thought that deems the social model of disability all the more relevant in the current debate is the biopsychosocial model of disability. An individualist approach that opposes the collectivism and empowerment of the social model, the biopsychosocial model designates the problems that the physically impaired face onto the deficiencies in their state of being. Perpetuated by the private healthcare sector, the model 'seeks to de-incentivise the disabled and stop them being self-reliant' (Inclusion London, 2021). The case study of the Blind and Polytrauma Rehabilitation Centre is of utmost importance as an architectural example of inclusive design practice; its presence within the wider territory of the health and public sectors is a definite contrast to the medical and biopsychosocial models of disability endorsed in these fields.

An exemplar architectural practice that actively engages with the social model of disability is the DisOrdinary Architecture Project. An experimental creative collective pioneered by designers with a plethora of different bodily impairments, the project has been challenging preconceptions of inclusivity within the architectural sphere for the last decade, in order to achieve 'doing disability differently' (The DisOrdinary Architecture Project, 2021). What could be considered a direct architectural response to the social model's ideology, the collective utilises the unparalleled perspectives of those in positions of disability, to innovate effective creative strategy. Inclusivity is actualised through the granting of authoritative positions to those who can provide an impaired perspective, enforcing a more multi-faceted approach to user-centred design.

Within contemporary British attitudes to accessibility, a collective such as the DisOrdinary Architecture project acts as a representation of emerging attitudes towards how we perceive and cater to disability. However, more widespread platforms have adapted also, to support a more holistic approach to the disabled demographic, by taking into consideration access to information in the age of technology. The Government Digital Service provides online materials pertaining to disability, in order to communicate a stronger understanding of accessibility needs to the public. Whilst an estimated '1 in 5 people in the

UK have a long-term illness, impairment or disability', recent studies discovered less than half of local council internet homepages meet basic accessibility requirements for their users (Government Digital Service, 2021). This could allude to wider issues, beyond regulated services such as accessibility to online information. These statistics can be analysed as a direct reflection of the minimal importance attributed to reforming our social opinion on considering the disabled in our endeavours. 'In Britain, it has been the social model of disability which has provided the structural analysis of disabled people's social exclusion' (Hasler, 1993). Within the closer confines of design shortcomings that affect the visually impaired, a notable predicament is that the visually impaired 'don't have access to information to get around' (Downey, C, 2011).

The social model bridges thought and action in their imposition of disability (fig. 6 and 7), and it critiques the manner in which the term 'disability' reduces the individual down to their personal bodily deficiencies. Furthermore, societal shortcomings (in their failure to accommodate any divergence from 'the norm') impose disability onto those who cannot attain able-bodiedness. Within the contemporary injustices sustained by ableism, the social model's focus on repairing the disabling attitudes, rather than the disabled individuals themselves, combats the restrictions placed upon them by ableism – the belief that there is an afflicted demographic that requires 'fixing'. Within inaccessibility in our architecture, cultural conventions orchestrate the way we produce and behave in the built environment. This brings light to a visual bias within able-bodied individuals that imposes disability onto those who cannot see. Thus, in its effects of creating a visually reliant domain, 'culture, the great enabler of humanity, is also disabl[ing]' (McDermott and Varenne, 1999 p. 142).



(fig. 6 and 7) diagrams, explaining the medical and social model of disability

Chapter Two: Philosophy Behind Ocularcentrism

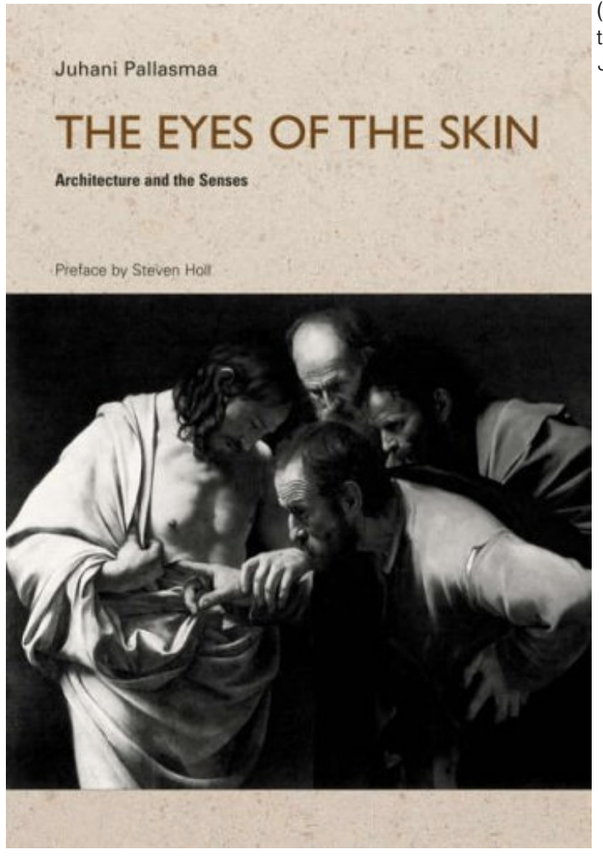
It can be argued that our understanding of visual culture is constructed by the schools of thought implemented in the philosophical sphere. 'Privileging the visual' (Pallasmaa, J, 2012, p. 16) in our design methodologies can often work against the favour of the visually impaired. It is crucial to establish the philosophical ideas that have contributed to the social attitudes towards disability: that being the former supplementing the latter with cognitive reasoning behind an ocular preference. Ocularcentric ideals are encouraged through classical Greek thought, and this has impacted wider western culture also.

In direct consequence of evolving philosophical thought, a certain visual bias can often be unknowingly embedded into products that designers fabricate. The Ancient Greek debate of perception can be evaluated in its effects on our mental programming, through the manner in which knowledge and rationale are ascribed to the visual. In *Eyes of the Skin* (fig. 8), the existence of 'epistemological privileging of vision' (Pallasmaa 2012, p. 16) is identified through multiple philosophical discussions, all regarding the perceived importance of sight in our worldly comprehension. Determining reality and appointing evidence through the visual paradigm has directly influenced the imbalanced and vision-reliant experiences we have with our architectural surroundings at present. In consideration of the visually impaired, who must rely on alternative bodily encounters to acquaint themselves to spaces, the sensorially despondent results of this visual bias present wider issues of accessibility.

