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Sense and Sensing

A critical enquiry into relations between hearing-impaired children, vision and photography.

by

Kevin Robinson

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in partial fulfilment for the degree of:

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Sense & Sensing

A critical enquiry into relations between hearing-impaired children, vision and photography
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‘Because there are innumerable things beyond the range of human understanding we constantly use symbolic terms to represent concepts that we cannot fully define.’ (Jung, 1964, p.4)
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Author’s Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Doctoral College Quality Sub-Committee.

Work submitted for this research degree at the University of Plymouth has not formed part of any other degree either at the University of Plymouth or at another establishment.

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Abstract

This thesis explores and critiques attitudes and assumptions related to hearing-impaired, school-level students and their engagement with the educational discipline of photography. It is not uncommon to find that hearing-impaired children are described as visual learners. This thesis argues that the conceptualisation of children as visual learners merely reflects a wider discourse that aims to legitimise a certain practice of schooling as normative. In appearing as common-sense and value neutral, the discourse has the tendency to perpetuate the marginalisation of those senses deemed less noble and the pedagogical insistence on a premise that posits a link between looking, seeing and knowing, remains. It is argued that distinguishing the sense of sight from that of listening and from the body, and the westernised privileging of seeing has had ramifications across the educational landscape for methodologies employed in facilitating language acquisition for such cohorts of children. This includes the organisation of their photographic learning experiences; the architectural structure of buildings, classrooms, and the systematised pedagogic and educational narratives that are mobilised in the pursuit of pupil progress. Engaging with Mitchell, Serres, Di Bello, Deleuze and Guattari, Merleau-Ponty, Foucault and others, this thesis destabilises the dominant discourses upon which such assumptions are founded and framed unproblematically, as common-sense. What would the educational landscape for hearing-impaired children, as expressed through photography, ‘feel’ like, ‘smell’ like, ‘taste’ like, ‘sound’ like and of course, ‘look’ like, if a more nuanced, synesthetic shift were embraced that engaged with sensory modalities beyond that of vision and hearing?

This study explores these debates through references to photographic material created by students in secondary level education and through references to photographic activities conducted outside of the formal curriculum. In doing so, it opens up a critical space within which familiarised traditions of knowledge formations for the hearing-impaired child are challenged.
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List of Abbreviations

ASL: American Sign Language
BATOD: British Association of the Deaf
BSL: British Sign Language
CALP: Cognitive Academic Language Proficiency
CI: Cochlea Implant
CRIDE: Consortium for Research in Deaf Education
DCDA: Deaf Children of Deaf Adults
DCDP: Deaf Children of Deaf Parents
DCHA: Deaf Children of Hearing Adults
DCHP: Deaf Children of Hearing Parents
GA: Gaze Aversion
HI: Hearing-Impairment
KS4: Key Stage 4
KS5: Key Stage 5
MHS: School
MSI: Multi-Sensory Integration
NDCS: National Deaf Children’s Society
OFSTED: Office for Standards in Education
SEN: Special Educational Needs
SSE: Signed Support English
TOD: Teacher of the Deaf
TTCT: Torrance Tests of Creative Thinking

For reasons of economy, the above abbreviations will be used throughout the thesis where appropriate.
Dedication

For Catherine and Shannon
Preface

‘In other words, discourse is a particular knowledge about the world which shapes how the world is understood and how things are done in it.’

(Rose, 2007, p.142)

This thesis is an exploration of the ways in which a ‘hearing-impairment’\(^1\) in school aged children impacts on an engagement with creative photographic practices. The catalyst for this thesis stems from my teaching of Media Studies, Photography and Film Studies in a school for hearing-impaired children for 26 years. During this time, I have been intrigued by the educational methodologies that have been adopted with the ultimate desire to align the ‘language’ capability of hearing-impaired children with that perceived as the ‘norm’ within the hearing population and of the implementation of a system that attempts to control the ‘career’ of the hearing-impaired child on their route through to their successful integration within a hearing community. This is a laudable endeavour of course and whilst challenging the assumptions that underpin such a desire, particularly those related to what I will call a visual conception of the hearing-impaired child, and questioning the pedagogical and curriculum-based approaches to teaching and learning that are implied, it is not my intention to denounce such a system. Indeed, I am proud to be associated with a school for hearing-impaired children whose motto is reflective of a desire to secure their future, ensuring that their hearing deficit is not perceived as a barrier to their integration within a hearing world. Nevertheless, I have also been frustrated by the common-sense rhetoric that assumes that a deficit in hearing will lead to a deficit in language capability and of the assumptions that underpin a notion of ‘language’ itself which seems to perpetually defer to a common-sense understanding, and one that therefore tends to resist critical attention.

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\(^1\) In line with a deconstructive reading, I use quotation marks here to indicative that the signifier – ‘hearing-impairment’ does not have a stable meaning. Nevertheless, I also realise that such can be a distraction to the reader so will refrain from its use as the thesis progresses.
As a ‘teacher’ of the deaf myself, I am deeply embedded within this discourse and indeed, it is a discourse that I had unknowingly adopted to some extent before I had even begun to work at this school. I recall one of my first teaching experiences at the school where I was required to teach a class of year 11 media studies pupils who were approaching their formal examination in the subject. It was January 1994 and the group were keen to get on track with their studies as their previous teacher had left suddenly and they had been without instruction for several weeks. The group had various levels of hearing-impairment and various levels of intelligibility of speech. There was one child in particular whose speech, I had found difficult to follow, to hear and consequently to understand. As a result of this lack of clarity in his speech, I am somewhat embarrassed to admit that I had assumed that there would be a negative correlation to his level of intelligence and that this would manifest itself in subsequent written examinations. Of course, my naivety and my lack of experience had impacted my judgement and it soon became clear to me that a correlation between clarity of speech and intelligence was anything other than a simple cause and effect relationship. The child in question was the most intelligent in the class in relation to standardised testing in this subject and his written work was testament to this ability. The issue of language capability, in both acquisition and production was evidently more problematic than it first appeared. Speech clarity was poor; indeed, it was difficult for me to decipher any verbal contributions that were made but the child’s ability to ‘understand’ was evident in other communication modalities – in this instance in his written work. I was now presented with three aspects to this child’s evident success - his level of intelligence, his clarity of speech and his written work. Of course, there were also the visual-based artefacts that he created as part of his course and I

2 Once again, I use quotation marks to indicate to the reader that I do not consider this term to imply that my identity as a teacher is in any way static. I also concede that such use can be an annoyance to the reader so again, will refrain from its use her on in.

3 I did ponder whether the lack of volume in his voice was due to some embarrassment on his behalf but that would have implied that he could indeed hear his own voice. For a discussion of the stigma and stereotypes surrounding deaf speech, see Charlie Swinbourne, “Deaf Voices Are Natural, So Why Are They Still Mocked?,” The Guardian, November 11, 2012, accessed April 22nd, 2019. https://www.theguardian.com/commentisfree/2012/nov/11/deaf-voices-mocked.
recall that he was able to create genre products that reflected those established in the media such as magazine front covers, with relative ease. I saw this visual-based ability however, as negligible to some extent as perhaps I had expected such to be of a higher quality given that these were hearing-impaired pupils who, I had been informed, were language delayed as a result of their hearing deficit and that this would result in higher abilities in visual-based activities. On reflection, I think that I may have accepted such a stance without question as it seemed a reasonable assumption to make. Nevertheless, there were several conundrums emerging from these initial experiences in the classroom that would continue to unsettle me throughout my career but they were not to unsettle my pedagogic practice because that which was to guide my actions in front of the children, already went before me. I’m not overly keen on the use of metaphors, but it seems apposite to suggest that I had stepped into the shoes of a teacher of the deaf, becoming qualified through completing a two year post graduate course, and adopting a mode of teaching and learning that was already established - a philosophy of oralism that promoted the use of residual hearing and the development of speech in the promotion of the acquisition of English in its written and spoken form. The use of sign language was not permitted in such an educational environment for it was deemed that engaging in manual forms of communication merely impeded opportunities for children to engage in speech and the sequential and time based systems that underpin language. There was of course, the added complication that the structure of sign language itself did not follow the grammatical structure of English - it had its own grammatical structures. In addition, sign language had no written form and as a result could not be assessed in a manner demanded by the dominant language and by examination boards. The assumption gleaned from this ‘evidence’ was that sign language as a method of communication, could not enable hearing-impaired children to become integrated in society at large - one in which the majority used English in its written and spoken form as the chosen method of communication.

Whilst I have witnessed little change in the methodologies that have been employed to equip hearing-impaired children with language over the
years, I have noticed a general improvement in the speech clarity of the children in my care. To settle my curiosity somewhat, I am tempted to reconcile this ability with an improvement in pedagogic, audiological and speech and language-based practice - common-sense and scientific based research would dictate a correlation. However, as those in the field of deaf education will know, but perhaps deny as a matter of convenience, hearing-impaired children cannot necessarily be considered as a homogenous group so to defer to such claims will do little other than to bolster and solidify my own practice and justify to myself that ‘I am doing the right thing’! Furthermore, there is a contributing issue in that it may well be that an adjustment in my own ability to hear has affected my ability to listen more carefully. In doing so I am resisting the accepted dogma that dictates that my hearing will be in continual decline as my age increases. In the education of hearing-impaired children, there is much debate (Spencer & Marschark, 2005) around how adults influence the language of the children in their care through their use of English and in the spoken and written communication that takes place. However, there is little research regarding how the children might influence the speech clarity, language or listening abilities of the adults. I would certainly entertain the proposition that my listening has changed in subtle ways to make me ‘feel’ that the speech of the children has greater clarity.

My ruminations as regard language, led me to consider a broadening out of the concept to incorporate amongst other areas, that of visual-based languages and in particular, photography. Indeed, how might a hearing-impairment impact on any engagement with this mode of representation - could there be parallels with that which hindered the development of written and spoken English within this cohort? The study of visual-based languages with hearing-impaired children, has been considered by some scholars (Allen et al., 2014) as have the use of visual based instruction tools in an attempt to improve written communication (Easterbrooks & Stoner, 2006) but the latter appears of

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4 I do not believe that there is any typical experience of deafness. Rather, d/Deaf people relate to “deafness” in different ways: deafness entails a combination of highly individual audiological characteristics, linguistic preferences, identity politics, and that which is further constrained by technology.
overshadowed by the former which, has been viewed as a poor relation. Hence, it does not appear to have received the attention from academics that I believe it has deserved. Nevertheless, set against a contemporary cultural backdrop that is itself changing, there are cracks appearing and it is within these cracks that I believe my ruminations can be placed and within which this thesis emerges.

Indeed, during my years of teaching at this institution, I have witnessed the changes that have taken place in technology that have impacted on the way that hearing-impaired children communicate with one another. No doubt the greatest and most evident impact is in the use of texting via mobile phones and subsequently through the use of social media. These devices did not require communication between children to be made using speech though it does require the user(s) to engage with English in its written form to some degree. It was a type of English however, that was not required to abide by the rules of spelling and grammar and as such was denounced as being detrimental to the development of traditional English. Furthermore, described as a manual form communication, such was deemed to potentially have negative effects on concentration levels - if a child is not concentrating on a particular task or on a particular speaker then this could negatively affect their attainment. In a school for the hearing-impaired, the concentration levels of a child might well be assessed through their propensity and attentiveness in ‘looking’.

Whilst there appeared to be some distrust of these technologies in an educational context (concerns which were further reflected in the national conservative press) their use was intriguing in their engagement with touch which seemed to be implicated to a great extent whenever such communication took place. That which was of particular interest was the kind of contact implicated which did not seem to privilege any particular modality, engaging across the senses rather than with a particular sense.

It was evident to me that the emergent modes of communication that children were engaged within, were changing and as a result, I surmised that it may not be enough to simply rely on traditional forms of instruction that place language, in its written and spoken form, so centrally to the education of hearing-impaired children. This raises several interesting questions regarding
the way that language is defined, and its role and purpose. How can a conception of language be re-shaped to accommodate the re-defined needs of hearing-impaired children in a post-modern context and how might a more detailed understanding of visual language - if such a thing exists - be implicated in this endeavour?

I had clearly spent too much time ruminating about the philosophical approaches that underpin pedagogic practice to language acquisition within this institution. Whilst philosophical musings enabled me to step outside of that which guided my pedagogical practice, it impeded the common-sense stance that is obvious to see and whilst much of these approaches continued to unsettle me, I felt that to pursue an alternative would potentially jeopardise the future of individual children and their ability to be able to express themselves in the dominant language in which they reside. It was clear to me that the defined problems around language and the hearing-impaired child, whether written, spoken or visual did not reside within the languages or indeed within hearing-impaired individuals themselves, but rather within an institutional discourse that dictated that only certain types of knowledge was attainable through certain modes of acquisition. The demarcation of these languages along what appeared to be stringent lines dictated by a curriculum that itself was compartmentalised meant that to look across these different modalities rather than at them, might prove to be conceptually and practically difficult. I could propose that I look at photographs, not across them but attempting to look across challenges the visual based notion of looking that is so natural to me and natural to the discourse within which I reside.

Whilst I increasingly wanted to be more flexible in my thought, it was clear to me that I was bound to the demarcations of educational practice that dictated rigid separations of thought and of practice. I was to find an escape however, at least on a theoretical level, through an article that I read whilst on a photographic trip to Hong Kong. The article by Mitchell (2005) entitled, ‘There are No visual Media’, was to prove to be a further catalyst that spurred this investigation. It is often assumed that hearing-impaired children will have a propensity toward visual based studies such as photography but in questioning
the nature of the visual itself, Mitchell alerted me to that which I had accepted without question - that photography was a visual medium, an assumption that reflected popularist understanding and dare I repeat, a common-sense stance that guided and shaped my pedagogic practice through most of my teaching career. How could photography be thought of as a non-visual based activity and how could the products that it created, photographs be themselves thought of as non-visual. More importantly for some perhaps - how could an investigation that seeks to destabilise such common-sense assumptions be useful for the hearing-impaired educational community so entrenched in particular pedagogic practice that to some extent is premised on the child as a visual learner? These broad and varied questions are addressed throughout this thesis. It is not my intention to draw specific conclusions to that raised however, as this would fall in line with a positivistic research based process which my subsequent methodology underpinned by an alternative logic, a ‘logic of sense’ (Deleuze, 2004) seeks to resist. There is also the ‘danger’ of replacing one system of thought with another with a hierarchical determinism that potentially undermines an open and somewhat ‘performative’ strategy.

This thesis may be of interest to current teachers of the deaf who are engaged in visual practices with hearing-impaired children; with teachers embarking on a career with working with hearing-impaired children and with teachers of visual based creative subjects such as photography.

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5 The notion of the thesis as a performance will be referenced throughout this work. The rationale will be explained in the plateau, ‘Time for Change’. The reader may wish to jump to this plateau now if further exploration is sought.
INTRODUCTION

In education, it is commonly assumed that hearing-impaired children will have a propensity toward ‘visual’ based subjects such as Photography. As a subject that has been discursively constructed as a visual medium, photography is considered to be particularly suitable for this cohort whose auditory deprivation is assumed to have positive ramifications for their vision. Indeed, some commentators have gone as far as to describe this cohort of children as visual learners (Hauser, Marschark & Hauser, 2008) or even as ‘natural’ visual learners. (Easterbrooks & Stoner, 2006) Furthermore, such an assertion has been legitimised in clinical, scientific (Neville & Bavalier, 2002; Neville & Lawson, 1986) and educational (Dowaliby & Lang, 1999) research which has led several scholars (Hauser et al., 2010) to pronounce that deaf people’s engagement

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with the world is primarily through sight and vision;\(^7\) that they have “enhanced ... visual attention” (p.486) are “biologically predisposed to be more visually orientated” (p.487) and are “reliant on vision for learning” (p.488). Furthermore, in an attempt to consolidate this proposition, others have sought to compare a propensity for visual-based learning within this cohort to that of their hearing contemporaries and their conclusions have confirmed that deaf individuals do appear to have a propensity toward visual-based activities: tend to be faster than hearing individuals in redirecting visual attention from one spatial location to another (Parasnis & Samar, 1985); have an ability to detect motion at the periphery of vision (Swisher, 1993); have advantages in their perception and memory for complex visual signs (Bettger et al., 1997) and have an ability to generate and rotate mental images (Emmorey & McCullough, 2009).\(^8\) The literature appears overwhelming in its support of such a hypothesis. Others however, have a word of caution, suggesting that the research in this area is limited and that which does exist indicates that hearing-impaired individuals are no more suited to a visual style of learning than their hearing peers. (Marschark et al., 2013) Indeed an alternative hypothesis that is built upon a theoretical stance that the senses are interconnected, suggests a detrimental effect across all sensory modalities as a result of a hearing-impairment. (Tharpe, Ashmead & Rothpletz, 2002) Despite such contradictory assertions, the former continues to frame a philosophical and practical pedagogic approach with the supplementation of written prose and the spoken modality with adjunct visual aids.\(^9\) It is a scenario that seems to reflect a common (sense) understanding of

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\(^7\) I initially use the terms sight and vision as if they are interchangeable though I agree with James Elkins, that, ‘Vision usually means the anatomical action of the eyes and ‘sight’ refers to all the wider senses of seeing from suspicion to unconscious desires.’ Elkins, J. (1997) The object stares back : on the nature of seeing. San Diego, CA ; London: San Diego, CA ; London : Harcourt.

\(^8\) However, others have a word of caution, suggesting that there is limited research in this area and that which does exist indicates that hearing-impaired individuals are no more suited to a visual style of learning than their hearing peers. Marschark, M., Morrison, C., Lukomski, J., Borgna, G. & Convertino, C. (2013) ‘Are Deaf Students Visual Learners?’ Learning and individual differences, 25 pp. 156.

\(^9\) See: Logan, J. H. (1870) Books, Pictures and illustrative apparatus for the deaf and dumb. American Annals of the Deaf and Dumb, 15, 93-104. As far back as 1870, James H Logan recognized the value of adjunct aids to improve learning, ‘Pictures, besides the pleasures that they give, act as definers of the text, and convey far more correct ideas than could be gained from the words alone’. (p.97)
the senses as dictated in western culture, which on the one hand, suggests a
separateness of sense\textsuperscript{10} reflected in the traditional westernised view that there
are five senses, whilst concurrently acknowledging a relationship or impact\textsuperscript{11} of
one sense over another.\textsuperscript{12} Despite concerns over the biological determinism
(Miller, 1999) implied by the former, it is evident that this position continues to
overshadow the latter,\textsuperscript{13} a position that is reflective of an enlightenment desire
that has sought to stabilise the senses through locating them in particular parts
of the body.\textsuperscript{14} In a positivist desire for control, if the senses are fixed in the
body, a hearing-impairment\textsuperscript{15} can be subjected to analytical scrutiny and put to
work in a curriculum that is itself, built upon binaries that continue to reflect a
Cartesian mind and body duality – a binary that divides cognition from the
sensorium.\textsuperscript{16} Whilst vision is elevated as the beneficiary in this scenario for the
hearing-impaired child, both pathologically and culturally, the development of
language\textsuperscript{17} in its written and spoken form, has been and continues to be

\textsuperscript{10} That my ears are for listening and that my eyes are for seeing.
\textsuperscript{11} The potential of impact at all however, in either direction, is reflective of a position of which I
am complicit - that the pathology of hearing and that of vision, run on separate tracks,\textsuperscript{11}
dictating a common-sense understanding that the ears be used for listening and the eyes be
used for seeing. There is an historical basis for such a common-sense assumption of course, which dates back to Aristotle (350 B.C.E) 'De Anima (On the Soul)’. 25.7.2018. [Online]. Available
at: http://classics.mit.edu//Aristotle/soul.html. whose impact of assigning bodily parts to
different senses as well as dictating a hierarchy of sense with vision placed securely at the top,
has underpinned a centrality of the visual within westernised culture.
\textsuperscript{12} This is known in some circles as the sensory compensation hypothesis.
\textsuperscript{13} maintaining a position that the hearing-impaired child learns through the eyes and through
the ears (as evidenced in that stated in the original school logo (fig 2)
\textsuperscript{14} Indeed, the growth of schools for children with specific impairments as established in the
Elementary Education Act (Blind and Deaf Children) of 1893 and subsequently in the Education
Act of 1918 was in part a reflection of an ideology that pre-supposes the separation of the
senses. Local authorities had been responsible for educating blind and deaf children since 1893
but the 1918 Education Act, made schooling for all disabled children compulsory. It was a very
significant piece of legislation. By 1921, there were more than 300 institutions for blind, deaf,
'crippled', tubercular and epileptic children.
\textsuperscript{15} This proposition of a cross modality is sure to fall on ‘deaf ears’ for those concerned with the
education of hearing-impaired children whose career is predicated on this cohort having a
sensory loss that is located in particular parts of the body, as this legitimates a particular type
of intervention and a whole range of professional competencies that themselves, rely economically
on the isolation of this sensory mode.
\textsuperscript{16} See: Rodaway, P. (1994) Sensuous geographies : body, sense, and place. London ; New York:
London ; New York : Routledge. Paul Rodaway suggests that creating a binary between cognitive
and the sensorium creates a false understanding of perception as the two are always in play
simultaneously.
\textsuperscript{17} Unless otherwise stated, Language will refer to English in its written and spoken form.
positioned to its detriment. This has had further ramifications for the design of a curriculum deemed appropriate for the hearing-impaired child where those subjects assumed to be less reliant on language and less reliant on sound, such as photography, are thought to be most appropriate. However, such a stance is possibly at odds with a contemporary photographic curriculum that is itself embedded in language, as a method of instruction that is dictated by specifications, pupil reflection, description and analysis and also in production of photographic materials. To this extent, language shapes and defines the limits to what is knowable about and through photography and continues to overshadow practical output. In doing so, language shapes a particular concept of the hearing-impaired child as a visual learner, defining the limits of what is knowable through vision. It is my proposition however, that the concept of vision and that of the hearing-impaired child as a visual learner is far from a neutral proposition. Rather, such is shaped by a visual based discourse that perpetuates a link between seeing (vision) and knowing (knowledge). It is a discourse from which such a stance emerges and within which it is maintained.

The thesis before you resists the aforementioned common-sense correlations, interrogating relations between hearing-impaired children who are educated in an oral/aural context and their engagement with the educational, visual-based practice of photography. In doing so, the thesis will engage with three seemingly discreet areas of study:

(-) the positive impact that an assumed heightened sense of vision in hearing-impaired children has on an engagement with a visual-based practice of photography.

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19 What impact might a framing of photography as a visual based medium have on a hearing impairment and how that is understood?

20 They will be considered as discreet for purposes of initial organisation of this thesis but their inter relations will cut across the various plateaus.
the impact that a perceived *language delay* in hearing-impaired children has on an engagement with a visual-based practice of photography and contrary to the direction of impact in the aforementioned,

the impact that the mobilization of the visual, through historical and contemporary educational photographic practice has had on shaping the hearing-impaired child as a visual learner.21

A desire to investigate and challenge these deceptively simple questions is what motivates this thesis. It is through an initial analysis of the latter in relation to the school photograph,22 that the former will be re-conceptualised to challenge the domination of a visual centric paradigm. It is my proposition that this has been embedded within educational pedagogy for this cohort of children and evident through discursive practices that continue both to shape a particular notion of the hearing-impaired child as a visual learner and of photography as a visual medium. Whilst vision, opticality and its relation to hearing (impairment) and photographic practice will be central to this thesis, I concur with others (Shohat & Stam, 2002) that, ‘the visual is simply one point of entry... into a multidimensional world of intertextual dialogism’ (p.22) I will argue therefore, for a broader conceptualization of this sense, a kind of haptic visuality developed by Laura Marks (2000) that cuts across the three aforementioned discreet areas and one that challenges an assumed delineation and hierarchical structuring of sense. It is one that also challenges the assumed direction of impact in these three discreet areas of concern and instead proposes a reciprocity, an interference that evades the sequential construction implicit in common sense notions of knowledge. It is a haptic visuality that is not separate from the pathology or opticality of vision or from the pathological basis of hearing itself but as something that slips in and out of, through and across

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21 The three discreet areas presented are my initial attempts to separate out that which is essentially inseparable. As a consequence, from within the main body of the thesis, such will be considered more holistically, weaving across and through the dominant discourses that shape the hearing-impaired child as a visual learner and relatedly, photography as a visual medium.

22 The school photograph from this educational setting will be referenced as a focus of analysis throughout the initial part of this thesis.
such sensory modalities, some of which escape definition and remain beyond the confines and control that a scientific or positivist understanding of the senses dictates. The proposition that the eyes are for seeing and the ears for listening is complicit with a stability of thought and practice that is deeply embedded within educational narratives for the hearing-impaired child and it is one that is driven by a common-sense approach that can see no alternatives. It is a common-sense understanding that is difficult to challenge (Belsey, 2002) but challenging the status quo, I believe is necessary if we are to begin to disrupt established and cyclical research narratives, whose ideological basis seeks to perpetuate and confirm attitudes toward the body, the hearing-impaired child, the senses and their relation to knowledge acquisition and production through photography. The focus on ‘vision’ will provide the reader with several ‘jumping off’ points to a subsequent inter-sensory orientation and one that reflects a broader interest of a more intermingled ‘nature’ of sensory systems, already evident across the humanities (Edwards & Bhaumik, 2008) sciences (Eimer, 2004; Joost X. Maier, Blankenship & Katz, 2015) philosophy and sociology (Callaghan, 2008) and the arts (Di Bello & Koureas, 2010). It will be acknowledged that these have already attempted to displace and challenge established sight-based paradigms and in doing so, have called into question the deep-seated, western distinctions related to the five-fold classification of the senses. Despite these attempts however, the status quo appears to remain in the educational context for the hearing-impaired child where the focus on the sense of hearing and that of vision in the acquisition of ‘bodies’ of knowledge through the dominant language modality, negates the potential influence of the other senses.

De-stabilising these common-sense attitudes may lead to new understandings of photography in an educational context for the hearing-impaired child and have implications beyond the subject itself. It may also reposition the notion of the hearing-impaired child whose propensity for learning,

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23 I refer to Deleuze and Guattari’s notion of the plateau that will be plugged (Jackson, A. Y. & Mazzei, L. A. (2012) Thinking with Theory in Qualitative Research: Viewing data across multiple perspectives. 2 Park Square, Milton park, Abingdon, Oxon, OX14 4RN: Routledge.
I believe is beyond that constrained by pathological and to some extent cultural, definitions of ‘hearing’ and of ‘vision’.

I look at photographs; I look at paintings; I listen to sound but the proposition that I might listen to photographs, look at sounds or taste that which is deemed to be visual puts to the test both my own sensory sensibilities and the call to ‘common-sense’ and perhaps, my professional responsibilities to the hearing-impaired child.
Shaping the Thesis

How can I shape a thesis that addresses the multiple and divergent concerns outlined in the introduction so that it does not alienate the reader who may be expecting a thesis that unfolds in a linear, traditional manner. This is a challenge that permeates this thesis. Nevertheless, I am compelled to go against the grain and perpetuation of positivistic ideals, evident in research paradigms that tend to exhibit a ‘ruthlessly linear nature of the narrative of knowledge production in research methodology’ (St Pierre, 1997, p.179). It is a process that is complicit in upholding existing ideologies that are constructed with reference to common-sense. (Belsey, 2002) In this respect, I encounter an initial issue: how do I engage the reader where common-sense is held to account and challenged? I do so through an alternative presentation method, that is employed to be less dictatorial, enabling the reader to construct their own narratives through entering the thesis at any point that reflects their particular interests.

In explaining this research and presentation process in an accessible manner to the reader, I begin with Thomas Reid’s (1764) more familiar notion of the tree of knowledge which I propose, underpins that found in more linear research models. It is one that this thesis will push against:

‘All that we know of nature, may be compared to a tree, which hath its roots, trunk and branches. In this tree of knowledge, perception is the root, common understanding is the trunk, and the sciences are the branches.’ (p.424)

Through this metaphor, it is proposed that knowledge is formed through a flow from the roots of a tree through to the branches which is subsequently solidified by a common-sense and culturally shared understanding. I do not wish to deny the potential value of such a methodology to the formation of scientific based knowledge, but my thesis suggests that a reliance on such an approach may have been responsible for legitimising a conception of the hearing-impaired

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24 The shape of a thesis is inevitably dictated in part by the rules and regulations evident in University submission guidelines and the presentation of the thesis before you is no exception.
child as a visual learner. I therefore, seek an alternative methodology that falls in line with my research aims. This may appear as a somewhat uphill struggle, pushing against common-sense, but the reader may find it helpful to heed the comments of Chris Jenks (1995) who points out that,

‘The world is not pre-formed, waiting to be ‘seen’ by the ‘extro-spection’ of the ‘naked eye’. There is ‘no-thing’ out there intrinsically formed, interesting, good or beautiful as our dominant cultural outlook would suggest.’ (p.10)

Contrary to that which is embedded within traditional empirical based analysis that begins from a fixed entry point, (Brown & Stenner, 2009) I will engage with a more rhizomatic (Deleuze & Guattari, 1988) way of thinking in both the philosophical and practical presentation of this thesis and in the manner that I subsequently conduct research activities with children. In *A Thousand Plateaus*, (1988) Deleuze and Guattari describe a rhizome ‘as subterranean stem’ which ‘is absolutely different from roots and radicles. Bulbs and tubers are rhizomes’ (p.6) What is particularly pertinent to the structuring of this thesis is their further description that, ‘the rhizome has no centre, no beginning, middle or end and is an image of thought that organizes themselves in non-hierarchical lateral networks that experiment with new connections that may mix words, things, power, and geography’ (Deleuze, 1994, p.25)

This philosophical approach represented through the concept of the rhizome will be embraced for the following reasons. In the first instance, the non-linearity, non-hierarchical structure of a rhizome enables a thought process that pushes against established discourse that the author believes, has legitimised a conception of the hearing-impaired child as a visual learner. Secondly, in opposition to the tree like structure evident in Thomas Reid’s description, a rhizomatic thought process enables a challenge to the representational canon of historical photographic practices which the author further believes, has been engaged to position the hearing-impaired body as an
object of study and framed that body as a seeing entity.  

Thirdly, because this image of thought suggests that, ‘Any point of a rhizome can be connected to anything other, and must be….’ (Deleuze & Guattari, 1988, p.7) the concept allows for a fluidity of connections between the different aspects of that under analysis, which may otherwise have gone unnoticed. Furthermore, Maggie Maclure’s (2013) work on data coding in which she refers to the fixing of data into categories that ‘assumes, and imposes, an ‘arborescent’ or tree-like logic of hierarchical, fixed relations among discrete entities’ (p. 168) confirms that the categorization of information, ‘does not allow that things might deviate and divide from themselves and form something new’. (p. 169). For Deleuze and Guattari, ‘Many people have a tree growing in their heads with a regular hierarchy of trunk and branches’, (p.15) and this undoubtedly structures a particular approach to research; to the presentation of this research and to the reader whose response is already coded before their reading. However, as Deleuze and Guattari further concur: ‘the brain itself is much more a grass than a tree’. (p.15) In this conception, grass has no constraints and can be navigated in any direction. Like the sea, there are no predefined paths from one particular point to another. This has been considered by Deleuze and Guattari to be a

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25 This, I believe has had inevitable implications for a power differential or binary that has framed the teacher in relation to the pupil in a manner that the latter is subordinate to the former. Whist this is something I seek to resist, I acknowledge the difficulties given that much pedagogy is built upon assumptions that posit a biological causation effect to learning (Piaget) or that imply a differential power relation between teacher and learner encapsulated with Vygotsky’s model of ‘proximal development’ Vygotskii, L. S. (1978) Mind in society : the development of higher psychological processes. ed. Cole, M., Cambridge, Mass.: Cambridge, Mass., : Harvard University Press.

26 Positioning the child as an object of study has also been conducted from the medical, the linguistic, the psychological, the educational and social perspectives. For a discussion, see: Marschark, M. (2007b) Raising and Educating a Deaf Child: A Comprehensive Guide to the Choices, Controversies, and Decisions Faced by Parents and Educators. Oxford University Press. Parasnis, I. (1998) Cultural and Language Diversity and the Deaf Experience. Cambridge: Cambridge University Press.

‘smooth space’ (p.479) and one if embraced conceptually, can permit connections to be made in research that might otherwise be neglected. The process also permits an individual navigation through the thesis, acknowledging the agency of the reader. The smooth space of the thesis inevitably flows in and out of and between that which dominates – the ‘striated space’ (1988) of hearing-impairment and photographic education. If, however this ‘striated space is constantly being reversed, returned to a smooth space’ (p.474) then I consider this to be the point at which I enter the debates that will unfold. The smooth space is a point of possibilities, of lines of flight (Deleuze & Guattari, 1988) that don’t necessarily have to conform to established research narratives that inevitably construct the straited space.

Whilst explaining the philosophical rationale for embracing the concept of the Rhizome, I further wish to consider how to make this work practically within the presentation of the thesis. I do so through employing the terminology associated with the rhizome. The traditional use of chapters will be replaced by Plateaus and whilst each Plateau will have a title, they will not be presented hierarchically through a numbering system that might perhaps privilege particular knowledge. In resisting (philosophically at least) the sequential structuring of a thesis that falls in line with established conventions, the reader may enter the thesis at any point, any of the plateaus and then ‘jump off’ at any point to another plateau. There will be locations in the thesis where the author may suggest ‘jumping off’ points but these will not be a requirement and not intended to interrupt a flow of reading or the agency of the reader. This methodological approach also problematises the dominant conception of ‘reading’ visual based photographic images and their assumed similarities with reading text-based language that whilst under increasing academic scrutiny,

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28 However, as the sea became a space of increased navigation, then the demands for its striation became evident. According to Deleuze and Guattari, this striation manifested itself in maps with meridians, parallels, longitudes, latitudes and territories gridded the oceans, making distances calculable and measurable.

29 A way to conceptualize this practice is with reference to Brian Massumi’s advice for reading ‘A Thousand Plateaus’ as a kind of sampling, skipping via different themes, passages, or links from one plateau to another.
continues to reflect the dominance of a semiotic (Saussure, 1983) approach to considering all forms of media as forms of ‘texts’.

In summary, it should be clear to the reader that this thesis is resistant to a hierarchical structure that seeks to address a defined problem and positions the researcher as an objective reporter of the ‘facts’ – ‘facts’ that are seemingly uncovered through this process. Nevertheless, I acknowledge that my musings are reflective of my particular stance and that my entwined positionality within this research infers that any sense of objectivity is a fallacy and unattainable. It is important therefore, that I clarify my position in relation to this research context and the reader may wish to ‘jump back’ to the preface to consolidate their understanding of my research position before continuing with the following plateau.
Plateau: Positioning Myself in Relation to the Research

Many of us “do” ethnography but “write” in the conservative voice of science.... In short, we often render our research reports devoid of human emotion and self-reflection. As ethnographers, we experience life but we write science. (Krizek, 1998, p.93)

The evident binary presented in the above quotation between experiencing life yet writing science reflects a dichotomy that pervades my relationship with this thesis and the research territory. On the one hand, the concerns that I raise in the introduction as regards the hearing-impaired child and their assumed propensity to be visual learners is framed by a science that has a neurological basis. It is a science that is built upon a particular conception of the body, presenting convincing narratives that default to common-sense. ‘Evidence’ of such a research base can be located in academic journals but such a stance has also seeped into general public consciousness, evident in the popular science sections in high street bookstores. On the other hand, the experience of working with hearing-impaired children informs me that this propensity, if such exists, cannot simply be reduced to a ‘mechanics’ of seeing and hearing. Likewise, to reduce photography (in the broadest sense) to a mere mechanical recording device whose essential characteristics make it particularly suitable for this cohort, is to deny the possibilities of any broader sensory engagement to learning. The privileging of a biological based ‘vision’ in both of these areas of concern simply does not reflect my own day to day experience of working with hearing-impaired children and photographic based education. The position I intend to occupy therefore lies somewhere (in) between these concerns - I am tempted to say in the centre, but as I employ the concept of the rhizome, then there is no centre within which to position myself. I therefore choose my entry point into such debates through the sensory modality of vision and this, from within the research base with which I am entwined.

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30 Aspects of this research will be pursued in the plateau, ‘Feel What I’m Hearing’ from page 143.
This research base, the context within which this thesis resides, is a boarding school for hearing-impaired children aged 11-18. The school adopts an oral/aural approach to the education of this cohort, encouraging the use of residual hearing to develop written and spoken English. This in order for hearing-impaired children to access a curriculum designed for their hearing peers but also to prepare the individual child to integrate within a hearing community once leaving formal education. Some academics (Kusters & De Meulder, 2013) and Deaf people have considered this approach to developing speech to be disrespectful to a concept of deafness that is based on cultural foundations. Those who subscribe to this view have labelled deaf people with a capital 'D' (as opposed to a lower case 'd' that is used to signify deaf people who align themselves with the hearing community) to signify that they are part of a Deaf culture that has its own traditions and its own language – Sign language. Furthermore, it is assumed that an immersion in auditory based language will maximize oral language development, particularly in young children (Christiansen & Leigh, 2011). Of course, this view is very much contested by those who suggest that such an approach denies the value of acquiring language through visual means. There is indeed a body of research that supports this view and denigrates an oral/aural philosophy to the acquisition of language. (Meadow-Orlans, 2004) A child’s relationship with D/deafness is clearly complex. Indeed, I agree with commentators who have suggested that there are many ways to be Deaf or deaf! (Taylor & Darby, 2003)

In terms already established and to some extent accepted, deafness can be separated into three models: the biological or medical model, (Oliver, 1990) the cultural model (Oliver, 2009) and the social model of deafness. (Corker, 1998) The biological model is one that positions deafness as a problem (Oliver, 1990; 2009) that can be ‘cured’ through medical and/or scientific based intervention that focuses on adjusting the body with reference to a ‘normalcy’ of hearing. The cultural model challenges the biological model in that it

31 Further explanation of the educational context can be found in Appendix C.
32 I use this term to indicate a shift toward the normalcy of hearing through the use of hearing aids, cochlea implants.
positions deafness as a naturally occurring entity that does not require any remedial action. This identity might manifest itself in the use of signed language and other culturally shared interests within a community that is defined by a shared understanding of what it is to be Deaf. The social model of deafness suggests that the roots of ‘disability’ do not lie in impairment per se, but in the ways in which the social context fails to adapt to enable the participation of its citizens. (Oliver, 1990).