Historically, visual culture has been governed by ideals that speak to an understanding of our self-awareness in a given space. Originating in Ancient Greek discourse, the widely understood principle of knowledge was parallel to the consciousness of self, determined through seeing. The ocularcentric paradigm conducts a 'vision-generated, vision-centred interpretation of knowledge, truth and reality' (Levin, D.M., 1993, p.2) which upholds a narrative that sight dictates logical reasoning and underpins common sense. Furthermore, the 'uncontested [visual] hegemony' (Levin, D.M., 1993, cited by Pallasmaa, J, 1996, p.17) identified in this approach is illustrated in the philosophical placement of the self. Ocularcentric ideals attribute our cognition to account for what we know, wherein 'the eyes are the more exact witnesses than the ears' (Heraclitus, cited in Graham, D.W., 2007), the

appreciated as the prime judiciary in our reception of information.

Following the reasoning that the eyes act as the 'enigma' of the body, Peter Sloterdijk identifies the eyes as being the 'organic prototype of philosophy' (Sloterdijk, P, cited by Pallasmaa, J, 2012, p.15). The ocularcentric paradigm is hereby reinforced, as the perception of body in the world is recognised primarily through seeing, in addition to the act of 'seeing-oneself-see' (Sloterdijk, P, cited by Pallasmaa, J, 2012, p.15). This awareness of 'seeing-oneself' within a worldly context is credited solely to the ocular channel of perception, therefore emphasising the knowledge we attribute to seeing. Furthermore, phenomenological thought also hypothesises recognising the world through bodily observation, applying 'a posteriori' thinking to determine empirical evidence - that which is identified through tangible observation. Subsequently, the built environment plays a large role in constructing this tangible realm of evidence, whereby architectural products fabricate what we understand as substantial evidence of material existence.



(fig. 8) The Eyes of the Skin, by Juhani Pallasmaa

Within a global context, ocularcentrism remains a theory preserved through Western thinking. The 'importance of unclouded observation' has circulated within 'Western philosophy since [the times of] Plato and Aristotle' (Dewey, J, 1929, cited by Houlgate, S, 1993). From this, it can be gathered that the scope of the research will be informed by a specifically western context, in conformity also to the models of disability discussed. Western ocularcentrism has been perpetuated additionally through a Renaissance outlook onto the social implications of the senses. The five senses were organised, formulating a 'hierarchical system from the highest sense of vision down to touch' (Pallasmaa, J, 2012, p. 16). 'Suppressed by the code of culture', smell, taste and touch were considered only appropriate in one's private residence, whilst vision and hearing were deemed the 'privileged sociable senses' (Pallasmaa, J, 2012, p. 16). The case study will follow an understanding of how the seemingly lowest sense (the tactile) is brought into the public realm, in the consideration of the visually impaired. A later surveyance of the capabilities of braille will also assess the changing attitudes towards the language of touch within a technologically evolving society.

After a philosophical intervention into the 'character of vision that predominates today in our world' (Levin, D.M, 1993, p. 2), a developed acknowledgement of its rationale will inform a critical approach to western ocularcentrism. This, in conjunction with wider social attitudes towards physical impairment, will perform to analyse the impacts that the Blind and Polytrauma Rehabilitation Centre made in its developing attitudes towards inclusion, but also in a multisensory approach to design. In the absence of ocular programming in visually impaired cognition, visual dominance and its socially divisive power within current design methodologies will be understood, in evaluation of the practices that stray from the fixation on the visual.

Chapter Three: Polytrauma and Blind Rehabilitation Centre, Palo Alto, California Smith Group and the Design Partnership

Currently the largest Rehabilitation Hospital within the U.S. Veteran's Affairs System, the Blind and Polytrauma Rehabilitation Centre was built to completion in 2016. The centre serves to rehabilitate those who are suffering from multiple stages of vision loss, as well as accommodating other injuries, including brain trauma.

The design methodology of the centre will be analysed in its success in creating an environment for its' patients that considers their visual impairments; inclusive practices that engage in unconventional sensory design techniques will aid this endeavour. In collaboration with one another, Smith Group and the Design Partnership designed the blind rehabilitation unit, alongside Christopher Downey, a practising late-blind architect who became contracted to assist in the development of the architectural journey from a blind perspective. Downey's contributions in particular will be surveyed in their effectiveness in creating an environment that is sensorially enriched, and emotionally nurturing for those undergoing rehabilitation.

After losing his vision and sense of smell as a result of brain tumour surgery, architect Christopher Downey was insistent on continuing his design practice. His interests developed from this stage forth, engaging in multisensory approaches to envision design outcomes, mostly in the healthcare sector for the visually impaired.

"I want to propose that the blind be taken as the prototypical city dwellers, when imaging new and wonderful cities, and not the people that are thought of after the mould has been cast, it's too late then" (Downey, C, 2013, *Design with the Blind in Mind*).

In accordance with the social model's encouragement of disabled viewpoints in professional practices, the actuality of Downey's role in the project design would be valued highly. In his efforts, a 'multi-dimensioned replica of reality that can trigger insights which we might not otherwise [have] develop[ed]' (Finkelstein, V, 2001) aids the inclusivity of the project in its entirety. The 'multi-dimensioned replica' could allude to the ways in which the physically impaired can access spaces, but also have enriching experiences with them,

comprised of sensory modalities other than sight. Downey's affirmations for the design of the centre account for this by "address[ing] the pragmatic need of getting around, but secondly addressing the quality of the architectural experience, if you aren't going to see it" (Downey, C, 2009). Overall, it can be understood that the social model stands in unison with the action of engaging a blind design director to help in the approach of the build, as the relationship between user and designer is strengthened. The simple requirements of usability are achieved, and the design exceeds these necessities. The rehabilitation space acts as a re-familiarisation tool for the user, through a sensorially enriching spatial journey to accompany their treatment. The 'privileged position of both designer and user' (Vermeesch, 2013, p 137) that Downey assumes in the wider development scheme catalyses the connection from designer down to patient, through the mutual experience of visual impairment.

The repercussions of representationalism in the design procedures are evocative of the experiences had in the eventual site. Through the undertaking of the project, Downey overcame some encounters that could be best labelled as failed representationalism.

"[The architects conducted experiments where] they blindfolded themselves for periods of time to experience it, but they know that's just a trial and that doesn't get you through a day. That doesn't give you understanding of how you understand space if you're blind. It just is an experiment to do for an hour" (Downey, C, 2009).