These distinctions uphold binaries however, that are unhelpful to a thesis that intends to embrace more fluid constructions of deafness, of Deafness, hearing-impairments and visual based educational subjects such as photography. This has not escaped the notice of some academics (Hughes & Paterson, 1997) who have considered the pathological explanation of impairment as something that is also culturally produced and socially constructed. Concerns have been raised that the social model of disability, negates the body within the social, maintaining a dialectical between the ‘deaf’ and ‘Deaf’. Nevertheless, the context of this thesis is reflective of the medical, biological model of deafness which is adopted and is implicit within the educational structure of schooling for this cohort. Whilst a clear demarcation between these concepts of D/deafness enables a positioning of the hearing impaired child and teacher/researcher in relation to the context, there is a danger that it masks the complexities of being and the assumed formation of particular identities as a result. Whilst acknowledging such distinctions and their usefulness in pedagogic practice, I prefer to adopt a philosophic position that proposes an interrelatedness of such concepts and one that resists such an artificial divide.

Given some of these complexities, it is imperative to further consider my relationship with the research context. In the first instance, and in line with the medical model of deafness, I must consider this from the perspective of one whose hearing is deemed to be intact and one whose experience is markedly different from that of the hearing-impaired child. In his infamous book, ‘What is it like to be a Bat’ (1974), Thomas Nagal ponders on a philosophical question that interrogates the notion of experience. Whilst I have not exactly pondered
on the same question myself, I have often wondered in a similar way, what it must be like to be Deaf or deaf\textsuperscript{33} and whilst there is little shortage of films,\textsuperscript{34} tv programmes,\textsuperscript{35} popular science books (Sacks, 1989) and academic articles that attempt to explain or give an \textit{insight} to this phenomena, I prefer to align myself with Thomas Nagal’s conclusions - that I will never truly be able to experience what it is like to be ‘another’. Indeed, it is somewhat presumptuous of me to think that I could. As the anthropologist Edward Bruner (1986) argued, “\textit{We can never know completely another’s experiences, even though we have many clues and make inferences all the time}” (p.5). If this is the case, then as a teacher, researcher I will be forever positioned ‘outside’ as opposed to ‘inside’ of the phenomena under investigation\textsuperscript{36} - how a hearing impairment impacts on an engagement with photography. I might conclude therefore, that whilst I could artificially replicate the biological processes that underpin a hearing-impairment, I could never experience what it is like to have a hearing-impairment or to become hearing-impaired.\textsuperscript{37} Furthermore, I could not experience the technologically aided\textsuperscript{38} experience of being able to hear or perhaps, for some children, to re-hear.\textsuperscript{39} Of course, I could write about what that experience might feel like but the language that I use in attempting to mediate this experience, only seems lacking in getting me to the essence of what that experience might be like. Language and the discourse within which it resides both permits me to construct an experience of being hearing-impaired but at the same time, seems to restrict how that experience can be expressed.

\textsuperscript{33} In order to avoid the cultural and biological arguments that circulate in relation to these two terms, I opt to use hearing-impairment as a term that cuts across both of these terms and is used as a point of reference for the children that reside within this research context.

\textsuperscript{34} See https://www.imdb.com/list/lst073244650/ for a short list.

\textsuperscript{35} See https://www.signiausa.com/blog/5-great-tv-characters-hearing-loss/ for a short list.

\textsuperscript{36} This despite that already stated that I am deeply entwined with the research context.

\textsuperscript{37} Of course, Presbycusis would suggest that I am already on a decline in my ability to hear so perhaps this might bring me closer to the phenomena under investigation.

\textsuperscript{38} Through hearing aids and cochlea implants.

\textsuperscript{39} Children who have lost the capability to hear through illness are sometimes aided enabling them to re-hear.
This is perhaps familiar territory to those who have read the work of Michel Serres\textsuperscript{40} (1985) but despite the evident barriers that language and discourse creates, I still seek ways through which I might be able to embody the experience of being hearing-impaired. Through doing so, I attempt to disrupt the power differential implied between the researcher and the researched, and that which \textit{appears} to give me the right to speak for what this educational system dictates to be the ‘other’. This ‘other’ is not however, a static entity and belies a system of educational control that suggests otherwise and whilst I might for practical reasons, consider myself to be the same person as I was yesterday, I have undoubtedly changed – not the physicality of the body necessarily, as explained by the medical fraternity but as a thinking, experiencing entity that affects my engagement with my surroundings, with photographic images and with the children in my care. In this sense, I construct photographic images, the children construct photographic images but in return, there is a propensity that these images construct the constructors in a cyclical process that shapes a notion of becoming.

When I began this PhD process, I was 46, a head of department that included media studies and photography and I had a full teaching timetable that spanned these subjects. I am now 54, a Head of Faculty who oversees a number of departments and around 15 teachers. My own teaching commitments have become more widespread and although I still teach media studies and photography, I also teach on post-graduate teaching qualifications and mentor a number of prospective teachers on their route to attaining teacher status. When I speak of the ‘I’ or the ‘my’ therefore, it is reasonable to ask from which ‘I’ is the position from which ‘I’ speak throughout this thesis? In the opening to ‘A Thousand Plateaus’, the authors state, ‘\textit{the two of us wrote Anti-Oedipus together. Since each of us was several, there was quite a crowd}’ (Deleuze &

\textsuperscript{40} For Michel Serres, Serres, M. (1985) \textit{The Five Senses. A Philosophy of Mingled Bodies.} Translated by Cowley, M.S.P., London: Continuum International Publishing Group. the senses are not channels that exist independent of each other. They are not on separate frequencies, in different parts of the waveband but are subject to interference. If we accept this stance, then there are clear consequences for the ways in which a hearing-impairment is framed and hence consequences for the pedagogical methodologies engaged in the promotion of learning and acquiring kinds of knowledge.
Guattari, 1988, p.3). However, I prefer to think of my writing as a manifestation of several positions – as teacher, a teacher of the deaf, a head of faculty, a photographer, a father, a gardener, a musician (of sort), a cyclist, an ice skater (of sort), a walker and now with some hesitancy, a writer. I do not believe that I can occupy any one of these positions without being influenced by the others and whilst some might appear to be peripheral to my engagement with the research context, there is undoubtedly impact. The intermingling of these positions impacting on that which ‘I’ choose to privilege at any one time - as I weave my way through a journey which will be more akin to being nomadic (Deleuze & Guattari, 1988) than the linearity of approach with which the reader might be more familiar.

In addition to considering my own position within the research, I must also consider that of the children with whom I seek to work with. This is much more problematic however when one acknowledges that childhood is far from a static concept with which I can engage, but one that changes across different historical time periods (Aries, 1962) and across different cultures (Kamp, 2001). I would like to add to this narrative in that a ‘child’ is perhaps constantly changing on a daily, hourly, minute by minute basis, evident perhaps in their position of always being ahead of the strategies that are put in place in an attempt to control their development. Resisting research paradigms that conceptualise childhood as a universal biological category, I fall in line with

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41 I borrow this term from Deleuze and Guattari (1988). Being and becoming nomadic implies a particular distribution of bodies across the land. In opposition to the sedentary occupation of lands with its defined borders and defined routes from A – B which is reflected in the structure of schooling, the nomadic relationship with the land is resistance to this territorialized structure with its impact om the control of bodies and their movement through the environment.

42 Whilst the focus of this thesis is based around the contemporary hearing-impaired school child growing up in the UK, it is necessary to recognise such a construction within an historical context from which it has emerged. In particular, notions of normality as a given from which notions of biological and cultural differences have emerged and been legitimised. How these historical notions of the ‘child’ and ‘childhood’ have influenced contemporary perspectives and ones that have ultimately driven policies concerning the welfare and education of hearing-impaired children, defining their needs and ultimately shaping how those needs are to be met.

43 I use the term cultures here to address and distinguish that which is implied in the term ‘Deaf’ to that which is implied in the term ‘deaf’.

Berry Mayall’s (1994) conclusion that children do not form an homogenous group and that their experiences of childhood can be very different. Furthermore, hearing-impaired children often suffer from being considered as a homogenous group, particularly from a biological standpoint which has profound implications for pedagogic instruction and for the shaping of their being. Whilst acknowledging the educational economics that underpin such a positionality, I prefer to align myself with those that resist the temptation to homogeneity and acknowledge that this population indeed have complicated characteristics that intersect between language, disability, communication and cultural identity. (Baker-Shenk & Kyle, 1990; De Clerck, 2010) This position enables an engagement with the individuality of experience that results in an individual ‘voice’ (Arnot & Reay, 2007) of the child. Considering the child to grow ‘with’ the research therefore, rather than being subjects of research further acknowledges the concerns of some (Young & Ros, 2011) who have proposed that d/Deaf children:

‘have been consistently treated as outsiders in research through their construction as the subjects of research – they are the sample, they provide the data. Research is done ‘on’ them, or ‘for’ them, but rarely ‘with’ them, or from and by ‘us’.’ (2011, p.12)

I must allow therefore for a space for that ‘voice’ to be heard, to be seen, to be felt and at least attempt to avoid the ‘schooled’ voice or the schooled ‘vision’ which is ever present. For this reason, many of the activities conducted with children in the Plateau entitled: ‘Touch What I’m Feeling’ will be undertaken outside of formal curriculum time. This is intended in an attempt to reduce the effect of the pedagogic voice whose overriding intention is to increase levels of attainment, masking the aforementioned complexities in favour of a kind of educational progress.
Outlining the Minor Plateaus

The shape of this thesis begins with three minor plateaus. The focus of these plateaus was outlined in the introduction and the reader may wish to ‘jump off’ at this point to re-familiarise themselves with the structure proposed. I am aware that attempting to demarcate areas of concern in this manner however, is somewhat artificial and is itself problematic but the purpose is to anchor the main areas of discussion that will be pursued throughout this thesis. The reader may wish to return to the following minor plateaus as they navigate their way through the thesis.

45 The three areas of study are indicated by the symbol in brackets (-) and can be found on page 25/26
The Minor Plateaus
Figure 3: One Ear looks Like every other Ear. Photographer: K.Robinson (Author)
Heightened sense of vision - impact on ...

‘The grip of neuroscience on the academic and popular imagination is extraordinary. In recent decades, brain scientists have burst out of the laboratory into the public forum. They are everywhere, analysing and explaining every aspect of our humanity, mobilising their expertise to instruct economists, criminologists, educationists, theologians, literary critics, social scientists and even politicians, and in some cases predicting a neuro-savvy utopia in which mankind, blessed with complete self-understanding, will be able to create a truly rational and harmonious future.’ (Tallis, 2013)

Every morning I wake up, open my eyes and thankfully, I see. I am also fortunate enough to hear but whilst on occasion, my sense of hearing might consciously precede my seeing, in the sense that it might activate and direct my seeing, it never seems to overshadow it. Indeed, my hearing seems to be somewhat subservient to my seeing. Is this merely a reflection of pathological explanations of the notion of seeing itself or does the Anglo-American cultural privileging of sight over and above the other senses, shape my psychological and physiological response?

The former pertains to a consensus built upon a science-based logic that the neurological features that underpin a process of ‘seeing’, dictate a sensory privilege in vision and in visual perception. Indeed, the justification for educating the hearing-impaired child in an oral/aural context and that which has proposed the hearing-impaired child as a visual learner does owe much to developments made in neuroscience and whilst the premise of such research will be subjected to critical enquiry throughout this thesis, these developments cannot be ignored or dismissed. In her studies into the adaptions of the brain in the 1970’s for example, Helen Neville, (1986) a cognitive neuroscientist showed that in pre-lingual deaf children, the auditory

\[46\]
I am aware of a binary here which whilst useful in setting up an analysis, masks the complexities inherent in such a separation.

\[47\]

\[48\] those that had become deaf before the age of two or so
parts of the brain had not degenerated or atrophied - they had remained active and functional but with an activity and a function that were new: they had been transformed or relocated for processing visual language. The notion of cross sensory modality or brain plasticity is an attractive proposition, receiving extensive coverage in academic journals, in the popular press and in popular science-based texts. Titles such as, *Super Powers for the Blind and Deaf*; Deaf People Hear Touch; Brains of Deaf People Rewrite to ‘Hear’ Music; Feel the Music: Deaf People Use ‘Mind’s Ear’ to Process Vibrations; Deaf People ‘Develop Super-Vision to Compensate’; and Deaf People ‘Feel Touch’ with Hearing Part of Brain, all emphasise a fluidity between the senses. Whilst such are pertinent to this thesis, they have also had a tendency to romanticise the implications, courting the imagination of the public and establishing a scientific discourse that privileges a rational and perhaps anthropocentric form of thinking. If I consider such opinions to have travelled in one direction from ‘A’ (the formation of such ideas in the popular press underpinned by scientific research) to ‘B’ (their adoption in pedagogic instruction and the framing of the hearing-impaired child as a visual learner) then it is with some reluctance that I can see that such seeps effortlessly from description to prescription. The humanist position implied however, is resisted in this thesis in favour of a post humanist, post-modernist endeavour that seeks to challenge the dominant form of thinking that positions the hearing-impaired child as a visual learner and of photography as a visual medium. The assumptions that form the basis of such opinions will be pursued and challenged throughout this thesis.

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49 For a review of cross modal brain plasticity from a neurological standpoint, see Shinsuke Shimojo and Ladan Shams, ‘Sensory modalities are not separate modalities: plasticity and interactions’ in Current Opinion in Neurobiology, 2001, 11: 505–509.
50 See: https://www.scientificamerican.com/article/superpowers-for-the-blind-and-deaf/
51 See: https://www.youtube.com/watch?v=Q6sXPuvIJeA
54 See: https://www.dailymail.co.uk/health/article-1319480/Deaf-people-develop-super-vision-compensate.html
Figure 4: Year 10 Sketchbook work. Permission to reproduce granted by the student. Redacted in line with GDPR.
Language delay - impact on ...

‘Seeing comes before words. The child looks and recognizes before it can speak. But there is also another sense in which seeing comes before words. It is seeing which establishes our place in the surrounding world; we explain that world within words, but words can never undo the fact that we are surrounded by it.’ (Berger & British Broadcasting, 1972, p.7)

Every morning I wake up, open my eyes and thankfully, I see. This is usually a steady process and it takes time for me to formulate my thoughts as regards the day ahead. Turning those thoughts into words is a further challenging task but I must do so if I am to communicate with those around me and organize myself for the day ahead. I sometimes have to search for the words that will help me organise myself, a task which seems to become more difficult with age and perhaps with what the data tells me, as my hearing deteriorates, then my ability to communicate may become impeded. Impeded perhaps, as my ability to hear the higher frequencies which I am informed is evident for instance, in the ‘s’ sound and the ending of words that sometimes indicate the passing of time. Nevertheless, in doing so, I make an assumption that the words that I seek are somehow there, somewhere in waiting for me to find. In this sense, it is as though these words precede my thoughts, but it is my thoughts nevertheless that are needed to organise these words into a structure that makes sense to myself and therefore to others. I’m not quite sure if these thoughts somehow follow on from a visualization of what I am trying to communicate. Nevertheless, it is a debate that has dominated the area of language acquisition for the hearing-impaired child for some time - whether ‘language’\textsuperscript{56} is needed to think or whether thoughts precede that to be formulated in language. Whilst the relationship between thought and language is evidently more complicated than a simple demarcation of this kind, I agree with Laurel Richardson (2005) who is in line with the latter:

\textsuperscript{56} Unless otherwise stated, the term language will refer to that commonly used within the local community and deemed to be the dominant modality.
‘I was taught, as perhaps you were as well, not to write until I knew what I wanted to say, until my points were organized and outlined.’ (p.960)

Despite the complexities involved, the debate has never really been resolved - given that historically, it has always reverted to a very narrow notion of language - one that is English in its written and spoken form. Nevertheless, these concerns continue to dominate given that they are somewhat relevant to a curriculum that is underpinned by this language modality. If hearing-impaired children are to succeed in a system designed for their hearing peers, then they will need to be proficient in this language modality and in this context, I might be complicit that words indeed, do follow thoughts; be placed in a sequence that is temporal in nature, existing over time and in one direction. However, several studies (O’Connor & Hermelin, 1972; O’Connor & Hermelin, 1973) have suggested that hearing-impaired children are less able than their hearing peers on tasks which involve the temporal organisation of information. How then, might this cohort perform in what has been described as a new language economy where information is not necessarily presented sequentially but cuts across and through a range of communication modalities. It is a debate that needs to engage with a broader concept of reading and the notion of ‘language’ itself which cannot continue to simply default to the written or spoken modalities. In the new language economies, information is presented in a non-linear manner, accessed through nomadic forms of engagement across multiple platforms and in differing technological and structural environments that will dictate new forms of engagement. These new forms of reading need not, indeed, should not simply defer to vision.

The assumptions that forms the basis of these opinions will be pursued and challenged throughout this thesis.

57 It is less likely to be resolved given the changing nature of language and communication itself though such is yet to be acknowledged within an educational context.
58 This has been further corroborated by more recent studies Todman, J. & Seedhouse, E. (1994) ‘Visual-action code processing by deaf and hearing children.’. Language and Cognitive Processes, 9 pp. 129-141. in which hearing impaired children did better than their hearing peers on spatial memory tests.
59 Making searches on the internet for instance, requires a different process of accessing information and is spatial, rather than sequential.
Figure 5: The author about to start school, 1971. Reproduced with permission of the author.
Mobilisation of photography - impact on ...

“Memory work” is, like any kind of physical or mental labor, embedded in complex class, gender and power relations that determine what is remembered (or forgotten), by whom, and for what end’ (Gillis, 1996, p.3)

Every morning I wake up, open my eyes and thankfully, I see. As I prepare myself for another day of teaching with hearing-impaired children, I ponder on my own experience of being at school as a child. This broad and somewhat historic experience however has been reduced to a few photographs that remain hidden from view within a family album and are rarely exposed. When or indeed if, I do eventually look at these photographs, I wonder whether this kind of looking is any different from the way that I look at other photographs, such as those that I encounter in magazines, in newspapers and in the educational material that I use on a daily basis. The physical encounter, the physical relationship may well be similar, but the ways in which these encounters engage my interest and ignite my imagination seem very different.

In the first instance, that represented in the photograph in figure 5 is obviously not a stranger to me, or at least it is a version of me that is now only accessible through this image. Whilst the image is clearly a flat surface in two dimensions that I can hold in my hands in the present time, I seem to be able to look through the frame to a time, a place and perhaps an event when the photograph was taken, even though these memories are hazy to say the least. The photograph confirms to me that this event\(^6\) took place and if I am to believe that the person represented in the photograph is/ was actually me, the photograph confirms an identity with which I have a relationship. This process seems to reflect a process of looking as a one-way process in which I look at the image as a material object that has no apparent agency and even though the person seems to be looking directly at me, the image is incapable of resisting my look. The sense of power that I have over the image implies a sense of control.

\(^6\) Some commentators have suggested that the photograph is the event itself.
not only over the content of the image, but also how I re-member\textsuperscript{61} the event. I can create a narrative based on the event, manipulate the memory of the event and of the identity that is contained within the frame. I am never able to look at this photograph in isolation however as it is cut from the surroundings by the frame and this has implications, as John Berger reminds me, ‘\textit{we never just look at one thing; we are always looking at the relation between things and ourselves.}’ (Berger, 1972:9) Whilst my vision, in a pathological sense, might well give me a kind of access to the image which suggests a relationship, it is my imagination that initiates a more multi-sensory engagement. This sensory engagement is one that is beyond vision or that which suggests I read the photograph as a form of text, accessible through my vision. If I displace the centrality of vision in this encounter, I might consider the photograph not to be a visual medium at all, permitting an engagement with the photograph that is a different kind.