Despite the design team's "aware[ness] that they really didn't understand how space and architecture would be experienced and managed by users who would not see the building" (Downey, C, 2009), the attempts to encapsulate this experience through wearing blindfolds did not achieve the desired accuracy. Downey's position at this time was crucial in transforming the way in which the able-bodied design team became acquainted with designing for the visually impaired. Despite the blindfolded testing being of "no harmful intent" (Downey, C, 2010), a deeper understanding of the reception of the space was required to continue designing thoughtfully. It is often in good faith that we try to view the world from a different perspective, however, we unknowingly underestimate or dismiss the experiences of those we are trying to replicate in doing so. The medical model's values equate to this scenario, as they pinpoint solutions in decision-making on behalf of

these individuals. The same can be said of the trivialisation of disability (or how disability is hypothesised), rather than inviting into the discussion those who have experienced the 'hypothetical blindness' first-hand. Understanding the impaired experience through the vehicle of the hypothetical 'ha[s] a luxurious after-dinner quality; [this] rarely lead[s] to improvements in the lives of actual blind people' (Michael, E.K., 2018). Rather than fabricating false realities to appoint blindness to, Downey's solutions create an interconnected dialogue between blind members of the Veterans Association and those who are designing for them.

This instance of failed representationalism is overcome by the involvement of the demographic that the centre seeks to support. The Smith Group and the Design Partnership invited blind centre directors into the design conversation, who were members of rehabilitative staff. Now existed representatives of the visually impaired, whose perspectives could most successfully imagine a space for them to thrive in. Most vitally, with Downey's combined blindness and architectural expertise came the dual capability of synthesising one holistic concept, composed of all ideas from both designer and user.

"In professional circles, we tend to get surrounded by so many people that are completely able-bodied that we forget the reality of a lot of people that have other issues. I think it's important to consider that at the beginning of the design process, so that you develop an architectural form and language that works for more people" (Downey, C, 2009).

Albeit the centre would be commended in the eyes of the social model of disability for its inclusivity, it more so resonates with the principles proposed by the social-relational model. It's logical that the social-relational model of disability is categorised as an interactionist modification of the social model, one that 'ignores experiential dimensions of disability' (Shakespeare, 1994, cited by Reeve, D, 2004, p. 84). What can be considered a more mindful approach, the social-relational model roots itself in not only the 'experiential dimensions', but also acknowledges its implications, concerning the 'psycho-emotional dimensions' (Thomas, C, 1999, cited by Reeve, D, 2004, p. 83). In terms of the rehabilitation centre itself, the social-relational model manifests itself in two ways: firstly, in the interactions had with the blind directors, and secondly, in the compassionate rehabilitative environment that provokes an emotionally intelligent response.

Moreover, the Nordic social-relational model appreciates the differentiation between bodily impairment and imposed disability. That being said, it also ‘views disabled people as unable to perform in social roles in the same way as non-disabled people’ (Berg 2004, cited by Owens, J, 2015, p. 386). It can be suggested that the inability to ‘perform social roles’ in the same fashion as the non-disabled is partly attributed to undeniable difference in bodily being. However, as the social-relational model is the system in which all elements at hand can interact, it identifies the responses elicited between environment and user, encapsulating the continuum of action and reaction that the theory proposes. Owens (2015, p. 388) provides commentary on the proposed ‘relationship between the individual and their environment’, associating the experiential outcome as a ‘mechanism of exchange or interaction’. Following this, the nature of the rehabilitation centre as a medical institution puts forth the implicit awareness of bodily deficiency present in its patients. However, the approach of the centre, both in its methods of rehabilitative assimilation and also in the experiential considerations of the spaces therein, speaks to the concept that both influence the resulting encounters.

A comparative approach to the case study can be constructed, through the analysis of the DisOrdinary Architecture Project’s workshop for visually impaired designers. A notable similarity between the rehabilitation centre and the workshop is the empowerment of individuals, through a collective persona. An attendee of said workshop (fig. 9) , Poppy Levison (2020) recalled past experiences where she’d felt “detached from [the disabled] community”. Despite the differences in patients of the rehabilitation centre, and the student population of the workshop, both find sameness in the creation of safe and empowering spaces, that enhance the sense of community. In her further commentary on unintentionally exclusionary spaces, Levison states that “support is often a thing that makes you disabled”, through the self-perception of being an inconvenience to others when asking for guidance. A certain empowerment occurs, when those with impairments assemble to engage in activities, as the communal spaces provided in the rehabilitation centre serve the same purpose.

Overall, an extensive understanding of the social model of disability’s relevance has been evaluated, in its impacts in an evolved understanding of the case study. The comparative analysis between the case study and the DisOrdinary Architecture Project’s workshop

established the similarities in its aims for communal empowerment. Engaging in the social-relational school of thought introduced an experiential dimension to the inquiry, in the social debate for the wellbeing of the disabled.

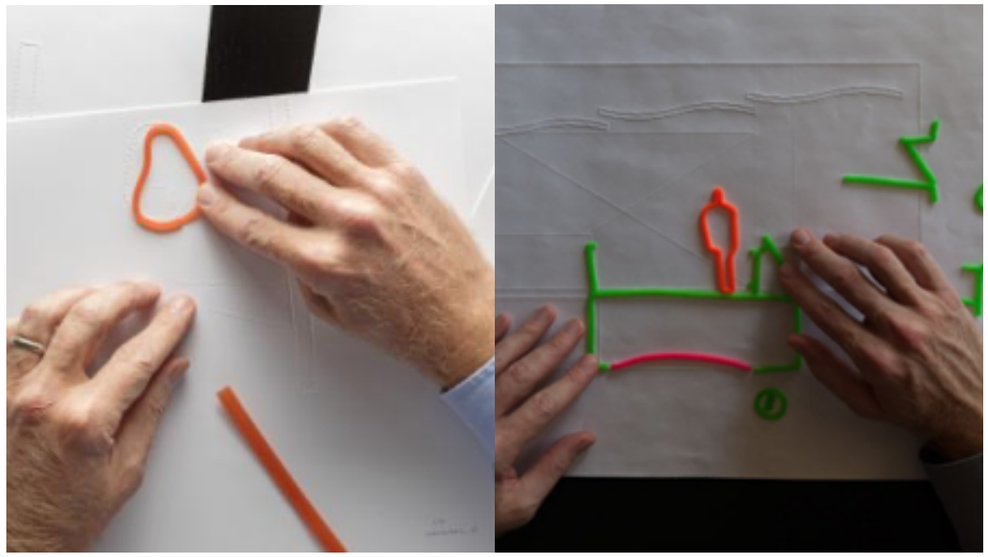
(fig. 9) Partially sighted student Poppy Levison showing her final ‘box of feelings’ to sighted architect

Abdul Photograph: Jos Boys

It is important to note that whilst it is useful to evaluate the social ramifications of the centre design itself, sensory modalities implemented to communicate the centre design should also be reviewed in their own merit. A philosophical argument will be brought forth as part of a wider inclusive dialogue, the changing body and its new sentience of the world being appraised as a result. Downey, a professional architect who has undergone similar rehabilitation processes to future patients due to late-blindness, assumes a unique state of being within the design team. A certain fluidity of communication is initiated by him, bettering the conceptualisation of the design intent to blind directors in the team.

Previously distinguished through a social theoretical framework, Downey's existence as an orator of the visually impaired outlook has served in the pursuit of inclusionary design discourse. Additionally, sensorially extensive practices have aided in the transmission of ideas to impaired individuals. Firstly, in the closer context of authoritative figures, the "VA has department directors that are blind who have been involved with the design process" (Downey, C, 2009). Within the social-relational models' principles, identifying the diversity of impairment perpetuates inclusive and communicative environments, where impaired voices are paramount. In disagreement with the medical reasoning of 'disability [being] caused by, or equat[ing] to, impairment' (Cologon, K, 2016), the embracing of impaired opinions in the design of the centre can reduce the disablement caused by architectural programming. In accordance with this, 'impairment' and 'disability' are therefore separate entities: design intervention can act in appreciation of this.

The translation of objectives for the redesign of the centre was communicated to Downey through an 'embossing printer that provides a tactile form of the drawing' (Fogg, D, 2010). What could be considered an extension of the common braille language, tactile graphics are utilised in order to engage the readers' haptic perception in the conveyance of the drawing. This technique can be widely applied to architectural practice, as it relies heavily on the presence of technical drawings - a routine form of media in the design realm. This format of presenting information was extended to the blind directors, 'bringing them into the process in a way that otherwise they were shut out of—not by anybody's intention but just not by having the means to engage in the conversation' (Downey, C, 2009). This demonstrates Downey's importance as a professional blind designer, having the ability to innovate this tactile means of communication, thus "open[ing] up the entire architectural process to [the blind directors]." Descartes' notions of the sense of touch being 'more certain and less vulnerable to error than vision' (Descartes, R, cited in Pallasmaa, J, p. 19) proposes the idea that a more tactile means of communication would be beneficial to able-bodied participants in the design process as well. Moreover, reciprocity in design conversation was achieved through a less conventional tactile modality. Downey attributes the use of "Wikki Stix, which are just thin wax sticks that you can easily bend, curve, or stick together" (Downey, C, 2010) to the success in voicing his own design proposals back to the able-sighted and blind team members simultaneously. The union between the visual and tactile characteristics of 'Wikki Stix' (fig. 10 and 11) deems them an inclusionary method, that engages a multi-sensory reception. Encompassing this multi-sensory approach acted as a vehicle for Downey's responses to site proposals, expanding the dialogue. In addition to this, the malleability, adaptability and three-dimensional potential of 'Wikki Stix' contributes to their design capabilities in modelling as well as technical drawings.



(fig. 10 and 11) Examples of Downey's interactions with 'Wikki Stix'

The approach of assimilating one's changing body with the world around it operates as an independent sensory design tactic. The relationship Downey establishes between himself and the site pre-build births a distinct perception of his given surroundings. In analysing communication between body and world, Downey's cane can be examined as an actor in his perception of the rehabilitation centre alongside his 'altered body' (Vermeesch, P.W., 2013, p. 56). More specifically, the cane extends his field of vision when navigating the space and gathering material knowledge. Descartes' 'Hypothetical Blind Man' interprets the enlarged field of perception that can be achieved through the cane as an extension of the tangible self. In cartesian rationale, all encounters between oneself and the world are interconnected to one another, each performing in reaction to the occurrence before it. Comparisons can be drawn between this school of thought and the Nordic social-relational model of disability, seeing 'impair[ed individuals] and disab[ling environments] as interacting with one another on a continuum' (Berg 2004). The 'Hypothetical Blind Man' (fig. 12) encompasses Descartes' geometry of sticks within the ideological representation of the cane, to fulfil the suggestion that perceptual self can be modified through objects outside of it.

(fig. 12) Descartes' Hypothetical Blind Man Illustration

A scenario in which Downey performed in consensus with this archetype was when liaising with an able-bodied interior design consultant, on the matter of material swatches. Downey's 'changed body [had a] translated effect into [his] design tools' (Vermeesch, P.W 2013, p. 7), thus resulting in the operation of his cane. In this case, the 'design tool' is the cane, as it predicts an accuracy of the experience of patients engaging with these materials. Ocularcentrism can be appointed to the visual judgement of these tactile materials. 'While colleagues interact visually with composed material boards, he must interact by touching or tapping' (Vermeesch, p.W 2013, p. 146). Downey overcomes the 'hegemony of vision' (Levin, D.M, 1993, p. 2) by using his cane to assess the distinction between textile swatches. This, in turn, formulates a more accurate assumption about the interactions had with these materials, from a patient's cognition. An 'elevate[d] association between functional vision and mental knowledge' (Kleege, G, cited by Michael, E.K., 2017) is intercepted by 'reading with touch' (Downey, C, 2011). Downey assisted in mapping out a more accurate material wayfinding programme, as the distinction of materials was not anticipated fully enough by the sighted design team.

An additional dimension of the cane's purpose is as an informative tool that works for the sake of able-bodied and disabled users alike. First and foremost, the cane is consolidated in its purpose towards its owner. '[As] a way of gathering information about the world' (Hull, J, 1990, p. 38), the cane can be appointed as an assistive sensory receptor, that's length aids in the expansion of spatial awareness. Secondly, an additional communicative feature of the cane is the visual message sent to others in close proximity. Poppy Levison (2020) comments on the image she creates for herself in the public eye "as a young woman". To counteract the visually biased "assum[ption] that [Poppy] can see", her cane serves as iconography of her impairment: "I use it as a symbol that I'm visually impaired." Ocularcentrism resonates within these encounters, as the visual bias functions subconsciously to construct a stereotype of someone with visual impairment, which Levison is excluded from. Overall, it can be ascertained that the multifaceted character of the cane serves as an extension of the perceptual self, as well as a translator between the able-bodied and the visually impaired.

Conclusively, the social empowerment that occurs through inclusive design practices is unequivocally connected to the sensory design methodologies applied. Comparisons can

be drawn between Downey as a communicator (fig. 13) between a blind centre educator and head architect, in identical fashion to the manner in which a blind person's cane creates lines of communication between user, environment and social setting. However, it can be argued that the multisensory capabilities of the site have not been analysed in their full effects. French philosopher, Maurice Merleau-Ponty assesses his spatial encounters in 'a total way with [his] whole being', in doing so 'speak[ing] to all of [his] senses at once' (Merleau-Ponty, M, cites in Pallasmaa, 2013, p. 21). This all-encompassing spatial approach will be discussed further, in the sensory results of the rehabilitation centre.