How might these encounters differ if I was deemed to be sensory impaired? Common sense might well dictate that if I was visually impaired then this would have obvious impact on my interaction with that deemed to be visual based, photographic material but what if I am deemed to be hearing-impaired – how might this impact on such engagements? Common sense might further dictate that there would be little impact on such an engagement but how is such a stance maintained - what are the underlying assumptions that shape this stance as a position that has become resistant to challenge?

The assumptions that forms the basis of these opinions will be pursued and challenged throughout this thesis.

\textsuperscript{61}I can create an identity through re-membering this event – putting back together that which may have become dis-membered over time.
Concluding the minor plateaus

‘Vision dominates philosophical and empirical thinking about perception and perceptual experience.’ and ‘the terminology deployed in discussing perception frequently is explicitly visual: appearance, image, scene, perspective, observe.’ (Callaghan, 2008, p.55)

In my preceding ruminations, it will not have escaped the notice of the reader that I have used many terms that reflect the dominance of vision-based terminology in my writing. These terms have been highlighted in italics. This may appear inconsequential but is indicative of the discourse within which this thesis resides and that which frames the ensuing discussion. Indeed, such is perhaps so ingrained within western culture and evidenced in educational discourse that connects vision with knowledge, that it masks the possibility of entertaining other possible ways, ‘to know’. The discourse that sustains visions dominance in perception is far from mirrored in relation to other senses. Sound for example, might be considered to be invisible within this discourse, residing within a vision-based discourse means that I lack the language through which I can describe it other than in ways which defer to the visual. Within this vision-based discourse, sound exists, it exists in time, across time but seems always in the past, constantly disappearing into the ether. Hearing has to be made tangible if it can be out to work. I can see an audiogram, but I can also touch the paper on which such an audiogram is printed or on a screen on which they are sometimes displayed. This gives sound a sort of visual permanency. I can hear sounds from an audiogram in the sense that the graphic visual representation of sound ignites my imagination. How this connects my hearing and my vision is unclear to me but perhaps this is the only method through which hearing can be understood within a visual based culture. If sound is made visible in this manner, then perhaps it can more easily be controlled, manipulated and made to work for the hearing-impaired child and those who have chosen to work with this cohort. This visual construction of sound in this manner can only ‘mean’ perhaps to those who are deemed to have their hearing intact and indicates to some extent a cross modality between hearing and vision - one that resists a unitary
sensory standpoint. In what has been described as a ‘sensual turn’ (Howes, 2003, p.29) such a position has more recently been problematised, fueling research that promotes a more embodied engagement – in this case with the production and reception of photographic based materials for the hearing-impaired child.

In an article entitled, ‘There Are No Visual Media’, W.J.T. Mitchell (2005) invited the reader to ponder on the ‘nature’ of the visual. His exploration was to take us on a journey that questioned the common-sense assumption, that ‘visual media’ is essentially just that – that it engages the sense of sight alone. The argument proposed, that all media are essentially ‘mixed media’ and that ‘mixed media’ engaged or ‘involved’ all of the senses. Mitchell does not embark on an investigation into how these senses might be ‘engaged’ in such processes however, but others have. (Di Bello & Koureas, 2010) In her book, ‘Art, history and the senses : 1830 to the present’ Patrizia Di Bello (2010) traces a shift from a vision-based culture to one of embodiment. This ‘sensual turn’ seen as a backlash to the dominance of ‘vision’ within western societies is less evident in a system of education for the hearing-impaired child where hearing and vision continue to stand for the rational, the intellectual. This thesis attempts to redress this position. A hearing-impairment is often assumed to have a positive effect on vision but what of the other senses – how might they be implicated in photographic engagements?

In the previous minor plateau’s, I have attempted to separate out three areas of concern that the reader may have noticed are essentially inseparable. Nevertheless, this has been necessary in order to provide several anchors for the reader as the journey weaves its way through and across these concerns. The whole school photograph will provide the basis through which a critical discussion of these concerns will take place as I believe it to be a practice, a performance and an object that reflects an enlightened desire to shape the hearing-impaired child as a visual learner. As previously stated - this is not a

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62 In parallel, some have suggested a cultural turn has taken place as regards attitudes toward the ‘deaf’ as a social group.
thesis ‘on’ the school photograph or on childhood but more a performative thinking through the school photograph in order to address the aforementioned concerns.

**Outlining the Major Plateaus**

The shape of this thesis proceeds with three major plateaus. Each plateau will focus on particular areas of concern. In essence, the plateau, ‘*Hear What I’m Seeing*’ sets the context; ‘*Feel What I’m Hearing*’ interrogates aspects of the related literature and ‘*Touch What I’m Feeling*’ is based on photographic exercises undertaken with children. The latter will proceed and is informed by the research undertaken in the previous plateaus.

**Plateau: Hear What I’m Seeing**

‘*Hear What I’m Seeing*’ sets the philosophical background for the focus of this thesis. My intention is to write myself into a position that can then be used as the basis for a broader investigation through the literature review, ‘*Feel What I’m Hearing*’ and further unpicked through photographic based activities undertaken with hearing-impaired children in the plateau entitled, ‘*Touch What I’m Feeling*’. Whilst it is tempting to try and state what that position might be, it has not been formulated at the time of writing because to do so would contradict the methodological strategy that I seek to employ. I agree with Annete Khun (2007) whose preference is for a ‘*grounded approach that carefully builds up explanations from clues and traces extracted from readings of objects of study.*’ (p.283) She cites the cultural historian Carlo Ginzburg and his description of this methodology as a type of ‘*conjectural knowledge*’ (Ginzburg, 1989). In line with this methodology, the objects that I focus on in this plateau are photographs; the school photograph in particular, broadening out from this mode of representation to include film and argue that a particular conception of vision and visuality (Crary, 1992; Jay, 1993) has been mobilized through photographic practice to shape a concept of the hearing-impaired child as one
deemed to be a visual learner. It is a discourse that I believe has shaped their bodies to be receptacles of particular kinds of knowledge through particular language and sensory modalities. Vision, as I see it, has become the standard through which the gaze has mobilised the codification of the ‘other’ - in this case the hearing-impaired child - subjecting them to a form of control that is and perhaps, always has been rationalised with reference to common-sense. The modernist endeavour, underpinned by a scientific rationality has positioned their bodies as objects of investigation, scrutinised in terms of separate sensory modalities that have been subject to investigation by a dominant elite. The implication has been to solidify an impenetrable link between seeing (and hearing) and knowing - both on behalf of those who have been charged with the educational career of this cohort and of the children themselves, who have unknowingly adopted a vision-based engagement with their own learning. My task is to challenge the status quo from within this discourse. It is a challenge that proposes a multi sensorial (Edwards & Bhaumik, 2008), multimodal, (Kress, 2000) approach to the production and reception of knowledge through photographic engagements. In doing so, this plateau builds upon research that continues to emerge within and across various disciplines that challenges the hegemonic position that vision, has held. Whilst there are many facets to such a discussion, I will limit that addressed to the mobilisation of photographic practices since, what some have described as the enlightenment period (Bristow, 2017) and how through a construction of the school photograph, a particular notion of the child, the hearing-impaired child as a visual learner and

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63 Why use the Gaze over other terms such as to look? The term seems to have been embraced in relation to visual studies even though there are a number of alternatives of the verb, ‘to see’ evident in the Oxford English Dictionary and in the Oxford Thesaurus of English.


of schooling as a ‘schooled’ process has been legitimised. It is a legitimisation that has carved an educational career for the hearing-impaired child that I have a feeling, has limited rather than emancipated their becoming. Whilst pathological explanations in such a discussion will be given their due credit, they will be sidelined in favour of a proposition that attempts to validate the potential for knowledge acquisition and production through bodily sensing that does not default to any particular sensory modality. In line with the ideas proposed by Polanyi (1983) knowledge will be considered as tacit, not so easily classified, defying the positivists ideas that hitherto have constrained my own engagement with learning as a teacher, and the engagement with learning for those within my care.

Drawing extensively on the work of Foucault and others, this plateau intends to argue that the notion of the hearing-impaired child as a visual learner is one that merely reflects an ideological and discursive imperative, evident in modern enlightenment thinking that masks the possible complexities of beings and their relationship to knowing.

Plateau: Feel What I’m Hearing

‘Feel What I’m Hearing’ is intended to consolidate aspects of research, both historical and contemporaneous, leading to a philosophical proposition that there has been a sensual revolution. (Howes, 2005) This revolution has perhaps manifested itself in a series of ‘turns’ that have steadily displaced or at least questioned, the hegemonic position that language, in a traditional sense has held within western societies. The use of the term revolution, however, is somewhat inappropriate perhaps, given that such has connotations of overturning established thoughts and whilst there is evidence that such has steadily taken place in the world of academia, such is yet to be embraced in schools for the hearing-impaired child. Indeed, there is little evidence of impact in theoretical and practical pedagogy. The status quo appears to remain, continuing to underpin linguistic based approaches to teaching and
learning across the curriculum for the hearing-impaired child. Whilst some subjects deemed to be visual based such as photography may be thought to circumvent a linguistic based approach, given the privileging of vision, photography and photographing merely comes to represent that which goes before it – language in the traditional sense. Language, however, is also reliant on vision. When I read text on paper, I do so through my vision. When I receive communication in signed language, my vision is engaged but when I listen to someone speaking, is my vision engaged or disengaged? or perhaps vision is merely the modality through which language is accessed. These questions will be pursued through this plateau and it will be argued that vision in the traditional sense, is more peripheral to communicative engagements through photography than is currently accepted. The hierarchy of the senses as defined by Aristotle (350 B.C.E) and evident in educational programmes for photography, will be challenged. This in an attempt to theorise a broader understanding of the senses and their relation to photography so that a reconsideration of hearing (impairment), what it is to hear and what it is to see, can be proposed.

Whilst aspects of this plateau will follow to some extent, the traditional form of a ‘literature review’, the inter-sensory, multi-modal concerns of the thesis will necessarily embrace a range of texts that might fall outside of reader expectations.

**Plateau: Touch What I’m Feeling**

‘Touch What I’m Feeling’ focuses on the photographic based practical activities that have been completed with the research group alongside the researcher. This plateau also includes an analysis of preliminary activities that were conducted with students who study the subject of photography, some of whom are outside of the main research group. These Minor preliminary activities helped to frame the Major activities that followed. It is intended that
the reader can interact with the activities in any order. The activities are intended to explore the issues that have arisen from the literature plateau.

The reader may wish to jump to these practical based activities and the analysis that follows. The issue of the relationship of language to vision, hearing and photography is central to these activities. The agency of individual children is paramount as it is the intention of the researcher that children should move with the research and not be the subject of research.

It was my initial intention that these activities would be produced in a sequential, relational process where one was initiated by the preceding activity. Whilst this was the case to some extent, such a neat description does not consider the numerous influences that occurred in the intervening time between research sessions. As a result, the activities developed out of a broader and continually changing research environment where concerns of mine and of members of the research group were continually emerging whilst other concerns became more peripheral. Whilst the requirements of a thesis deemed that I had to present this in a linear manner, the undertaking of activities could not always be tamed by the process.

A Cautionary Note for the Reader.

The focus of this thesis is centred around vision, hearing impairment, photography and the senses. However, it is not ‘about’ either of these areas in isolation. Rather, photography, photographing, constructing and interpreting photographic imagery in the broadest sense including historical analogue and contemporary digital based practices is used to think through the issues raised in relation to these areas.66

66 The teacher of the deaf, the audiologist, the speech and language therapist may find a lack of scientific based evidence to support the theoretical and philosophical investigations undertaken. However, whilst such is acknowledged by the author as a credible position, the field of scientific investigation is not the central concern of a thesis that seeks to challenge this hegemonic position and offer alternative ways to engage a broader understanding of the senses in relation to photographic practices.
PLATEAU: ‘Hear What I’m Seeing’

‘We who are the inhabitants of the photographic universe are accustomed to these photographs. They have become habitual to us, and we are not even aware that they are around us: habit hides them. It is change which is informative; the habitual is redundant. We are thus surrounded by redundant photographs.’ (Flusser, 1984, p.47)
From Sense...

The School(ed) Photograph

Figure 6: First School Photograph 1948 (School Archives) Anonymised in line with GDPR

‘The relation between what we see and what we know is never settled.’
(Berger, 1972, p.7)

In a continually changing educational landscape, the school photograph appears to have endured. It is performed in a space, a place, and at a particular time every other year in this particular educational establishment. It is completed with meticulous planning and the resulting photograph is adorned by those that view the content. The photograph is looked ‘at’ whilst those

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67 The School Photographic archive can be found online.
68 The term performance here is used to describe an event that is performed for the camera, in the absence of an audience. For examples of this use of Photography see details of the exhibition staged by MOMA in 2001 available at: https://www.moma.org/calendar/exhibitions/1087?locale=en. Also visit https://www.tate.org.uk/tate-etc/issue-36-spring-2016/hold-still. For details of an exhibition held at the Tate Modern in 2016 entitled: Performing for the Camera.
individuals within ‘it’, appear to look back.\textsuperscript{69} Without doubt, the school photograph is a culmination of a performance\textsuperscript{70} that is devoted to vision.\textsuperscript{71} However, that which occurs before the shutter is released is an integral but somewhat neglected aspect of this process. Shusterman (2012) describes this as a ‘complex performative process’ (p.72) that occurs before the shutter release and the camera’s ensuing mechanism of producing the photographic image. There is a distinction inherent in this description between photograph(ing), as a continually moving process and the photograph which is a still representation of a particular moment in time. However, perhaps this is too simple a distinction and one that has solidified a common sense assumption that the ‘still’ photograph has no inherent movement. Despite such ruminations, the notion of the school photograph as a still image is the one that is embraced by the educational institution. Indeed, if we heed the comments by some commentators (Fabian, 1983) that ‘the ability to ‘visualise’ a culture or society almost becomes synonymous for understanding it,’ (p.106) then the school photograph may be considered as central to supporting this claim and solidifying an already entrenched and assumed relationship between what is seen in the photograph and what is known about those within the image.\textsuperscript{72}

Considered as a material object (Edwards & Hart, 2004; Tolia-Kelly, 2016) that engages vision, the school photograph serves many functions that pertain to this thesis. In general, the school photograph acts as a border between a formal notion of ‘schooling’ and what might be considered to be a more relaxed...
home environment. This border is represented visually through the convention of a framing device that defines a separation between that which is ‘inside’ and that which is ‘outside’ of the photograph and therefore, outside the school community. The frame acts as a visual container of the contents of the photograph which in this case is the children, the adults and the environment which is part of this school community. More specifically, this school photograph represents a group of hearing-impaired children which it would appear, the visual-based school photograph is unable to expose.

When engaging with the school photograph, I do so through the sensory modality of my vision - through my eyes - at least on a superficial basis, this is undeniable and ahead of any philosophical discussion that might ensue. However, what precisely does my vision enable me to know? My vision enables me to scrutinize the contents of the school photograph within the frame and what I will refer to as the architectural\textsuperscript{73} structuring – a structure that unknowingly \textit{reflects} established westernized conventions and which \textit{guides} my reading\textsuperscript{74} from left to right.\textsuperscript{75} It is from this visual-based reading that a common-sense link between what I see in the photograph and subsequently what I know from the photograph, is solidified. It is reasonable to suggest perhaps that none of my other senses\textsuperscript{76} provide me with or affirm such knowledge. Indeed, just to be sure, allow me to briefly consider those remaining senses and their relation to what I am able to know from the school photograph. Hearing (Sound): common-sense dictates that this school photograph as a material, two-dimensional object does not emit any sound and therefore does not require a

\footnotesize
\begin{itemize}
\item I use the term architecture to refer to the image as a construction that was planned and as an object that is negotiated. In \textit{Touching Photographs}, Margaret Olin (2012) describes photographs as the architecture of mostly a paper environment and like architecture, photographs engage the tactile sense. Olin, M. (2012) \textit{Touching Photographs}. University of Chicago Press.
\item Images read as texts is reflective of a tradition which is underpinned by the representational and indexical quality of photography.
\item A recent study suggests that movement of the eyes from left to right or one side to the other whilst keeping the head still initiates vibrations in the eardrums even in the absence of any sound. See: Gruters, K. G., Murphy, D. L. K., Jenson, C. D., Smith, D. W., Shera, C. A. & Groh, J. M. (2018) 'The eardrums move when the eyes move: A multisensory effect on the mechanics of hearing'. \textit{Proceedings of the National Academy of Sciences of the United States of America}, 115 (6), pp. E1309.
\item Unless otherwise stated, the senses refer to those that have dominated western thought - Sight, hearing, taste and touch.
\end{itemize}

63
listener. I might suggest that this is what makes the photograph, all photographs particularly accessible to those children who have a hearing-impairment; Smell: there may be smells emanating from the photographic paper and those that might emanate from the environment that surrounds the photograph but once again, common-sense dictates that these will not affect my interpretation of the image. If the photograph can permit a kind of visual-based access to a past, we might concur with some commentators that this past has no smell and that it is odourless. (Bembibre & Strlič, 2017) Taste: common-sense once again takes care of this - my sense of taste is clearly not implicated and has no affect. Finally for now, whilst I might hold (touch) the photograph as I look at it, common-sense would further dictate that this would have little affect on my interpretation of the image. Of course, the scenario that I describe is from a visual centric, common-sense position that exists within a discourse of vision that does not permit me to explain such an engagement in any other way, other than through vision. However, as O’Sullivan (2001) reminds me, ‘you cannot read affects, you can only experience them.’ (p.126) Nevertheless, a consideration of the factors associated with my five senses that might influence my interpretation is far from exhaustive and far more complex than a unitary analysis of sense might afford. (Goldberg, Wilson & Cullen, 2012) My initial assumption is that my body has sense intact and that there is a particular sensory ratio to my engagement with the photograph that privileges vision. If vision is heightened in this engagement, others are deemed to be redundant or of little use. My sense of hearing is one sense that is assumed to be more peripheral in such engagements, framed as it is by a science that is able to specify the ‘nature’ of sound, of hearing with the subsequent common-sense assertion that sound is absent in photographic imagery. The position reflects a bodily schematism (Head & Holmes, 1911) where the senses are deemed to exist in particular parts of my body. This biological based framing of the senses

77 I use the word ‘affect’ here and will develop it later in the thesis.

78 Indeed, the growth of schools for children with specific impairments as established in the Elementary Education Act (Blind and Deaf Children) of 1893 and subsequently in the Education Act of 1918 was in part a reflection of an ideology that pre-supposes the separation of the senses.
has had implications for the education of the hearing-impaired child\textsuperscript{79, 80} and I believe it has underpinned the framing of photography as a visual-based medium and one that is seen to be particularly suitable for this hearing-impaired community. It is also a biological based system that has had implications for the way that vision has become dominant in my perception. (Shams, Kamitani & Shimojo, 2000) but the sensory separateness implied is highly questionable and challenges my intuition. When watching a movie at the cinema for example, I can hear the sounds of people speaking coming from the speakers behind me but my eyes somehow persuade me that the sounds are coming from the mouths of people on the screen.\textsuperscript{81} When I am out for a meal, the sound of music in the background somehow affects the taste of what I am eating. It may be that I am experiencing a form of what has been termed synaesthesia but regardless, there is a distinction between the science that dictates a particular sensory engagement and my bodily experience. The former is easily classifiable and referenced in data driven educational imperatives but the latter is more messy, defying the strategists desire to control.