(fig. 13) Downey acting as a communicator to able bodied architects

In the dissection of the case study, it is key to establish the sensory techniques that assured the visually impaired that they would "not [be] shut out of architecture" (Downey, C, 2010) through exclusive sensations, limited to the visual. The examination of sensory design tactics has been utilised in the conception of the space, allowing the sensations that result in the centre to follow suit in their multidimensionality.

Grounded in phenomenology, the relationship between the body and its surroundings results in the spatial encounters of everyday life. An appreciation for the changing body undergoing rehabilitative treatment acts as an indispensable frame of reference, when actualising the structural formation the centre will take on. Encompassing an inpatient and outpatient wing for the transitioning capabilities of its users, the centre follows a series of wayfinding landmarks, applying them to each wing, respective of the user's bodily capabilities. The *Polytrauma Rehabilitation Centre Design Guide*, published by the U.S. Department of Veteran Affairs (2014) details the differentiation in the wings of the building. Strategic wayfinding is gently encouraged to inpatients, through consistent placement of objects that are present and identifiable. 'Rhythm to time, space, and the body' (Firestone, R, 2010) are essential to the 'shorelining' technique of orientation, in which the cane acts as a multisensory wayfinding tool, incorporating the acoustic now, in addition to the visual and tactile. 'Resting areas with comfortable sofas at regular intervals' provide predictability for those new to the centre, wherein 'footsteps and cane ticks will resonate differently' with one another to distinguish spaces and furniture apart, particularly in transitional spaces. Furthermore, in the appreciation of the body undergoing change, those more acquainted to the space and living in the outpatient unit will have access to a replica of the 'real world environment, that can be found in most public buildings' (Orientation and Mobility Department, Office of Construction and Facilities Management, U.S Department of Veterans Affairs, 2014).

An extended enquiry into the disposition of transitional spaces is necessary, to shift attention onto the impacts of sunlight. An unassuming sense to focus on in the investigation, the visual sense is most relevant to the inclusion of sunlight. In the Renaissance hierarchy of senses, 'fire and light' was viewed as 'belonging to the visual in sensory hierarchy' (Pallasmaa, J, 2012, p. 16). However, the kinaesthetic qualities judged in transitional spaces speaks also to Pallasmaa's *An Architecture of the Seven Senses.* 'The warmth of the sun'

is depicted as a ‘healing experience’, appointing the perception of the self in direct sunlight through the sensation of warmth. This sensation, or lack thereof, is an interpreted wayfinding approach through the centre, with the sun being accessible in the building through public transitional walkways (fig. 14, 15, 16). A comparative approach between artificial light and natural light can also be assessed in the bodily reception of this. Artificial light is implemented as a method of ‘primarily focus[ing] on the quantitative measurement of illuminance’ (U.S. Veterans Affairs, 2014, p. 56). Overall, the properties of sunlight serve to patients experiencing a slow loss of vision, and to the photosensitivity of those who cannot see. Poppy Levison (2020) remarks ‘I would say everyone I’ve met likes to be in control of their lighting, and there’s such a variety in preference.’ In light of this statement, the variety in light levels and types is suitable for those undergoing loss of sight.

The use of different textures within spaces clarifies the separation between the public and private. Sonic guidance is implemented by reflecting the noises in the space, to the extent of which the space was intended for noise. In a sequence of impactful reverberations, the cane most often ignites a process of successive sound reflections, that evoke a level of privacy in the space. In extension of this statement, it should be noted that Downey’s establishment of a physical relationship with the space pre-build anticipated these outcomes, as he is ‘not that far removed from the experience of the veterans’ (Downey, C, 2013) himself, so was able to gauge a first-hand navigational account. The communication from space to user, in its translation of privacy levels through sonic guidance, governs the collective and individual experiences had in it. Following a process where a patient approaches a room and hears the amplified noises of many canes reverberating, and conversations amplified through glass (a common material used in the communal spaces in the area), the aforementioned patient is now able to engage in autonomous decision-making, in accordance to their own emotional needs at that specific point. This engages heavily in the conviction of the social-relational model of disability; disabled users of the spaces provided now are commanders in their own psycho-emotional wellbeing, through the means of informed decision-making, made possible by sensory design.

A holistic understanding of how the multisensory was utilised could argue that through each sensory outcome, the active space was a determining factor in the interactions that followed. Whether a patient was familiarising themself with a new-found bodily perception,

(fig 14,15,16) renderings of transitional spaces

or with another patient, the sensations provoked through the materials, structures and combinations of the two catalysed the results of these sensations. In John Hull's phenomenological account of his transition into blindness, he notes that everything he could sense around him 'was a point of activity. Where nothing was happening, there was silence. That little part of the world then died, disappeared'(Hull, J, 1990, p. 82). In equating 'silence' to the 'disappear[ance]' of his perceptual world, Hull amplifies the narrative control that sound has over his understanding of the world, negating the ideals of ocularcentrism, which appoint all knowledge to the visual. In associating his cane reverberations to the noises he is able to make using methods such as shorelining, Hull's 'instrument of sense perception'(Hull, J, 1990, p. 38) is his cane. Overall, comparisons can be drawn between the authority of the centre's building, in orchestrating noise that defines spatial experiences, and the noise created through autonomous individuals who grasp their surroundings with their hands, feet or cane. In John Hulls description of his cane as an 'instrument', and the notion that the rehabilitation centre acts as a conductor of spatial experience, it could be argued Hull acts as a representation of the average centre patient, who is attempting to assimilate through sound and reverberations. The centre, in this context, is consolidating the efforts of this individual to grasp the space, through a plethora of textures and surfaces that work in conjunction with the noises made by the user's cane, in best effort to perceive the space. To conclude, it could be understood that through both the properties of the space and the perceptual intent of the user, the audible and tactile act in collaboration as a communicative medium for the user and space to interact through.

Conclusion

Within this dissertation, an inquiry into how sensory modalities of design can interact with our existing architectural techniques, to formulate a design methodology that better suits the needs of the visually impaired. Considering this, a rigorous research programme has proven effective in elevating the understanding of social attitudes towards disability, and the social fixation on the ocular that dictates these attitudes through sound reasoning. The research strategy of understanding 'vision's strong will to power' (Levin, D.M. 1993, p.2) has performed as a philosophical inquiry, denoting the subliminal bias present within our determining of knowledge. This, in turn, impacts the notions proposed, regarding our dispositions toward the physically impaired.

The comprehension of the social and social-relational models of disability, under threat from the medical models, have proven the necessity to perpetuate these values, thus continuing to empower disabled individuals and groups in doing so. The application of the two social models' outlooks proved effective in the analysis of the inclusionary methods used in the design of the Blind and Polytrauma Rehabilitation centre. Christopher Downey's involvement yielded maximum success, as he as a communicator was able to translate the experience of blindness into subsequent fabrications of them, through a unique design practice.

The inclusive and communicative outcomes of the site itself, answer questions pertaining to the future of architectural inclusion. In addition to this, Downey identifies a '[lack] of access to information for wayfinding' (Downey, C. 2010), wherein braille is deemed ineffective, if the user is unaware of its presence. In a state of affairs where less than 10% of the blind population can read braille fluently, this may bring into question the effectiveness of the sensory design tactics that play into its reception. Stemming on from this, Downey's emerging methods of designing for the blind could be of use in the rethinking of braille as a design language, possibly amalgamating an array of sensory techniques, such as audio and graphics, to further inclusion.

Alternatively, it can be argued that these rehabilitation centres assessed, by nature, lack any mundane realism that would reflect the plight of blindness in wider society. The Blind and Polytrauma Rehabilitation Centre serves as an example of a comforting environment, that may overstimulate its patients, failing to accommodate them to the visually dominant realities of the urban landscape. Nourishing a community of visually impaired individuals will detach them from wider society, thus opposing the social model's viewpoint regarding inclusion and accessibility. However, this argument in itself could be rebutted, through the understanding that a rehabilitative space needs to acquire a personalisation towards its users, involving the social-relational model's compassionate approach to psycho-emotional wellbeing. The rehabilitation centre in question provides a transitionary environment, for users to become slowly involved with their changing perception of the world through visual impairment. In doing so, a space that nurtures initially, transforms into one that encourages independence, by awakening each patients' engagement with a sensory toolkit, that, through ocularcentric ideals in the sighted world, supressed the use of it for so long.

(fig. 17) Christopher Downey

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Appendix

Interview: Poppy Levison

Key: P: Poppy I: Interviewer (myself)

I: So the crux of my dissertation is I'm looking at case study of the blind and polytrauma rehab center that was Co designed by blind architect Chris Downey. A lot of my essay is evaluating the history of visual bias and looking at print sensory design tactics and. The idea that we can empower visually impaired people to not only engage with their surroundings in a way they feel suits, but also to invite these perspectives into the architectural conversation. Which is why I think you're such an important part of my research, because you're studying architecture student who has visual impairment. So yeah, these about of the explaining it.

P: But yeah, so really cool.

I: Yeah, I really hope it's going to be interesting. Like I, I hope I can do some really good research and do the topic justice 'cause it really interests me. But so I have some questions are just like about you and just to get kind of idea of you and your life and your relationship with your visual impairment. So first of all, would you be able to describe me your level of visual impairment when in your life it impacted you first and has the level of impairment change throughout your life at all?

P: Yes, so I was born visually impaired. I've got a condition which means that my iris didn't form properly, which means that just my general eyesight isn't great. So I see something at about 20 meters as well as you can see it at 6 meters is the sort of like go to judge of how to, how people, how well people see I also can't see anything above straight ahead. OK, very limited peripheral vision. Um, and then so that was kind of how it was for most of my childhood. And then when I was 16 'cause I got stressed during my GCSE's, I got these. Another thing to do with my retina, which means that I've now got persistent double vision in my left eye. So I see kind of two of everything and it's reduced my vision a little bit, but generally I can still I can still like see things. But when I'm out and about like I use a

long cane 'cause I don't have the peripheral vision and things.

I: Yeah, OK, that's really interesting to hear, but about the peripheral vision, I wasn't expecting that 'cause I feel like I don't hear a lot of I don't hear from a lot of I feel like a lot of people who I've had interviews from within fully blind, so it's very interesting to hear how vision impairment varies with some of his partially sighted. Yeah, the screen doesn't go into my next question, yes? So when did your interest in your creative practice start? I just wanted to try to gauge if it was any different for someone when how it started and what sparked your interest in it.

P: I've always been quite creative 'cause I'm from a very creative background like my Granddad was an art teacher. My mom did fashion design. So like I've always been surrounded by that man and then my interest in architecture actually, like from when I was a child. It was because I loved the environment and me and my best friend were such like Little Greta Thunberg's like we just we were such like climate nerds and we'd read about like eco-friendly design and things. But then as I got older and so my disability sort of impacted me more, I was introduced to the social model of disability and obviously that is so. Space and architecture and how we build is so relevant in that that I think that really like it opened my eyes to the concept of like architecture and justice
and architecture and SoC and how those things are so interconnected. And obviously then they just like stemmed from then onwards that I was just like fascinated and how. Yeah, the way we design and the things
that we build. Like obviously how they look is important and how they work is important, but also they can have such a huge impact on the world.

I: Yeah, yeah, it's so true I've been reading a lot about the social model because funnily enough until I started deciding that I was going to do my discussion on this topic. I didn't know about the medical, the medical and the social model, and it was so interesting to read about it. I feel like it brought even closer. The topic of architecture and built environment to visual impairment and that we are to an extent have control over how we enable people to go to wayfind. Did you find yourself OK? This is a two part question, so it's did you find yourself adopting any particularly unconventional methods of one who clearly routine. Actually this is kind of this question I guess is kind of on the basis that you started

out more visually able than you are now, but not the case, but it was going to be. Did you find yourself adopting any unconventional methods of either your daily routine or your creative practice? But I'm not sure if that applies now, but maybe it could be from the GCSE point. Did you start doing things differently or or do you? Would you recognize the way you do things is different to someone who is completely able sighted?

P: Yeah, I think it's also interesting 'cause when I was younger my parents didn't like pressure me into wearing my glasses. It was very much like I could wear them when I wanted to and so. If I don't have my glasses on, I literally can only see about this far in front of my face. So my world was like very different and obviously like how I experienced. Space was very different and it was very much about like stitching together. Images of a space. You know how like those funny little vacuum cleaners that robots like? Oh yeah, idea of a space by like they scan right next to them and they scan the next place in this or stitch all the images together.

I: Yeah I remember them and yeah primary school and they like moved along nicely.