The relation between what I see and what I know from a photographic image is problematised when considered from a multi-sensory perspective, particularly when ostensibly, the photograph remains to be considered as a visual medium. It is clear that such a correlation between my vision and my knowing, is far from straightforward than what an unproblematic and common-sense acceptance might afford. In line with that proposed by John Berger (1972)

\textsuperscript{79} This is particularly the case for those hearing-impaired children who are educated in an oral/aural context as in the context of this thesis.
\textsuperscript{80} In relation to education, the demarcation of the sensory was embraced by Piaget Piaget, J. (1952) \textit{The origins of intelligence in children}. New York: New York : International Universities Press. who suggested that there were four stages that a child passes through as they come to \textit{know} - these were defined as the sensorimotor, preoperational, concrete operational and formal operational stages. The view has had a profound effect on teaching methodologies that construct a notion of the child as one whose development of an ability to think, to deduct and to reason will pass through this series of stages on a journey to maturity. For Piaget, the development of intelligence therefore was clearly viewed as a biological process that reflected a successful transition through these stages.
that knowing is ‘never settled’⁸² - the veracity and validity of the school photograph as a knowing object and my vision as a knowing sense is called into question. The photograph seems to know more than its visual contents can tell (Polanyi, 1983) and more than I am able to access through my vision alone. My vision gives me a confidence that I can read the contents of the photograph but such a reading tells me very little about those contents - about the children, adults, the place, the history of that which is represented within the frame. The reliance that I have placed on my vision and a reliance on the indexicality of the photographic image to provide me with a knowledge that is unquestionable, is less secure than what I had been led to believe.⁸³ Perhaps Di Bello (2007) is correct in her assertion that ‘the indexical nature of the photograph...can guarantee nothing at the level of meaning’ (p.18). and that ‘indexicality itself can be seen as one of the fantasies incited by photography’ (p.159). A textual approach to reading images provides a kind of knowledge that appeals to the rationale. However, photographs also have an affect on me that cannot be reducible to, or reflective of such readings alone. This affect is beyond or outside of the language-based discourse that tames my reading, my understanding. The affect that images have on me is extra-textual in that they do not only produce knowledge but produce affects – a different kind of knowledge. This is counter to an educational system that aligns with the former that underpins the notion of the hearing-impaired child as a visual learner. How this notion has come to occupy a hegemonic position is central to this plateau and guides my initial investigations of the school photograph as an indexical product that I believe has been mobilized to shape and maintain a discourse of educational stability - essentially through vision.


⁸³ What is certain about this image? There is a sense from the image that time has passed, the photograph from the point it is taken is in the past and the viewing experience is of something that has occurred in the past. Unlike film, the school photograph is still and cannot show the passing of time but rather than the object not inherently able to do this, it is the discursive system within which it is placed that defines it as still.
‘To photograph is to appropriate the thing photographed. It means putting oneself into a certain relation to the world that feels like knowledge—and, therefore, like power.’ (Sontag, 1979, p.2)
Inter-sectionality and inter-sensorality

The school photograph lies at several intersects that pertain to this study. First, there is an evident intersection between the photograph (the act of photographing, creating photographs and being photographed) and the concept of schooling itself (being schooled and doing schooling). Secondly, there is an intersection of the photograph and the text that purports to anchor it’s meaning and establish it as reflective of a particular moment in time, in history. Thirdly, the photograph lies at an intersection between the public and the private world of a particular education system, performing the notion of schooling beyond the fabric of the school setting itself. This intersection has a border however - the frame of the photograph that demarcates a distinction between what lies within this school setting and that which is deemed to be outside or ‘other’. Fourthly, the school photograph is reflective of an intersection of technical, artistic, professional and cultural processes that result in the framing of collective bodies in an organized and sculpted manner resulting in a material object that is called the school photograph. I could and perhaps should go further - suggesting that the photograph lies at an intersection between a defined past and a future or between what the children

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84 The school name and logo in the foreground as well as the name and logo of the company, Panora Ltd., who created the photograph. Started in 1916, Panora Ltd of Clerkenwell, London, produced panoramic photographs of school and college groups. The Panora negatives were deposited with the DPA (Documentary Photography Archive) in 1986 by the managing director of the firm who had sold his business but retained the negatives. The photographs are dated from 29 September 1968 to 30 July 1985. The collection is now held at the Greater Manchester County Record Office. See: http://www.myoldschoolphoto.co.uk/about.html
(and adults) are at a particular moment in time; have been in the past and what they might become. The latter highlights a sense of uncertainty however – an uncertainty that pervades even in the face of an educational system that demands stability. At least that stability is in some respects is represented in the school photograph which demonstrates a sense of authority that demands order. This highlights another intersection – one between a sense of order and stability and that related to the individual hearing-impaired child whose continuous sense of becoming is masked by this somewhat fictitious backdrop of stability. The assemblage of bodies in an organized, symmetrically balanced and tightly framed composition, denotes a sense of control of those bodies and acts as a spatial metaphor to represent the abstract meanings associated with a hierarchical structure of learning. It is a control which is reflective of a power invested in a photographic technology, capable of producing a two-dimensional re-presentation of that be-fore the camera. The sensory modality of vision cuts across the aforementioned and is central to a particular framing of an educational system for the hearing-impaired child and of the hearing-impaired child.

The school photograph is an event or perhaps, a ritual to use Erving Goffman’s (1990) term. It is a performance that takes place every two years in this particular educational setting and it is one event where the ever unfolding and cyclical narrative of schooling is halted temporarily. The school photograph is the physical object that represents this interruption of the narrative. There is a sense of sameness in the structure of the school photographs presented throughout this thesis. This sameness is explicit in the construction of the bodies within the frame that seem to conform to conventions that have been established. At the same time however, there is a sense of deviation – the bodies are different, the poses different, the numbers of children and adults

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85 Represented not only in the school photograph but via a series of visual based educational, medical and audiological documents whose ultimate aim is one that purports to maintain that sense of control.
86 It is also a performance that is repetitive which culminates in a still photographic image Judith Butler
87 The reader may wish to jump to appendix R where there is a selection of school photographs that appear to replicate established visual conventions.
represented are different and the performative process that precedes the release of the shutter is different. This evident binary between sameness and difference seems to permeate the school photograph and is yet again, another intersection. Furthermore, the effect that the photograph has on the viewer each time it is seen, will surely be different even though the construction of the final photograph tends to tame responses in line with what a discourse of vision demands.

The first example of a school photograph in this setting dates back to 1948 (fig. 8) and the latest was undertaken in 2016 (fig. 9)88 The school photograph frames and attempts to represent the identities of staff and children at a particular time in history. It is also one that has connotations for the notion of ‘schooling’ itself and what it means to be ‘schooled’. If I frame the school photograph as reflective of a ritual or a performance that results in a material object, I can concur that it is not reflective of a somehow ‘naturalized’ or pathological mode of vision - the one that is dominant in scientific based discourse but reflective of an ideological, discursive, system that is framed by all those89 that have a vested interest in creating a particular notion of the hearing-impaired child and their propensity to learn.90 These would include the medical, the audiological, the educational and the speech and language fraternities that structure and help to maintain particular modes of seeing, modes of vision. How such vision works to control and maintain an order is in part addressed in this thesis as I believe it to be evident throughout this educational system and performed through the explicit use of statistical data. It is further made explicit in the ritualised and performative display of the school photograph.

The school photograph purports to faithfully represent the individuals who are associated with the institution. There is an evident indexical relationship between that which is inscribed in the image and those individuals that such inscriptions come to represent. Despite this indexical relationship

88 Both photographs can be found on page 72.
89 As a teacher, I include myself in this scenario.
90 The hearing-impaired child as a visual learner I believe to be a construction. The question arises regarding in whose interest is such a construction.
however, the resulting image is one that actually masks rather than reveals particular identities of children and staff. This is achieved through a standardized photographic process that tends to obliterate any sense of individualisation. The photographic representation documents a likeness but informs the viewer very little about the individuals. To the viewer who knows nothing of the educational setting, this image is similar to many others from the genre. It is however, one that is unable to disclose a lack of hearing\textsuperscript{91} (impairment) for instance, in/on the children in any manner and why should it. Indeed, how could it, for this ‘viewer’ is likely to be one who knows the identity of children or at least has some relationship with the context and so does not require layers of further information. A date that is evident in the text (fig. 9) is all that is required to anchor the meaning of one aspect of the image that is reflective of the genre. Nevertheless, such a process of representation that negates individual identities subscribes to an ideological process of integration and normalisation, adhering to established and recognizable conventions. The educational/social intent in this setting is to ultimately integrate this cohort of children within that defined as a hearing community and the school photograph supports this aim through integrating seamlessly within an established genre. This overshadows any sense of disability and any sense that there may be a defined ‘difference’ between this cohort of children and any others in any other educational setting.

The regimented way in which children are positioned, dressed and instructed to behave belies any sense to isolate and bring to the fore, their individuality. This standardising process underpins the act of the school photograph, presenting a public image of educational stability to those who are ‘outside’ of this particular system, ‘outside’ of the frame – parents of the children themselves whose access to the actual school setting is beyond that which is permitted without prior arrangement. The ‘visibility’ of the school photograph therefore, lies at the border between the home of these children

\textsuperscript{91} Of course the photograph does not exhibit many aspects of physical, or psychological states of being but my focus here is hearing impairments.
and the educational setting and this border is represented visually through the frame of the photograph - the frame of the photograph is therefore, far from inconsequential!

The 68 years that have intervened between the two school photographs presented here (fig. 8 & 9) is recognisable perhaps to the viewer through the evident surface quality of the images.

Figure 8: The first School Photograph 1948. (School Archives) Anonymised in line with GDPR

Figure 9: School Photograph 2016. (School Archives). Anonymised in line with GDPR

It is likely that fig. 8 was produced through a mechanical and chemical process that may well have been the result of engaging a professional
photographer. The compositional aspects suggest it was constructed with an intent reflective of someone who had acquired a knowledge of that demanded by the evolving genre. Whilst the rise of inexpensive cameras was reflected in the continuing rise of what was to be termed, the amateur photographer and cinematographer\textsuperscript{92}, I would suggest that the school photograph was deemed too important an event to be left to the sole responsibility of someone deemed to be an amateur.\textsuperscript{93} As with the more recent school photograph, (Fig. 9) to produce an image that has such visual clarity, demanded the ‘expertise’ of a professional photographer - one who arrived with a range of impressive equipment that sealed the authenticity and importance of the act of photographing the event – I know, because as regards the latter image, I was there! Children were arranged by their height to ensure a compositional symmetry in the resulting image. Staff were also arranged by height with the exception of those deemed to be of importance and these individuals took central positions on the front row. In all, the construction of the image was complete before the shutter was pressed because established photographic conventions of the school photograph were adhered to, resulting in an image that is so tightly framed and composed that it is possibly recognisable to all those that have been ‘schooled’ in the UK and in some cases beyond. The apparent visual-based process of constructing the school photograph that I describe reflects an established discourse that permits such a description but at the same time reminds me of the impossibility of writing from a position other than with visual based-terminology.

What is the function of the school photograph in this particular setting? First and foremost, I would suggest it is a document, a piece of evidence of an event that took place at a particular moment in time. This moment in time

\textsuperscript{92} According to John Tagg, George Eastman brought the camera to the masses in 1888. Although they would have been capable of pressing the button, they did not then possess the means to let Kodak do the rest. At least in the UK, working class families did not move decisively behind the camera until the 1950’s and 60’s.

\textsuperscript{93} The process of constructing a school photograph is one of course that does indeed engage with my senses other than vision. It is a process which first and foremost engages with touch through bringing me in close physical proximity with my colleagues and with children as we jostle into our designated positions. This is evident in the resulting school photograph where it is visually apparent that there is little distance between those individuals within the image.
however, (fig. 9) is one that is recorded by the year in which the photograph was created rather than more specifically by date and time. In what ways is this significant? There is an assumption perhaps that those individual’s within the frame do not change in a sense of who they are, their sense of being throughout a given year - to specify a particular time therefore, would be irrelevant within the discourse. The static image, constructed as such further reflects common-sense assumptions that a reality can be captured through the photographic apparatus and the resulting image be reflective of a particular time but not be constrained by that time. It is through a more general naming convention that this open sense of time is proposed but it does enable the photograph to sit in relation to other school photographs from the past and to those that have yet to be taken. The date on the more recent photograph (Fig.9) acts as a reference point for those who might return to the school and want to locate themselves within the image. Once printed the image is judged by all those who were part of the event and is scrutinized by those in charge for evidence of inappropriate behavior by any of the children – behavioral gestures that are deemed evidently to ruin the ‘look’ of the photograph, potentially having a negative impact on the ‘image’ of the school in addition to the costs incurred by having to re-stage such an event. In this context, the school photograph can perform both as a piece of data (something that can be read) and as an aesthetic artefact (something that can be felt).

Whilst I attempt to depart from a vision-based engagement with the school photograph, I have to be complicit with the dominant discourse. In order to be seen, the sensory modality of vision must surely be engaged. So whilst I attempt to escape the confines of vision, I am continually brought back to that which insists that I interact with the image and the surroundings through this sensory modality.

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94 There is an assumption that ‘beings’ change from year to year, implying that identity is somehow static, represented in the visual representation of the school photograph.

95 Bergson on clock time and psychological time.

for the ability to see oneself through vision? Through this modality, I can scour the image for evidence that I was there. I can scour the image for evidence that the children were present and that my colleagues were there. Without doubt, this is a document that provides conclusive ‘evidence’, that the event, the performance, took place at a particular time in history and that the experience can be relived through accessing the image through the sensory modality of vision. My capacity to ‘see as’ however is perhaps more complicated than a simple visual substitution of the image for its referent or relational acceptance of the indexicality of the image. For some (Scruton, 1981) it is not simply a question of being able to see x as y but seeing x as y without believing or being tempted to believe that x is y. In ‘The Ontology of the Photographic Image,’ Andre Bazin (1945) interrogates the very foundations of the premise that representations grant us the experience of a presence in the place of an absence. For Bazin, ‘the photographic image is the object itself.’ (p.14) The depictions of photography which emphasise indexicality appear to be common to photography, framing photographs as something that can be ‘read’, in the traditional sense. The relation of the photograph to legibility is an important one. However, we cannot assume that the skills that are deemed necessary to read text-based content and the inherent problems defined for the hearing-impaired child, can simply be transferred to reading images. It is becoming clear however, that within a text and oral based society, such assumptions are deeply embedded.

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97 I am reminded of Deleuze and Guttari’s concept of the Fold...Whist I attempt philosophically to escape a vision centred scenario, I constantly brought back into the fold.

98 For Susan Sontag, the photograph is “not only an image (as a painting is an image), an interpretation of the real; it is also a trace, something directly stenciled off the real, like a footprint or a death mask” (1975, 154-155). Arnheim, R. (1974) ‘On the Nature of Photography’. Critical Inquiry, 1 (1), pp. 149-161. explains photography as: “the physical objects themselves print their image by means of the optical and chemical action of light” (p.155)

99 If hearing-impaired children are deemed to be language delayed, is it possible for that which guides or restricts a child’s ability to photograph, outside of that which is deemed acceptable by the educational fraternity, be restricted by their competence in English in its written and spoken form? In other words, is to have an ability in photography (in relation to the assessment criteria imposed by examination boards) related to the level of language that a child is perceived to have and by default by their level of hearing impairment.
In my reading of the school photograph, I see the visible presence of a particular group of children and staff and whilst their actual absence is not consciously, or discursively acknowledged, few would believe perhaps, that ‘x’ is actually ‘y’. ¹⁰⁰ My eyes however, persuade me that something/ someone is present within the image, within the frame of the photograph because if this something, this someone is not in the image, then where else can it be? I would agree to some extent with Kendall Walton’s (1984b) conclusions that ‘we’ literally, if indirectly, see through photographs to what they are photographs of¹⁰¹ – in essence, to what they represent. As Estelle Jussim (1974) states:

‘The photograph unquestionably stood for the thing itself. It was not viewed as a message about reality, but as reality itself, somehow magically compressed and flattened onto the printed page, but, nevertheless, equivalent to, rather than symbolic of, three dimensional reality.’ (Jussim, 1974, p.289)

Leaving aside the assumptions that belie the all-encompassing ‘we’ for the moment and substituting it for ‘me’ as a teacher of Photography and Media Studies, I am required to suspend my disbelief in such an engagement. I am required to put aside the materiality of the photograph itself - that which is literally placed between myself and the reality to which Walton refers. It is only then that I can accept a proximity of that seen in the image with that seen in reality. Even when/if I do so, I am still conscious of a ‘fact’ - that before me is an image manifested in its materiality on the paper that seems to hold this content.¹⁰² The image requires of me to be able to ‘read’ these contents so I would demand some visual clarity in the objects that are framed. If I am not able to ‘read’ the image, perhaps because the elements that make up this image are

¹⁰¹ See: Walton, K. L. (1984b) ‘Transparent Pictures: On the Nature of Photographic Realism’. Critical Inquiry, 11 (2), pp. 246-277. Kendall proposes that when looking at a photograph, we have the illusion of being in the presence of that portrayed – this is something quite different to seeing through a photograph to what it represents.
¹⁰² I am making a separation here between the context of the photograph, its materiality and an image – the content that it carries. See Edwards, E. & Hart, J. (2004) Photographs objects histories : on the materiality of images. London: London : Routledge. Edwards states that meaning is derived from a symbiotic relationship of these three areas. (p.189)
out of focus or just simply do not have the clarity I need to be able see them clearly, then I may begin to question the photographs validity and perhaps its usefulness within the discourse of vision that it is situated.

Nevertheless, both these propositions are problematic. The prospect of suspending my disbelief has long past and my ability to enjoy the photographic image on a recreational level is marred by a self-perpetuating insistence that it must be brought to analysis. I am too aware of the materiality of the photograph itself, of the paper that carries the image and the proposition that the image and its referent are one of the same, challenges common-sense assumptions. Indeed, it is curious that despite such a stance, the photographic image is used as if, to some extent, this was the case and dictates its use in social, industrial, political and educational contexts. As Flusser (1984) reminds me, perhaps because I believe it, I think I see it. As a result, such assumptions have been crucial to an organising principle that the photographic image is constructed to supply an unquestioned authenticity.103

My reliance on my vision or a sensory type of looking that defaults to vision leaves many gaps in my knowledge - my knowledge is never settled through vision alone. However, an acceptance that knowing rather than to know, is processual – I enter a different kind of relationship with the school photograph.

My perception, my interpretation, my visuality is culturally coded - my eyes therefore are merely the gateway to my perception - that which lies somewhere outside of what biology dictates I can see. My eyes appear to know nothing but the school photograph is literally looking back at me and has a kind of agency itself - it seems to know something. As Brian Massumi (1995) reminds me:

‘approaches to the image in its relation to language are incomplete if they operate only on the semantic or semiotic level, however that level is defined (linguistically, logically, narratologically, ideologically, or all of

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these combinations, as a Symbolic). What they lose, precisely, is the event—in favour of structure’ (p.87)

My Eyes Appear to Know - Nothing

Figure 10: School Photograph 1970 (School Archives) Anonymised in line with GDPR

‘The majority of photographers focus on the obvious. They believe and accept what their eyes tell them, and yet eyes know nothing.’

(Michals, 1992)

Duane Michal’s may well be right in his assertion that the eyes know nothing, after all, the eyes surely do not have the capacity to know! Seeing through my eyes foregrounds a biological process that has been well documented by a number of scholars throughout history (Gregory, 1990) and evidenced in more contemporary times.