P: Yeah yeah. And so it's kind of the same thing it was like I would have to stitch. What I knew about a room together. Because obviously I couldn't see to the other side of the room, yeah, so I've always thought about things in plan. And how I like experience space is always like where I am in a space or like mapped out in my
head in a way that I don't think is the same for sighted people. Because obviously if you can see the other side of the room, you don't need to like, think about where you are in that space. Yeah, so like when I was a child I would draw plans and I would draw places that I was from above. I know it's weird looking back like I remember I'd like if we go on holiday I'd draw. The place from above. Figure out like I couldn't look and see it, but I knew what it was like and that was away. Sort of like made sense to me which is really funny now. I think back and I'm an architecture student. That's like perfect but. Um, other things on like how my life is different. Who are like different routines and things. It's hard to know because it's like you just get so used to like how you do things. I mean just. Being in space is quite different like. It's not as easy for me to go to places that are unfamiliar, so I have like you have like places that you go and obviously like with covid, where layouts are changing a lot and there's like signs up. And I mean you must have had this when you're

around campus like there's like routes in and everything is changing every five minutes. So yeah, those things aren't as like easy to navigate.

I: Yeah. Yeah, can I ask can that question be applied to like the methods that you used to create uni or when you're at school?

P: Yeah, so I was sort of like. Growing up up people didn't really realize how little I could see growing up, so I was never really like as involved in like the visually impaired blind community, so it's kind of I still naturally go towards traditional methods and it's something that I'm like trying to stop myself from doing. 'cause like I can't read a ruler, so why do I keep going to use it? Um, 'cause? That's just like how we're sort of like expected to do things, um? But there are definitely like. Differences in the way that I like create work. I remember talking to one of the technicians and they were like oh, I know when they were working with visually impaired people who are like you don't turn things over. If something's on the bottom because you can just feel it like if you're sending something or you've done done a Castle thing like you don't need to turn it over to look at it and see if it's right because you can just feel it and it's very dark. Have like thinking about an object. And I definitely. Do you use my other senses a lot more than sighted people do? That might think of like how something feels how something sounds like I can. Recognize people by the sound of their walk. Yeah, like wow, that thing they're like sounds that they give off when I'm out and about using my cane and things.

I: Yeah, it's really interesting to hear. OK, next question. So. OK. So did you have any apprehensions about attending Uni? Is a creative student and how have these if you have had any apprehensions how these compared to the lived experiences you've had now in a creative environment at the uni?

P: I think I I knew that being in a creative environment like. They go to attitude is normally like that's interesting. Rather than that's a problem which it has been like my experiences at school, it was very much like or if you can't see the board to do the lesson, that's because you're not smart enough to do. The lesson was like some of the attitudes that I face, whereas like as soon as I came to you a lot, they were like, oh, that's so interesting. Like how can we find the found it? And I think that like attitude is such a big part of. Disability

and how disabled you feel in an environment. But then equally, there are other apprehends apprehensions, like, obviously architecture is so visual at the moment, and I think it will be with covid is increasingly visual, what with like a huge reliance on not being in a space and rather yeah, spaces online. So yeah, it's definitely apprehensive about would I be able to do it? But yeah. Definitely like the attitude of people. Makes like the biggest difference, yeah, but pretty good to hear though that like you've come to UAL and it's it's just another interesting perspective to have, isn't it? Yeah, not a new way of looking at things. Definitely eyes of UAL.

I: But I am in your experiences with other visually impaired people. Are there any large differences in your preferences towards certain environments? So if you've had a lot of interaction with other visually impaired people, have you been surprised the preference differences that you have?

P: Um, I would say almost more so the opposite, like I kind of assumed that there would be more variance in how people felt about spaces and that there wouldn't be sort of like one thing that people prefer, but definitely, like acoustics, is a huge part of things, like I much like I like being able to hear what people are saying and who's talking, because obviously there's so there's so many like nuances in the way people are speaking, that like. If I can't read that facial expression, I can pick up on the way that they're speaking and like the emotion that they're giving off. And you definitely, if you're somewhere loud and you can't pick up on that if you then can't pick up under facial expressions, you can't. You miss out on so many parts of the conversation that is so important. So definitely acoustics is a huge thing. Similarly lighting, there's there's some differences in lighting. Some people prefer things to, just like always be really bright. Some people prefer it to be always very dark, but I would say, like everyone I've met likes to be able to be in control of the lighting, and that's something that often spaces that we designer. So like. Standardized, it's like. We do it in tech. We have to look at like this. Should be 500 lumens or whatever and you're liar. So you're in an office and you can't change the lighting like everyone will have a different preference and everyone needs to be able to change it depending on the time, the setting, like what you're doing in that space, and having some control over that is like a really big part of design that I think people don't think about enough.

I: I was reading something about the rehab center, new case study on about how people have different preferences, sunlight and artificial light and their photo sensitivity. It's all so interesting to me actually. Great question. I've only got a couple more actually, but um. So from your perspective, are there any examples of inclusive design or examples of Accessibility on buildings that you personally think could be improved from your own experiences interacting with them?

P: I think designing for people with vision impairments isn't as easy as designing for people in wheelchairs or whatever, like it's. It's just weird and I don't know if that's because we haven't got to a place where we have enough knowledge and enough discussion about it, or whether it's just always going to be a bit. I think it will always like you can't just put a ramp in, and it's like that, problem solved, yeah? But there are definitely. There are definitely things that people underestimate like materiality but. Also, how you sort of. Obviously people think, oh, that must make a building feel nice, but you can also use it as like wayfinding without needing to have like tactile paving. So for example, CSM, when you cross the threshold into the building, the flooring changes and there's like a band of like very smooth marble in between like the outside and inside. So then like I know when I've gone through the door 'cause I can feel it with my cane, but I could also probably feel it with my feet. And so those things of. Using materials not just for enjoyment, but also for like a quite useful purpose, is like, yeah, is an Accessibility feature that people don't recognize an Accessibility feature, and I think there's quite a few things like that that just like give you indications of things without needing to make a big deal out of it, but it's just like a subtle nod to like this is where this is, or I don't know if that makes any sense. Yeah, maybe that does make a lot of sense.

I: Um, also about your cane, I just wanted to ask some questions so you said that. You take it to places that you're unfamiliar with. Yeah, I just wanted to get a bit more knowledge about that, really so. You so in so you wear your glasses all the time now yeah and so and you in the home or I guess in the place is very familiar with you wouldn't use your cane. And then when you get up to go somewhere you'll take your cane with you to I guess. Get a more peripheral feel of everything, yeah.