‘Vision begins with light passing through the cornea and the lens, which combine to produce a clear image of the visual world on a sheet of photoreceptors called the retina. As in a camera, the image on the retina is reversed: Objects above the center project to the lower part and vice versa. The information from the retina — in the form of electrical signals — is sent via the optic nerve to other parts of the brain, which ultimately process the image and allow us to see.’ (Neuroscience, 2012)

104 changing theories over time from a scientific basis and will continue to change
105 For an engaging and accessible text on the biology of vision, see An Introduction to the Biology of Vision by McIlwain, James T, Cambridge University Press (28 Nov. 1996)
However, what I perceive, seems to be something different – something that cannot be so easily explained in words. It seems that somehow, I do not have the words that justifiably reflect that which I perceive. Perhaps I could explain this dichotomy through suggesting that vision seems to act in a linear manner from the objects that are in front of me, to my eyes and as pathological explanations dictate, through to my brain that receives their impression from the light reflected. My perception however, seems to occur in a non-linear manner, cutting across that which I perceive and engaging with all my senses and with the materiality of photography – it’s a much more messy or entangled (Barad, 2007) process. Vision and perception are sometimes used interchangeably or in some instances conjoined as Visual Perception, (Bremner & Wachs, 2010) but they seem to me to be quite different things.

If I accept that my vision is simply reflective of a biological, pathological process, I can conveniently (as others have) make a comparison with the functions of a camera and the mechanical or digital processes that render an image viewable. This is a popular analogy found in photographic manuals and instruction books that emphasise the technology of seeing and its relation to a biological notion of vision. (Langford, 2000) It is a process that is also evident in educational manuals that frame that which is to be taught as a process of learning through vision. For others however, it is precisely the non-camera like features of this process that are the most interesting. Richard L Gregory (1990) is one such author who debunks the approach to ‘seeing’ that posits a relation between a process of mechanical ‘seeing’, the functions of the camera,

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106 Ramachandran, V. S. (1999) *Phantoms in the brain: human nature and the architecture of the mind.* ed. Blakeslee, S., London: London : Fourth Estate. may have found it difficult to find the words to describe ‘pure vision’ for instance, but his scientific musings and the testing of theories of vision and perception were seamlessly embraced by an orthodox scientific community whose shared rationality defied critical objection.

107 Far less prevalent in discourse are term such as aural perception, taste perception or touch perception.


and that of biological ‘seeing’ - as little more than a convenient analogy aligned with common-sense assumptions that unite the two. Nevertheless, the assumed passivity of ‘vision’ as described in biological and scientific accounts of seeing, can perhaps be conveniently applied to a passivity of the camera. However, it has been well documented that such passivity, premised on a notion of the mechanical ‘objective eye’, is discursively constructed. It is a discourse that is powerful and underpins educational belief systems such as that which circulates the hearing-impaired child. Whilst my vision therefore allows me to see, in this case the school photographs that I present throughout this thesis, and that this is replicated in the mechanical ‘seeing’ of the camera through which the photographs were taken, it is my perception that shapes that experience into something that is beyond what the biological (the eye) and mechanical/digital (camera) functions of ‘seeing’ can provide. What I perceive is dependent on a whole range of factors that influence not just what (in this case the school photograph) I see but how I see (the school photograph). Some (Foster, 1988) have coined the term ‘visuality’ - in which vision - ‘how we see, how we are able to see, allowed, or made to see’ (p.ix) \(^\text{110}\) is socially constructed. My seeing therefore, is guided by a discursive\(^\text{111}\) system of which I am entwined as a teacher and the hearing-impaired children entwined as learners, as visual learners. Of course, such ruminations are not new and have been summarized succinctly by Raymond Williams (1961):

> ‘We know now that we literally create the world we see, and that this human creation—a discovery of how we can live in the material world we inhabit—is necessarily dynamic and active .... Reality, in our terms, is that which human beings make common, by work or language. Thus, in the very acts of perception and communication, this practical interaction of what is personally seen, interpreted and organized and what can be socially recognized, known and formed is richly and subtly manifested’ (p.314-315)

\(^\text{110}\) Vision is what the human eye is physiologically capable of seeing. Visuality, on the other hand, refers to how vision is constructed in various ways:

\(^\text{111}\) There are several discursive systems that weave throughout this context.
If that which is seen is something that is literally modelled into a shape, then in what ways did photography contribute to this shaping or sculpting\textsuperscript{112} of that reality. In the context of this thesis, in what ways has this shaped both a concept of childhood and in particular, a concept of the hearing-impaired child as a visual learner?

It is no coincidence perhaps that photography\textsuperscript{113} emerged in an era more broadly known as the enlightenment,\textsuperscript{114} that reflected a desire to organize a society in line with an emerging positivist outlook - described by some as:

‘an emerging world order that was based on a scientific method rather than religion; on representational democracy rather than autocracy and market economy rather than bartering – a turn toward reason, logic and rationality.’ (Rubenstein, 2015)

As the product of a mechanical process, the photograph became entangled in systems of organisation and rationality and ultimately as part of a regulatory system that demanded order and stability, underpinning a modernist desire for progress. Whilst acknowledging a mechanical objectivity in photography however, Jennifer Tucker (2005) stresses the urge to combine this with an ‘analysis of the actual processes through which people mobilized and used photographic evidence’ (p.4) It was also a system that was deemed to stigmatise, marginalise particular groups; patients, the poor and those considered to be disabled (Spencer, 2011; Tagg, 2003). In order for photography to take on this role, it was reliant in some respects on a tradition of representation that was itself dependent upon a westernised notion of perspectival organisation of elements within a visual field. The organisation of

\begin{footnotesize}
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\item I use the term photography to cover the act of photographing, making and creating photographs. Image however, refers to a visual object modified on a computer or an imaginary object created on a computer.
\item The Age of Enlightenment was an intellectual and philosophical movement that dominated the world of ideas in Europe during the 17th and 18th centuries.
\end{itemize}
\end{footnotesize}
elements within a visual field reflected a desire to control those elements. However, it is important to ask just how a certain organisation of visual elements within an image, can imply a sense of control over that represented?

‘The convention of perspective... centers everything on the eye of the beholder.... perspective makes the single eye the centre of the visible world. Everything converges on to the eye as to the vanishing point of infinity. The visible world is arranged for the spectator as the universe was once thought to be arranged for God.’ (Berger & British Broadcasting, 1972, p.16)

In line with the rules of perspectival organisation, developed through the renaissance period, that centred the world from the eye of the beholder, (also evident in other visual technologies of ‘looking’ such as the camera obscura115 and in disciplinary terms, Jeremy Bentham’s panoptican116), the photographic image represented an implied distance between the subject (those that were able to have control of the photographic machinery) and those that were to be photographed, organized and controlled (the objects). It was a system that was to reflect an enlightenment thinking of distance, objectivity and rationality but also implied a power differential uniting that seen with that referenced, a kind of knowledge and power over that represented.117 As Sontag (1979) succinctly illustrated:

‘In one version of its utility, the camera record incriminates. Starting with their use by the Paris police in the murderous roundup of Communards in June 1871, photographs became a useful tool of modern states in the surveillance and control of their increasingly mobile populations.’ (p.3)

In addition, it was a movement embraced by a scientific community in pursuit of a ‘truth’ that previous religious doctrine was not able to provide.

115 In scientific circles, the camera obscura has long been associated with the way the eye sees. Although focusing on The Window in relation to Vision, Anne Friedberg provides an accessible summary in The Virtual Window (Cambridge MA: MIT Press, 2006)
116 See: https://www.ucl.ac.uk/bentham-project/who-was-jeremy-bentham/panopticon.
117 The assumption however, that the photograph was as a ‘neutral mirror of reality’ in Victorian Britain is questioned by Jennifer Tucker Tucker, J. (2005) Nature exposed. Photography as eyewitness in Victorian science. Johns Hopkins University Press. in her book, Nature exposed. Photography as eyewitness in Victorian science, who subsequently embarks on a quest to establish how photography became to be ‘elevated to the status of evidence’ (p.235)
Distance, objectivity in this sense was to provide ‘a’ truth and the photographic apparatus was itself entangled with this process.

The notion of an indexical (Bazin, 1960) relationship between the photograph and its referent further underpinned a discourse (Foucault, 1974), of the photographic image as a document. Photographs were bestowed with a truth, a status of objectivity that reflected the social and political shifts of the enlightenment agenda, serving the needs of the political elite in their efforts to modernise society.\(^{118}\) (Tagg, 1993) The emerging photographic technology and the subsequent photographs that were produced were reliant on a particular type of looking that was essentially vision-based.

‘All the management of our lives depends on the senses, and since that of sight is the most comprehensive and the noblest of these, there is no doubt that the inventions which serve to augment its power are among the most useful that there can be.’ (Descartes & Olscamp, 1965, p.65)

However, as John Tagg (1993) has pointed out,

‘what makes a photograph real is the fact that the photograph is more than merely print and paper ... what is real is not just the material item, but also the discursive system of which the image bears its part’. (p.4)

This modernisation entailed systems of organisation across a variety of institutions and in relation to this thesis, to the organisation and what I would call, the shaping of children\(^{119}\), childhood, schools and the subsequent notion of schooling.\(^{120}\) The extent to which such is evident in the school photograph will be subject to further discussion in due course.

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\(^{118}\) The assumption that the photograph was as a ‘neutral mirror of reality’ in Victorian Britain is questioned by Jennifer Tucker Ibid. in her book, *Nature exposed. Photography as eyewitness in Victorian science*, who subsequently embarks on a quest to establish how photography became to be ‘elevated to the status of evidence’ (p.235)

\(^{119}\) A discourse that has framed the hearing-impaired child as a visual learner may itself be simply the result of an ideological imperative that is reflective of an enlightenment thinking. It is a term however, that has been placed upon the hearing-impaired child; it is placed on the body as if it is almost a concept that can be built into the body without any rejection. The extent to which the body comes unknowingly to accept or reject this term is unclear.

\(^{120}\) The concept of ‘looking’ though the ‘mechanical retina’ was deemed to make visible what was previously invisible to the eye\(^{120}\) and for some artists\(^{120}\) would become central to new ways of seeing the world, altering the way that that reality was ‘seen’.
The competing historical discourses surrounding vision and the colonisation of what some (Jay, 1993) have described as various forms of the ‘gaze’, under a common-sense notion of vision, further cemented a relation between seeing (looking) and knowing (knowledge). The act of seeing, based on a visual conception of looking therefore, enabled a form of control by those in power upon those that were positioned as subordinates. If looking through a lens, implies that someone or something is looked ‘at’ then it follows perhaps that there is a differential between those that have the power to look over those that are positioned to be looked at, in need of control and in the context of this thesis, in need of being educated.

‘To photograph is to appropriate the thing photographed. It means putting oneself into a certain relation to the world that feels like knowledge-and, therefore, like power.’ (Sontag, 1979, p.2)

Thus far, my discussion has implied that school photographs are made to be looked at – that they represent the ‘other’. Such an opinion however, negates to some extent the possibilities that the child, the adults within such photographs might look back at the viewer in what becomes an exchange of looking. This looking back, if it is conceptually embraced could challenge the dominant photographic discourse that situates the child as powerless and in a somewhat vulnerable state that easily succumbs to being controlled. For Jean Paul Satre, (1958) the Gaze, to be looked at, was a battleground for the self to define and redefine itself. For Satre, the gaze of the ‘other’, objectifies and is outside of the control of the subject. In this scenario, the objectified is powerless to respond - that the thing represented is completely distinct and

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121 My recent research revealed 30 synonyms for Gaze. It is curious as to why this term became a standard in art criticism. See https://www.thesaurus.com/browse/gaze

122 Whilst the fields of science may seem central to such a discussion, the gaze operated in other ‘fields’ of investigation. Judith Adler (1989) examines tourism and argues that, between 1600 and 1800, the travel of European elites was defined increasingly as a visual practice, based first on ‘an overarching scientific ideology that cast even the most humble tourists as part of ... the impartial survey of all creation’ (Adler 1989: 24), and later on a particular appreciation of spectacular visual and artistic beauty. John Urry (1990) has sketched the outline of a rather different ‘tourist gaze’ which he argues is typical of the mass tourism of the nineteenth and seventeenth centuries (see also Pratt 1992).
independent from the mechanism of representation. (Barad, 2007) In this context, the objectification of the look, of the gaze relinquishes a sense of freedom for those represented. If the power was invested in the look over that to be looked at, \(^{123}\) then it might be reasonable to suggest that this looking further shaped a notion of childhood, children and that of schooling itself. It also perhaps shaped a notion of what it was to be a hearing-impaired child influencing the scientific methodologies employed both to define and address a ‘loss’ of hearing. In constructing a scientific based knowledge about a hearing-impairment and those defined to be hearing-impaired, a specificity of pedagogic practice could be legitimately enabled. The negation of other possibilities through which to know, other than through the sensory modalities of hearing and vision were pushed to and remain \(^{124}\) at the periphery of acceptability. The system cannot necessarily accept any other ways of knowing, knowing.

There is a tension emerging through my discussion over an ownership of the sense of looking, of the power relations that emerge from a notion of looking. The hearing-impaired child is looked at through a variety of visual based methods that construct the child as one who is in need, but the opportunities to look back, (beyond that defined in the school photograph) the relevance of looking back that might challenge the dominant look are perhaps more minimal.

I believe that the school photograph is a site where such tensions are present and I will proceed therefore, to interrogate a notion of ‘looking’, of vision and of the child as a visual learner through a further analysis of the school photograph. In doing so, I am tentatively moving towards a broader concept of looking however, of vision and attempting to sideline its central role in shaping an educational discourse for the hearing-impaired child. I do so through an analysis of the school photograph, but this is somewhat an uphill struggle as I challenge a dominant mode of reading images which itself is reliant on a vision-based engagement. As common-sense might follow, it is through this process of

\(^{123}\) I am considering children in this respect to be the ‘objects’ who are subjected to a scientific rationality.

\(^{124}\) I refer for now to a specific educational context for the hearing-impaired child - one that whose educational methodology is based on listening and speaking.
looking, that I am engaged in ‘reading’ (Barthes, 1967) the photographic contents and common-sense further informs me that this process is reliant on my vision. With this cyclical process in mind with which I will subsequently engage, I take a step-back and move to discuss the construction of childhood through photographic representations prior to that evident in the school photograph. I do so in an attempt to uncover in a Foucauldian (1974) sense, the impact that such constructed representations had on shaping the school photograph and the hearing-impaired bodies within.

**Shaping Bodies/ Reading Bodies**

I propose that hearing-impaired bodies are contained by the frame of the school photograph. This is perhaps obvious to see but to what extent does this frame provide another function, that of taming the content, those bodies within the frame so that they perform in a manner that is reflective of the dominant discourse. Such a notion is both in line with pathological explanations but concurrently, appears to resist such pathology, suggesting that such a notion is discursively constructed and metaphorically placed upon the child which unknowingly is absorbed by their bodies. Through this process, their disability, framed as such is tamed and brought under the scrutiny of vision by an outside system, whilst diminishing their sense of vision from the inside. Can the print-based school photograph with the bodies that look back, actually reflect on the viewer and shape their body, their vision in a mutual exchange? This could potentially challenge the unequal power relations between the viewer of the school photograph and those viewed. The taming of that perceived as a disability is perhaps more of a taming of vision but those that seem to hold the power in this visionary exchange are themselves tamed through the process.

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125 I use the term ‘reading’ in the sense of being able to understand images through a structuralist approach to reading their contents. This approach has dominated the analysis of a range of ‘texts’ in education and still permeates the curriculum for media studies and photography.

There is a conflict between who actually owns this vision and it is perhaps this battleground that has implications for the language modality deemed appropriate for a particular cohort of hearing-impaired children.

In her book, *The Body in Pain: The Making and Unmaking of the World* Elaine Scarry (1987), considers the artefact, or made object, as a ‘projection of the live body that itself reciprocates the live body’ (p. 280). The photographic shaping of the body therefore, is reflective of the dominant discourse within which the bodies reside. This dominant discourse surrounding the hearing-impaired body extends the technological and material that is evident in the processes of photography to the technology that extends the bodies capability (hearing aids and cochlea implants) to hear beyond the body itself. This capability however, is defined by the limits of what the technology permits to be heard. It is a technology that is created by those whose referent is to a perceived ‘normal’ hearing. The technology is crucial in maintaining the hearing-impaired body and framing it through the school photograph. The school photograph may appear a benign repetitive representation of a particular event that occurs periodically but its influence in shaping a particular notion of the hearing-impaired child as a visual learner has significant pedagogic implications.

The notion of being a visual learner is not necessarily a concept that children own but something, I would suggest, that is imposed upon them.127 If this is the case, then it is reasonable for me to suggest that hearing-impaired children learn to perform (Butler, 1990) being hearing-impaired rather than it being something that resides within the body, described in a pathological sense. They learn, to be schooled as visual learners. The technology associated with enabling hearing has a memory perhaps that is built into the technology itself and this memory constructs how the technology will interact with the user and how a particular being might interact with their environment through this technology. The specific effects that this technology might have on the hearing-impaired child’s interaction with photographic imagery is highly nuanced and an

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127 The notion of ‘becoming’ a photographer is perhaps part of this process but it is something that they can have some agency - adopting a particular identity but then demonstrating some resistance through the photographic artefacts they produce.
avenue of research that will be left to a later date. Nevertheless, it is an unacknowledged, potential influence that goes unnoticed because perhaps, hearing is difficult, maybe impossible to see. Whilst the visual representation of hearing through audiograms and other visual based data, undoubtedly shapes my perception of hearing - I still cannot see hearing, in the same way perhaps, that I cannot see seeing. 128

**Shaping a Childhood**

The notion of the child as a construct is evident throughout 19th century literature 129 but also evident through the emerging practice of photography which was influential in shaping a notion of the child and of childhood. This is potentially a very broad topic however so I will limit my investigations initially to the photographic work of Dr Barnardo and Lewis Hine, both of whom I consider having been instrumental in this 19th Century desire.

The photographic work by Dr Barnardo it is acknowledged, was instrumental in transforming notions of childhood through a manipulation of the photographic apparatus. The way in which a sense of control over the subject could be achieved through photographic practice, however, is open to critical interrogation. How might it be possible for the image in fig 11 to give a sense of control over the contents. In order for this assumption to be scrutinised, I will fall in line with a semiotic based approach to an analysis – reading the contents as if it were a kind of text.

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128 I can of course see the objects of seeing and some of these objects emanate a sound that i can hear through what is deemed medically, pathologically accessible to my range

129 Some notable examples would be Charles Kingsley’s, *The Water Babies*, (1863) and Lewis Carroll’s *Alice’s Adventures in Wonderland*, (1865)
What do my eyes tell me as regards this image? Is there a link between what I see and what I can know? In this image I can recognise that there is a clear structure, carefully framed and positioned children in relation to the camera and an imagined viewer. There appears to be clear compositional rules observed, rules developed from renaissance painting and evidenced in the 19th century visual tableau. Children are placed centrally in a symmetrical composition, two children at the front, inwardly positioned at either side of the image. None of the children appear to be outside of this frame or even touching the side of the frame. There are four children standing in a row in the middle presided over by one child in the background who appears to my vision, to be slightly older than those toward the front of the image. The children in the

Figure 11: Dr Barnardo representation of destitute children. Early 1800s. Permission to reproduce granted by Barnados.org.uk.
middle row are huddled together as if they are providing mutual support. The hands of the children appear to be prominent. There is contact between some of the children made explicit through their touch. The child standing on the right has his arm around the child next to him, his hand visible on the other child’s shoulder. The child standing on the left at the back of the photograph has his left hand on the shoulder of the child in front of him. What is the significance of this ‘touching’ in the photograph which is evident but not limited to the hands? Indeed, this touching is also evident in the bodies of the children who are in contact with each other physically. This proximity is significant in that it is indicative of the children being part of a particular group. They are constructed as members of this group. The background appears to be the fabric of a building that is in a dilapidated state. There is a sense that the positioning of the children in this way is bringing a visual sense of control over their bodies. In what appears to be a highly contrived image with connotations of destitution, this image attempts to appeal to an imaginary viewer through direct address, who in turn might feel a sense of sympathy for those within the frame. There are several other clues that support a reading of destitution. Their clothes appear torn and a lack of shoes on several of the children would further indicate a level of destitution reflective of their constructed need. The facial expressions of individual children is indicative of a psychological state that as a viewer, I am compelled to accept. In what ways does the frame of the photograph, the defined edges of the photograph permit this type of reading? What might exist outside of the frame is irrelevant to the importance of that represented within the frame - the frame is far from redundant. The frame demarcates that which has been brought under control to that which is outside of the frame and yet to be subjected to an organising principle. There is a sense of stillness and an absence of ‘sound’ evoked by the compositional symmetry that seems to dictate a sense of quiet, a sense of calm that is reflective of a static, symmetrical

130 Touching in the school photograph is also significant in that it brings members of the particular community closer together physically and psychologically.
composition. This image has a sense of unreal perfection in the same way that the studio photograph excludes that which is irrelevant through the framing of the subject. In discussing the work of Edgar Martin, David Campany (2006) suggests that ‘Photography is rarely so absolute. The chance that creeps in is what gives it the effect of reality. Deprive a picture of chance and every inch of its surface comes under scrutiny.’ (p.52) As in the school photographs throughout this thesis, there seems to be little that is left to chance in what appears from a contemporary viewing position, as one whose composition is highly organised and contrived.

Figure 12: First Class of Deaf Children, Cecil House 1888. (School Archives)

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131 Is there a sense that some images could be considered to be quiet through their compositional arrangement and others loud - does that require the viewer to listen? See Edgar...


133 This compositional symmetry may have been dictated in part by exposure times needed to fix an image. Visit: https://www.brayebrookobservatory.org/BrayObsWebSite/HOMEPAGE/PHOTO_EXP_CALC_HIST.html for a history of exposure times and these were calculated to produce the ‘best’ photographic image that had visual clarity.
The compositional elements discussed as regards figure 11 are evident in Mary Hare’s first class of school children in figure 12. Indeed, a layering of these two photographs (figures 11 and 12) at 50% transparency resulting in figure 13, confirms their similarity in compositional structuring, indicating a transference of compositional arrangements with connotations of stability.

This organisation of the children (fig 11) as compositional elements within the frame, however is one that appears contrary to the children themselves and their apparent disorganisation. This is represented through their clothes which give the appearance of being tattered and torn and suggest that their economic status is one of need. Is the organisation of the elements within the frame suggestive that this image is about the potentiality of reform, reflective of a positivist agenda. That the children in this image might in some way be reformed through a future change in their clothes? That which might be referenced in the visual, the wearing of another set of clothes may be superficial.
and may mask a depth of social complexity that these children find themselves within. If a change of clothes can affect individual potentiality, then I must ask just how such a change might indicate a change in social, economic status and possibly, a change in the character of the child. (Rose, 2009)

My engagement and understanding of the photograph (fig 12) is not one that can be simply put down to a literal reading of the contents within the frame. Is this because I may have a more personal relationship with the image that goes beyond what a literal reading of this as a text can afford? When I look at the children in this image, I think about what they might become, but also, where they might have come from. In order for me to think of the image in this manner, I have to suspend my belief in the image’s stillness and enter a narrative, a negotiation with the image. Whilst being a still image in the sense that the image is not moving, it is anything but still when it engages with my imagination. It has an affect on my thoughts that is beyond that which a literal reading can provide. Neither is the photograph, necessarily devoid of sound in this context. I am not referring to a physicality of sound, that might emanate from the image itself but the imaginative sounds that it encourages in me as a viewer. Is it possible that such imaginary sounds exist for a viewer who is hearing-impaired and if so how might this affect interactions with the image? I would suggest that an imaginative engagement with sound is necessary if I am to enter a narrative with the image. The narrative that I enter is one that manifests over time – before the photograph was taken, at the time the photograph was taken and after the photograph was taken. This permits a consideration of the photograph as a moving entity, that as a viewer I move with, challenging the assumption that stillness resides within the image. As regards figure 12, It is this engagement that emphasises the photograph as part of a continuum, as part of a history within which I am, as a teacher of the deaf entwined. Even if I wished to do so, it would be difficult for me to dis-entangle myself from this continuum of time. I am viewing this image in the now - but the then, that I view in the contents of the image, clashes with this now but this clash creates a meaning that is not evident in the image itself. The meanings are somehow beyond or outside of the image itself or outside of the frame that
contains the contents of the image. What is evoked from this encounter is a kind of memory but this memory does not belong to me, so how do I embody this memory as if it is my own but at the same time, recognise that it is not part of me. Can this memory be embodied in the same way by someone who is hearing-impaired if, as it might be assumed, this cohort are not able to access the sounds associated with a visual image, through that which pathological (Chadha, Chadha & James, 2009) descriptions of hearing dictate?

I might try to separate out what I see through my modality of vision to that which I perceive when I engage with a different non-visual conception of looking. I find it difficult to disrupt a visual-based concept of looking however, but that problematic becomes less so if I start to loosen the hold that the representational quality that photography appears to have on my vision. I see that which I am looking at as separate from me, as something that is represented as different and apart from me. However, attempting to look across an image rather than at an image engages me in a different kind of seeing and one that is less reliant on a traditional form of westernised vision.

Thus far I have considered the child in the school photograph as an object to be looked at and manipulated through the photographic apparatus - but I have already suggested the possibility that the child also looks back in these photographs. If a child’s hearing-impairment is deemed to have positive ramifications for their vision, (Codina et al., 2011a) then perhaps, this ‘looking back’ is somehow different from that which is present in the school photograph of those deemed to have their hearing intact. As already suggested, the generic conventions presented in the school photograph appear to be evident in such representations across numerous school institutions134 but to assume that the sense of looking back at the viewer is somehow the same across these photographs is perhaps to overlook the nuances of a vision based engagement – across cultures and differing historical contexts. The purpose of the school photograph does not require such contemplative viewing across the surface however, but rather a superficial engagement that confirms individual and

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134 See appendix R for a range of school photographs from different educational institutions.
group identities. Whilst my vision seems lacking, restrictive and limiting to my engagement, it is the gateway to an imaginative engagement that exists on a different level, a different plane of meaning that my vision cannot provide.

Thus far, my considerations of childhood constructions have been devoid of the historical context within which such images were produced and how such a context impacts on my interpretation. Of course, my looking is always from a contemporary standpoint and my vision is shaped by this context. My ruminations should always be met with caution as I attempt to ‘enter’ the work of Lewis Hine and his photographic treatment of childhood.

‘If I could tell the story in words, I wouldn’t need to lug around a camera.’

*Lewis Hine (1874 – 1940)*

The photographs by Lewis Hine in figures 14 and 15 were produced for the National Child Labour committee in America between the years 1908 and 1912. Lewis Hine documented the plight of children and through this, he was perhaps able to use the mediums emerging capacity to make visible that which was ideologically and discursively constructed to be invisible. It is difficult to deny that to some extent this was achieved through an implied indexicality of photography, which exposed the child labour that was evident in America during this period. The subjects of the photographs, the girls in figures 14 and 15 seem to be constructed as objects of contemplation for the viewer. There is no evident looking back at the viewer who is therefore not challenged. These subjects are constructed to be looked at, overshadowing any possibility that they could be listened to. Where perhaps, I can see the machinery in figure 14

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135 This series consists of black-and-white photographic prints given to the Children’s Bureau by the National Child Labour Committee. The almost five hundred photographs represent a fraction of the approximately 5,000 photographs Hine took for the committee to document working and living conditions for children. Pictured are children engaged in a variety of industries located in the Southern, Middle Atlantic, and North Eastern United States. Included are images of children working as harvesters in agricultural field work; pickers in seafood, vegetable, and fruit canneries; workers in cotton mills, and glass, furniture, and cigar factories; and as peddlers and newspaper sellers in street trades. In addition, there are photographs of “breaker boys” in the coal mines and children working in homework occupations, such as artificial flower arranging. Access available at: https://catalog.archives.gov/id/523064
and I can see a girl in the foreground who is looking at the machinery, I cannot hear the machinery in the way that the girl might be hearing the machinery. As a viewer, I cannot experience the contents of the photograph through other sensory modalities that might be engaged by the other – by the girl represented in the photograph. Of course, I am assuming that the girl in figure 14 can hear, that her hearing is intact, but this information cannot be disclosed by an image that foregrounds the visual through vision. Perhaps if this girl cannot hear in a traditional sense and by that, I mean through the bodily mechanisms of hearing, then perhaps there is a possibility that she can hear through her body – through bone conduction that bypasses the eardrums. Her body is in contact with the floor and with aspects of the machinery that she is touching. The vibrations from the machinery transmit through the bones to the cochlea. (assuming that is intact) Why is the image not able to transmit these sounds in the way that it transmits visuals? The frame contains the visuals but it also contains the sounds. Whilst the visual aspect of the image is able to escape the frame, the sounds cannot, so in order for the viewer to experience such sounds, the viewer has to ‘enter’ the photograph. Through ‘entering’ the photograph, I can activate my imaginative engagement but this is dependent upon my familiarity of the sounds that might have been present at the time. What contribution does sound have upon my interpretation of such images and if I do not have the sensory modality of hearing, is this an impediment to my ability to ‘enter’ the image?

It is possible that such ruminations were not considered by Hine whose attention to the visuals overrides other possibilities of engagement.
Whilst such an emancipatory effect may have been evident in the context that these images were produced and subsequently placed, the photographer stood in relation to those he photographed, the children and whilst clearly attempting to give a ‘voice’ to those that were denied any access to systems of representation themselves, Hine was himself entangled in a system of power that was responsible for silencing these individuals in the first place. If we accept Judith Butler’s (1990) assertion, that ‘the subject turns out to be discursively constituted by the very political system that is supposed to facilitate its emancipation’ (p.4) the notion of an emancipatory effect might seem somewhat illusory. However, perhaps a fact remains that such photographs were instrumental in ensuring that children were no longer used as

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136 The discourse within which the images are placed is what gives them meaning.
137 Judith Butlers comments are in relation to the construction of a feminine identity which she argued was created by men for men within an existing patriarchal power system. In her book, ‘Gender Trouble’ (1990) she argued for a reconceptualisation of the category of ‘woman’.
cheap labour in situations that were detrimental to their health and well-being. In a contemporary context, those that are involved in the education of hearing-impaired children are themselves entangled in a process of benevolent activities, of ‘doing good’ onto the children who are in their care. The current conceptualisation of the Deaf/ deaf child dictates them to be in need – in need of a particular type of intervention that reinforces their discursively constructed position as being visual learners. To be emancipated from this position is to recognise that such ‘is produced and constrained by the very structures of power through which emancipation is sought’ (p.5) This is perhaps a side issue to which I shall return, but for now I will resume my analysis of the images produced by Lewis Hine and consider their architectural compositional arrangements and the possibility that the process of photography contributed to a form of control over that photographed. Figure 14 represents a girl centrally framed, in a symmetrical composition that dictates a kind of stability within the image. The

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138 There is a power differential still evident however, despite the rhetoric that might suggest otherwise. The element of control evident from the relationship of the photographer to that photographed mirrors to some extent, the relationship of adults, teachers and support staff to those who are in their care.
girl seemingly unaware that she is being photographed\textsuperscript{139} is disengaged with any imaginary viewer for whom she becomes an object of contemplation. It is not only the photographer who created the image who sustains a distance between themselves and that (in this case the girl) photographed but the viewer is also placed at a distance from that viewed in the photograph that might feel like they also have a certain power over that represented in the image. This despite the historical difference in time between when the photograph was taken and the viewing of such within this thesis. These compositional elements, the structure of the image itself and how different elements are framed enables a kind of psychological control over that photographed but it is a kind of psychological control that had real effects.

\textsuperscript{139} It is likely that the girl had no concept of what it was ‘to be photographed’. The compositional framing of the image was a reflection of the photographer’s ability to manipulate the technology.
In contrast, we could suggest that there is some resistance to being looked at in figure 16 and that this looking back disrupts the binary of looking and being looked at much in the same way as Foucault’s analysis of the function of the gaze in ‘Las Meninas’ (1656) disrupts the gaze of the spectator and the gaze of the painting. For Foucault, the spectator becomes part of an exchange in which, ‘observer and the observed take part in a ceaseless exchange. No gaze is stable...subject and object, spectator and model reverse their roles into infinity.’ (Foucault, 1989, p.5). If we accept Foucault’s assertion, then it becomes difficult to know exactly who is gazing at who in these exchanges and does not necessarily imply that there is a resistance on either side of this engagement. Lacan (1978) would consider the gaze to be ‘not the vehicle through which the subject masters the object, but a point in the Other that resists the mastery of vision.’ (p.10) There is therefore a sense that the children within this image have an agency that is expressed in their gaze. This gaze does not directly confront the viewer however as it appears to be directed beyond the frame to the right. What drew their attention? The shadow cast from the child on the right might suggest that it was the flash of light associated with taking the photograph that arrested their vision. I can ascertain this position from what I see in the image. It may have been a sound of machinery performed outside of the frame – this I cannot see – the sounds are not visible in the image but the possibility that such can be present is dependent upon my ability to hear. My ability to hear these sounds is perhaps dependent on my auditory experience that I bring to my reading of the image.

Where is this gaze to be located in the school photograph? It is a reciprocal gaze between a viewer and the subject viewed, and the subject viewed and the viewer. The site of the gaze is complicated. The temptation is to think of such representations as innocent reflections of a reality and one that

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140 Lacan refers to the painting by Holbein ‘The Ambassadors,’ and suggests that depending on the position of the spectator, the distorted figure in the front of the painting becomes the figure of a skull. Lacan sees this to be the point in the painting at which the object looks back at the spectator and invites a kind of participation.

is devoid of any agency on behalf of that viewed. Whilst the photographic work
of Lewis Hine presented here could also be viewed in the same vein, such denies
an agency of the children represented who may have been complicit in their
own representations, knowing that such a representation might in some senses,
improve their plight.

However, as Stuart Hall (1997) reminds me:

“Representations sometimes call our very identities into question. We
struggle over them because they matter - and these are contests from
which serious consequences can flow. They define what is ‘normal’, who
belongs and therefore, who is excluded.” (p.10)

Whilst making some ‘things’ some ‘people’ and in the context of this
thesis, some ‘children’ visible and enabling a submission to a form of control,
(but also enabling the agency of those represented) the process of photography
could also render some ‘things’, some ‘people’, some ‘children’ invisible. If to
photograph is an act of choice, (Berger & British Broadcasting, 1972) then the
photographer, in this case Lewis Hine, chose where to point the camera and
what to include within the frame and consequently, what to exclude from the
frame. I am not suggesting that this was a conscious decision however but if not
then what was driving such framing considerations and what were the
implications for the viewer?

‘A specific visuality will make certain things visible in particular ways, and
other things unseeable, for example, and subjects will be produced and act
within that field of vision’ (Rose, 2007, p.143)

I once again refer to the frame of the photograph in delineating that
deemed important to the intended meaning of the image and that deemed to
be irrelevant to the political message. It is a process therefore that by default,
something, someone is excluded by the frame of the camera and consequently
by the frame of the photograph. That which lies outside of the frame is
discarded by the frame itself, and as a result is deemed to be irrelevant by virtue of being ‘outside’. 

I refer to those children who may have been marginalised as a result of a perceived impairment that rendered them as somehow ‘different’ and within a modernist context, as less productive to what was discursively and ideologically constructed as the norm. A new language was needed to embrace the ‘other’ including those that were deemed to be hearing-impaired because only through a discursively constructed notion of hearing as an impairment, could this ‘other’ be understood and appropriately intervened. The medicalisation of deafness (Carpenter, 2010) reflected this desire to control, to know about the ‘other’. As the senses were thought by some, John Locke (1632–1704), to be the basis of reasoning, deafness and blindness became philosophical problems for those who tried to understand how a sensorially disabled person was able to reason and develop ideas. There was some evidence that the desire to control a population of deaf people was resisted by some and the plight of Jane Groom (herself deaf) in the 18th Century with her attempts to re-colonise a group of deaf people to Canada is one such example. Nevertheless, following the 1834 Poor Law Amendment Act, Deaf people increasingly became objectified, as did those who were considered blind as members of a ‘deserving poor’ (Atherton, 2011, p.25) It might be reasonable to suggest that Dr Barnardo, in the 19th Century sought to address what he saw as being the ‘deserving poor’ and embraced Photography to aid the plight of children who were deemed to be outside of that considered as acceptable to society. A process of the ‘taming

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142 The concept of framing is crucial here. Does the framing of a concept of hearing-impairment, delineate a boundary of knowledge that I will forever be ‘outside’ of, and never be within the frame. 
143 This invisibility or silence according to Friere (1970) is a feature of groups of people who are oppressed. 
145 The problem may have principally been one of economics. In an industrial society where people were judged by their ability to be productive, disabilities as framed so would be considered as peripheral.
of disability’ (Verstraete, 2005) was emerging, reflective of the setting up of schools for the deaf and blind.

In figures 17, A & B, the frame dictates that which is deemed to be of importance. These images are intriguing and explicit in their careful framing of the subject. There is certainly information that I can ‘read’ from the images, evident within the frame but then there is also information that cannot be contained within the frame itself. Whilst both A & B purport to represent some form of impairment which is visually apparent in both images, it is figure A that cannot disclose that this child has a hearing-impairment. This information is only present in the accompanying text\textsuperscript{146} that provides this detail. The text is supplementing the visual and providing information that the visual does not seem to be able to provide. This textual information seems somehow unable to be held within the image itself, at least when I continue to attempt to engage

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{figure17}
\caption{(A -Left) William Large. Barnardos. 1888 (B- Right) Name Unknown. Barnardos, 1888. Permission to reproduce granted by Barnados.org.uk.}
\end{figure}

\textsuperscript{146} ‘William Large was admitted in 1888, aged around seven and a half. His mother had died of tuberculosis the previous year, and his father was sent to the workhouse. According to records, the father’s ‘carelessness and cruelty to the child have caused the hip disease with which the little one is afflicted’. William was also deaf and had tuberculosis. He was trained within the print school at Stepney and was able to secure employment as a printer in 1899’. See https://www.independent.co.uk/arts-entertainment/photography/disability-history-month-barnardos-photos-disabled-children-kids-differently-abled-handicapped-a8071336.html
with the image through my vision alone. This should not perhaps be surprising
given that the contemporary discourse within which such images circulate that
does not permit sounds to be perceived as present in a visual medium such as in
a photograph. To accept otherwise, would mean overturning the historical
privileging of vision over hearing and the relegation of a dominant visual centric
discourse to the periphery.\textsuperscript{147}

Physical impairments are explicitly evident visually in both A & B but the
ability to hear or not hear by those represented is less visibly present in either
photograph. Indeed deafness is sometimes described as an \emph{invisible}
impairment.\textsuperscript{148} The invisibility of deafness is problematic for this cohort if we
concur with Martin Jay (1993) that we live in an ocular-centric society and that
the sense of hearing is subservient to vision. In what ways is hearing made to be
explicit to vision? The technological aids fitted to the body to enable hearing,
make the impairment explicitly visual. This is further enforced through the
convention of the audiogram that makes an individual’s sensitivity to sounds
explicit in visual based terms\textsuperscript{149} - a reading that is reliant on vision. Once
constructed in visible terms, a hearing-impairment can be ‘seen’ and has a kind
of tangibility, that is deemed to be useful in shaping an appropriate
intervention\textsuperscript{150} as well as shaping a particular notion of hearing as an
impairment and the construction of a hearing-impaired child. What other
shapes of childhood, of hearing and of the hearing-impaired child have been

\textsuperscript{147} Whilst an ambitious project, such is steadily being addressed and is evident in the arts and
humanities and somewhat embraced by the scientific communities.
\textsuperscript{148} See Holmes AE. The difference between the men who were blinded and who were deafened
Holmes contrasted the treatment of veterans who had been blinded during combat in world war
1, with their readily apparent eye bandages or use of canes, with that of their counterparts who
were deafened, whom the public, often unaware of their hearing loss, regarded with less
empathy.
\textsuperscript{149} For a discussion of the historical development and evolution of the audiogram through a
\textsuperscript{150} Barbara Maria Stafford, has argued that in a process beginning in the eighteenth century, the
construction of scientific knowledges about the world has become more and more based on
images rather than text.
discarded, marginalised through such processes of taming that framed as a disability?