P: So, um. I use my cane for sort of two reasons. I use it as a symbol that I'm visually

impaired. I used a simple cane for a while, which is like a a short one that you don't really doesn't really have a purpose other than to let people know that you can't see very well 'cause I think. Especially like as a young woman, people don't expect there to be anything. Different about you. People will look at me and a lot of people wear glasses. They just assume that you can see, yeah and so like although I can function fine, like if the world was empty of people, I would be able to get around without my cane. But because there are people it it really helps like, particularly in busy places like in London like people give you those days. People just like make concessions if you've gone the wrong way or whatever, but also. Like for me something that I notice when I started using it was that I stood up straighter and I looked around more because I before I'd always be looking at my feet. I'd be checking I was going and it's like. Because of my peripheral vision, if I was looking at the floor, I couldn't see anything. I couldn't see the world and so yeah, using my cane you like roll it along the ground and it it's like being able to run your hand along the ground in front of you or something like it tells you what the paving like. Whether there's like undulations in the ground. And for me I don't really need it to tell me if I'm going to bump into something, but it means that I don't have to look to check if there's a paving slab sticking up, or if the if the curbs gone down or something. Which has enabled me to then be a lot more present and also relax because I'm not. Yeah constantly think am I going to bump into something if I haven't been looking or I can walk along and talk to someone because I'm not having to think? And you all of my brain power to think about where I'm going, which is really nice.

I: Yeah, it makes things a bit easier and really interesting to hear that. Like it. I didn't really think about it from the perspective of a young woman in London. No one, not in London. There's a young woman, not a lot of just wearing glasses. Normal people look at you think oh, she doesn't have anywhere near as much as I do, even though I wear glasses. Yes, to give space or just confirm, I think I have one more question. I, Oh yeah, this was one about. The workshop you took part in this is how I realized that there was someone studying architecture CSM that you had a visual impairment. The Guardian article that mentions this ordinary architecture projects at UCL. Can you just? Yeah, kind of explain what you got up to the workshop that I read about and what you found really interesting about it. Or maybe some different people you met there with different experiences. Anything that you want to say about it.

P: Yeah, it was amazing. It was like the most amazing thing I've ever done. Minute yeah, yeah and like I think back to it now and I'm like I wanna be back there. It was for me being in a space. Where everyone was visually impaired. Well, like all of the students were visually impaired was a huge thing because I was I didn't know if you visually impaired people as a child, but I was quite detached from that community. And it was. It was like a weight was lifted because there's so much like. Is there so many things that you have to think about like all the time like you go somewhere new? Where's the toilet? And normally I wouldn't normally, because I've been brought up in, I wouldn't accept someone taking me to show me where the toilet is because I'd be too proud or whatever like that felt. So that felt like. I was bitter that made me feel disabled. If someone needed to show me where the toilet was, but then like I was in this space where no one was going to judge you for that. Because everyone was having it and it was. It was really interesting feeling that and like the support people there were all really good, which I think a lot of people don't realize that. You got offered a lot of support as a disabled person, but the support is often a thing that makes you disabled. The people and their attitude like at school. I never had classroom assistance because all of the classroom assistants at my school would talk to me like I was a 2 year old even though I was getting straight A's and so like it was being in this environment where. Hey, we're in the majority and be there was no pressure to like act in certain way or like I accepted help for like the first time in my life which was really nice. And then into the like architectures. I think Chris downey here as well, which was amazing. Yeah, he was another like shooters can't believe I said study about this guy didn't even heard of him. Chris, that you met him. Starstruck, I could go. No, I was too. I was like, Oh my God, I've read about you so much. Yeah, and also just um. The two women that run it are so amazing and like obviously like for example, you weren't aware of the social model of disability. I would say that 99% of UK population on aware of the social model of disability and that includes a lot of disabled people. So being an environment where everyone knew about that as well was really nice and you could have these sorts of discussions and like proper discussions about space and disability or space and vision impairment. And then honors or like practical note we were in the workshops and I like being in a workshop with other visually impaired people and being taught by visually impaired woodworker was amazing like. There were so many skills that I learned through that through things that, um Duncan, who was the like, one of the tutors on the course was teaching us he's a blind woodworker from Tasmania and just like. Yeah it was. It was really interesting for me too.

Approach something as a visually impaired person because I'm so often been like having to figure out for myself and I still do like most of my architecture, 'cause I'm like. How do I do this every year? This way? How do I do it? And so being in an environment where like everyone had ideas that you could share about how to get around the problem was really nice. A lot of things like, um, we had like little stepped blocks that you could put between the bandsaw and you knew that like this is the five mil step so you could put like a 10 mil if you needed to drop something off and need to set everything up. And then it's interesting since then being in the workshops at CSM and the technicians are like you're really methodical and really sensible compared to most students. And it's because like because I have to be, I have to set things up, but actually that can end up. Making my work neater and more precise. And yeah, I'm generally more careful. Yeah yeah, definitely.

I: Um yeah. So when you said when you receive a project that you may anything right? How am I going to do that? Is there been like any situations where you feel like you've really done something that properly suited you rather than maybe using the ruler that you can't see the numbers on? Or is there something you feel like or a few tactics that you have taken it? You need the others happen.

P: Yeah, I think, um. It's definitely something I'm still working on. Because architecture is so visual and I'm sure you experienced this on your course, there's like certain things that you kind of have to do that can at times limit your freedom because you're like, oh, but I've got to do this for this thing like I've got to submit plans and sections for this project. Yeah, even though you want to kind of just go off and do something a bit crazy, but I I definitely get into the like experiential side of things. And like I'm really getting into writing about my work. Which is generally kind of discouraged in architecture like they've definitely got an attitude of like a picture speaks A 1000 words. So you should just always make drawings. But sometimes, like a piece of writing, can tell you so much and build up a picture of something in a very different way. And I'm really lucky that the studio I'm in this year is like really open to that, and we've using a lot of like poetry as our precedents and things we will have to write stories at the start about like a creature that we found to do lost sight. And definitely like being in an environment like UAL, which is very free. Does help I think if I was at a more traditional, more traditional architecture school I would have struggled a lot more because it would be very much like go off and do these really technical drawings

which we have to do. But because that's not everything it's bearable.

I: Yeah yeah, I get that so. Fascinating to hear really. I've really. Yeah, this was great. Thank you so much for speaking with me that I. That was all the questions. I really had to ask I don't. There's nothing else I can really think of. I feel like you've covered so much. It's really enlightening speaking to you. I really, really loved to hear your take on things, so thank you so much for speaking with me.

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