If a notion of a hearing-impairment had to be built into or transcribed onto the body during this period in order for it to be made visible, then this enabled those within prominent political positions to shape hearing-impairment as a reality that reflected their own ‘vision’. Once made explicitly visible, such an impairment could be tracked, measured and its effect on the body be justifiably acknowledged by those knowledgeable enough to know what course of action was deemed appropriate to alleviate that defined as a ‘problem’. The body would have to come to accept or reject a particular identity but this was perhaps a social, psychological problem with the assumption that the body was unable to resist the identity that was placed upon it. As regards photographic practice, it was an identity I would suggest that was contained by the frame of the photograph which was not permitted to escape for if this was possible, then that might indicate a lack of control. The process of visualizing hearing, relies on disembodying that sensory modality through the development of a terminology that could frame the impairment as a disability - the medical ‘gaze’ (Foucault, 1973) surveys and describes but can only do so through a process of disembodying this sensory modality. The dominant medical based discourse, resulting in pathological explanations of deafness could not and in my opinion, still cannot see any other way of constructing and framing a lack of hearing, other than as an impairment. The implicit binary between those who are considered able bodied and have ‘sense’ intact and those who are framed as sensory impaired has political overtones, evident in a desire to impose an ideology upon those who have no access to such means of control - no opportunity to ‘look back’ with a degree of equality and agency and no opportunity to escape the frame of containment.

The frame of the photograph is crucial in maintaining a sense of normality and stability of thought in the processes that underpin this shaping of the child. That which is excluded by the frame, practically and psychologically is clearly of less importance to that which is centrally framed. It is helpful to examine the contents of figures 17 A & B further. Both seem to be highly
contrived, possibly taken within a controlled environment that contemporary descriptions might suggest as being a photographic studio. Indeed, the background of both photographs share some commonality typical of that which is intended not to draw visual attention away from the central child. The framing of the children in figure 17, A & B put the body on display, emphasizing the physical impairment over that of the face of the child which is made explicit through the framing of the body. The visibility of the impairment on the body is encoded and fore-fronted, that which is less important is excluded from the frame. In figure 17 B, the child is sitting at the edge of what appears to be some sort of bench draped in material. Whilst his physical appearance is fore-fronted, his clothes suggest that he is ready for work and hence is potentially useful to a community. This presents a binary within the image - an absence implied through the lack of physical attributes and a presence in the form of clothes that conceal aspects of the body. Nevertheless, the clothes give a sense of what the child might become\textsuperscript{151} rather than what he has been – a process that is central to the rhetoric behind educational imperatives but it is contrary to an educational system which is dependent upon a static conception of the child and a static conception of the senses. Conversely, the contemporary individual school photograph\textsuperscript{152} (fig 18) conceals that the child is hearing-impaired. Indeed, the child does not appear to have a hearing aid or cochlea implant that is visible in the photograph. The impairment is not put on visual display. Did the child remove his cochlea from himself prior to the photograph having been taken? If so, what is the significance of this act? Or is it simply that the constructed image is one that is framed not to visually acknowledge the presence of such technology? The connotations of what the visible presence of such equipment might indicate to the viewer was perhaps something that the child did not want to put on display or what the institution felt appropriate.

\textsuperscript{151} Rather than just referring to the past, the photograph in this sense is also able to project into the future. Is this an example of what... referred to when discussing how the past, presence and future melt into one.

\textsuperscript{152} The child represented in this photograph is a member of the research group.
The individual school photograph normalises the body through a conventional approach to a composition that is familiar to those educated in a British school and possibly in any western educational system. However, the child also attempts to reflect an image of ‘normality’ himself through a process of controlling his own re-presentation. In this image the face of the child is centralized and the child is engaging with the camera and hence the viewer through a direct mode of address that might indicate a particular psychological state. He is clothed in a traditional school uniform. This uniform hangs on the body as if to imply that the child is ready to learn but that he is also part of a school community. The child is visibly ready for work but the kind of labour that is connoted is one that is intellectual rather than physical. The uniform suggests that a process of schooling is intact.\textsuperscript{153} The frame of the photograph cuts through the school logo at the bottom of the frame denying the viewer access to information that might enable the viewer to locate the school and indeed the child.\textsuperscript{154} How can the frame contain this sort of narrative about a child and convey to the viewer that this is the case? Indeed, how can the still photograph

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{image.png}
\caption{Member of the research group. Permission to reproduce the Image has been granted by the student but redacted for data protection.}
\end{figure}

\textsuperscript{153} There is no legislation that refers to school uniforms. It is the responsibility of the board of Governors to decide what is appropriate. Approximately 98% of secondary school in England and Northern Ireland have a school uniform. Further information can be found at www.teachernet.gov.uk/sustainableschools.

\textsuperscript{154} Notions of privacy.
in this sense carry a narrative at all and what does it require of the viewer in order to read its contents as a narrative? To consider the photograph as a ‘still’ image is limiting in my attempts to analyse an image as narrative. In moving my thesis toward a consideration of the still image as narrative, I engage with Dr Barnardo’s attempts to construct a narrative in relation to several still photographs.

Dr Barnardo engaged with the potential of the still image to imply a narrative, but it is difficult to know how such images might have been ‘read’ by an audience of the period. Nonetheless, I will assume that whilst the still image on its own could convey a particular message, Dr Barnardo explored the possibility that it would be more productive in expressing a desired narrative if combined with another as a visual tableau.

![Figure 19: Dr Barnardo’s Before and After Photographs. Date Unknown. Permission to reproduce granted by Barnards.org.uk.](image)

In this way, the still image combined with another still image as shown above could imply the passing of time and that this passing of time might be
indicative of a narrative. How such images could contain this narrative will be subject to analysis as this thesis progresses. It is difficult to know how such a combination of images can represent time passing but one possibility is through engaging with conventions of reading the images from left to right. Reading conventionally could indicate a change, change over time as my eyes move across the images, from left to right. The frame around both images would seem to imply a separation of these images so as a viewer, I reflect the labour present in the images and work hard to resist that implied by the frame, particularly as the black line down the middle seems to imply that these images are not connected. However, suggesting that the reading of these images in a manner that aligns it with processes of reading text, is more problematic than what first appears – particularly if the issues identified for the process of conventional reading by hearing-impaired children is applied to the reading of images.\footnote{155 It is well documented that the ability to read text is seriously impeded by a hearing impairment.}

I refer to the photographic image as if there is a mutual understanding between myself and the reader of this thesis as to what constitutes a visual image. As regards figure 19, both of these images contain several different types of text\footnote{156 The term ‘text’ has been used to cover images, written, audio and audio – visual material which underpins the idea that these can be read.} that contribute to the meaning of this photographic image. The obvious point of course is that both forms of text: visual and text-based - are both visual.\footnote{157 Nancy Hellebrand’s close up black and white photographs of handwriting blur the boundaries between photographs and writing. Visit: \url{http://www.nancyhellebrand.com/handwriting/}} However, for the purposes of this analysis, I will assume that the reader is able to differentiate between these two forms of text through what conventional wisdom dictates. As a result of separating out these two forms of text, I can first turn my attention to the visual contents. I ask - to what extent could the change of clothes from the photograph on the left to the photograph on the right, indicate that there will be a change of character in the child or indeed, that the economic value of the child will change?\footnote{158 In much the same way, the contemporary school uniform attempts to construct a particular learning type – a schooled child.} Adopting this conventional form of reading, I might assume from the clothes and the activities...
that the child is undertaking in these images, that there is a change that has
taken place from the image on the left to the image on the right. As a result, I
might assume that there is evident progress as the child is transformed from
one who is destitute, evident in the ripped clothing and the lack of shoes, to one
who is now productive to society. In addition to the visuals there is the use of a
written text that supplements the visual contents and directs the viewer to a
particular reading. First, there is the numbering of the images indicating further
that these are to be read in a sequence – no 27 on the left and number 28 on
the right. Furthermore, there is the title of each image itself, ‘Once a little
vagrant’ to ‘Now a little worker’. Each image is further supplemented by - in the
case of card No 27: ‘The same lad as on card No. 28’ and in the case of card No.
28: ‘The same lad as on card No 27’. What is the relationship between this form
of visual language (text-based) and that provided by the (visual) images
themselves? In what ways are these methods of presenting information
different or the same? Are they interchangeable in providing the same
information in different forms; do they provide different information or is it
their combination that creates a desired meaning? More pressing to this thesis -
if I am hearing-impaired, then will my attention be drawn more to the written
elements or more to the visual contents of such images or am I able to combine
both? Or perhaps, neither the visuals or the written elements actually dominate
and the viewer scans across rather than at particular elements, continually
browsing from the visual to the written and back to the visual. The latter might
indicate an intermingling of what I will level as being visual-based contents to
arrive at a third meaning that is informed by the two. Or perhaps the two types
of visual elements actually exist on separate tracks or paths and are not
interchangeable. If these two forms of language – visual and written - are to be
considered as semiotic systems and my reference to them being ‘read’ would
thus far indicate that this was the case, then the question arises as to the
possibility of being able to express the same message in both modalities. For
some academics, the differences in semiotic systems means that it is impossible
to say the same thing in both modalities. As the French linguist Emile Benveniste
states:
‘Semiotic systems are not synonymous; we are not able to say ‘the same thing’ with spoken words that we can with music, as they are systems with different bases. In other words two semiotic systems of different types cannot be mutually interchangeable’. (Benveniste, 1986, p.235)

It is as if there is a limit to that which can be conveyed by the visual images themselves and without written text, their meaning is less secure and more polysemic. (Barthes, 2009) Of course, the opposite could be the case - that the text cannot communicate its intent effectively without some form of anchorage by the visual. It seems that the text and the visual are not inseparable but rely on each other for communication.

I am constantly reminded during this process that I am making assumptions about photographic imagery being ‘read’ in a conventional manner and that this is in line perhaps with common sense understandings that assume that ‘reading’ imagery does not require any special instruction. A consideration of language as print, as visual rather than as text that is aural, that speaks to me is a philosophical shift with its roots in the enlightenment.159 The visualisation of written language permits a consideration of it as something akin to other forms of visual language - in Roland Barthes terms, as texts that can be read and subjected to textual analysis. In this respect it is worthwhile considering the role in communication that the text and the visual share in common, with particular reference to figure 19. When I read the written text, I do so in a linear manner that follows the conventions of reading English. This process happens over time and requires me to remember (in my short-term memory) the beginning of the sentence so that when I reach the end, I arrive at a meaning. It is only through doing so that I can make some sense of the words, letters that form a particular sentence. Several aspects of available research would suggest that this is an issue for the hearing-impaired child whose short-term memory is impeded by their deficit in hearing. (Harris & Moreno, 2004) The photographic images however, do not require me to read the elements in any particular order so I might suggest that there is a greater sense of freedom to create my own

159 The shift from aural to the written.
narrative from the different elements of an image. This process is not constrained necessarily by a process of reading written English but is undoubtedly influenced by the same conventions. What I will call a creative process of interaction, which is perhaps somewhat outside of that dictated by the structure of English but is no doubt tamed by that tradition. However, in an educational context, written English is ultimately required in order to represent a level of understanding that can be assessed by the system of assessment that is in place. Reading images is somewhat different. My eyes are free to roam around the images or across the content and I can return to different elements depending on what seems to take my interest. However, this process seems to be somewhat involuntary. I don’t appear to be in control of my eyes whilst I am looking. Whilst it is important to remember that cited by Mitchell (1984; Mitchell, 1994) that images and language are inextricably linked and entangled and therefore, difficult to distinguish, my eyes tell me something different. I cannot focus on text and the image at the same time. My eyes travel from text to image but at some point, in this process, I seem to combine both. Nevertheless, my eyes always seem to settle on the image. I seem to have a reliance on the visual to provide me with the information that I need but I also need the text to secure or anchor this information. It would seem that whilst the period of modernity had established a link between my seeing and my knowing, in a post-modern context, the hegemony of this position is somewhat unsettled.

The message or narrative of a moral desire to improve the lives of these children surely cannot be ‘in’ the image itself or indeed, ‘in’ the text but if it is not ‘in’ either, then where does this message exist? Perhaps the message, if at all present within the frame has to seep across the border to the viewer if it is to be understood. If a narrative is not in the frame, then it has to be brought to the image by those that are to ‘read’ its contents and those would have to be familiar with emerging conventions that underpin the structure of these images

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160 Creativity is a slippery term. It is used frequently within this educational establishment, but its meaning is rarely qualified. For this stage of the thesis, I will align my use of the term with that used in general educational discourse. The reader may wish to jump to page 181 where the area of creativity is discussed in more detail.
which enable a particular reading to take place.\textsuperscript{161} Perhaps it is safe to say that the visual contents ignite this sense of a narrative for the viewer or the reader and that after that point, the visual contents of the image itself become redundant. The after image\textsuperscript{162}, what I remember about the image when it is no longer in front of me, is what I carry with me and what I refer to in my thoughts – wherever these thoughts might exist. The image that I carry with me is part of my whole body and this challenges a more established view that thoughts reside ‘in’ particular areas of the body – in areas of the brain that science dictates are designated for particular kinds of thought. However, as the image becomes redundant, so does any reliance on the biology associated with my seeing. These thoughts might not have a materiality in themselves but are part of the materiality of my body, resisting that which proposes that vision is my only access to knowing. It is a resistance that pushes against an established common-sense relation between my seeing and my knowing, as so succinctly described by Luce Irigaray (1978)

\begin{quote}
‘In our culture the predominance of the look over the smell, taste, touch and hearing has brought about an impoverishment of bodily relations. The moment the look dominates; the body loses its materiality.’ (p.493)
\end{quote}

\section*{The Ears Know Something}

In challenging my visual centric position of reading photographic images, I propose that I might engage with the school photograph through listening, through hearing. How might this be a tenable proposition? The school photograph is an object, but objects do not have sounds that emanate from their surface per se, though the sounds that transmit to my ear, do come from objects, not all objects perhaps have sounds. It is a conundrum that I need to

\textsuperscript{161} The ability to read such images was not an apriori. However, it would seem that contemporary assumptions exist as to how audiences might read visual based imagery to be developed.

\textsuperscript{162} Visit: https://www.youtube.com/watch?v=GbHMLV4CZfi Prof Tom Freeman of Cardiff University’s Psychology Department explains the Colour After Image Illusion and how it works. Psychology has much to contribute to this area but the after image I refer to is one that cannot be so easily explained. The after image I refer to is one that I carry with me when my vision in traditional terms is no longer engaged.
problematise. In a proposition that I might look at the school photograph through my ears therefore, through listening, challenges the dominant episteme but it is precisely this dominance that shapes my response and restricts my acceptance of such a proposition. Nevertheless, it is a concept that I would like to explore further in my attempt to challenge the dominance of a visual sense of looking. I wondered of the sounds that surrounded the construction of the school photograph in figure 9 at the time they were ‘done’ to the children and adults. I pondered on how much of the ambient sounds might have been redundant to the children within the images themselves at the time that the photograph (fig 9) was taken. As a viewer of this photograph, I attempt to experience the sounds as they were when they occurred, an experience that is ignited by the visual content that is in front of me. Attempting to listen to the sounds through the ears of those within the image was indeed a theoretical challenge – and even if I could, what would I gain from such an experience? In the first instance, such a proposition belies the individuality of those within the image as I assume that sounds will be heard by all those in the image in the same way. The children are hearing-impaired, and my proposition overlooks individual differences in hearing. However, I need not worry for I am resigned for now to the common-sense assumption that photographic images are silent and do not emanate any sounds that I could hear through traditional means - through my ears. I was reminded of the silent movie era and what it must have ‘felt’ like to be confronted with film without any sound - but my romantic ruminations were abruptly ended when I considered:

‘if it is argued that silent film was a ‘purely visual’ medium, we need only remind ourselves of a simple fact of film history—that the silents were always accompanied by music, speech, and the film texts themselves often had written or printed words inscribed on them. Subtitles, intertitles, spoken and musical accompaniment made “silent” film anything but.’ (Mitchell, 2005, p.396)

Of course, whilst I might agree that sound do not emanate from the material that carries a photographic image, I can never look at the photograph in silence though I might indeed feel that I can. Indeed, there is always some
ambient sounds that impacts on what I see, how I see. When I look at this school photograph, I am surrounded by what are to me, the familiar sounds of school life - shouting, doors opening and closing, chairs moving across a floor, tables knocked against each other, books being opened and closed, computers being switched on and the ever-present sound of the keyboard. Then there are the more subtle sounds, those that might escape my own attention because they rest in the background of my aural perception. These might be the sound generated when I pick up the photograph itself to take a closer look or the sound of my own internal breathing which seems to get louder as I concentrate. Then, there is the inner sounds that I make from my own internal voice as I ruminate about the photograph. In what ways might these sounds impact on what and how I see a photograph? Indeed, do they have any impact on what, how I see at all? A common-sense response would probably be that these sounds would have little effect on my interaction with the visual activity of looking at a photograph, but this side-lines other possibilities and inherent complexities in favour of the status quo - which I seek to avoid.

When hearing-impaired children are confronted with photographic images, the encounter is rarely a silent one for similar reasons to that already mentioned. However, their listening is one that is mediated by technology such as hearing aids and cochlea implants which become an extension of the human body and the nervous system. (McLuhan, 1964) As such, any sounds will always differ to my experience of listening. The pedagogy embraced in this particular institution relies on these extensions to normalise a sense of hearing across the cohort. This sense of hearing is always subservient to a vision that guides their sense of hearing. This is counter perhaps to the children in figure 16 whose vision seems to have been arrested by their hearing – their vision is subservient to their hearing. Regardless of these ratios of engagement, the remaining senses of smell, taste and touch and that which might be considered as being beyond such westernised and traditional descriptions (Goldberg, Wilson & Cullen, 2012) – do not appear to get a look in!
Looking Back

One evident component of the school photograph is that it appears to look back at me, or perhaps I should say that those hearing-impaired children within the frame seem to stare back at me, the viewer. In this respect at least, the photograph is engaging and has a kind of agency itself that is ignited through this interaction. It is an interaction which is reflective of the knowledge that I bring about those individuals that appear within the photograph. This challenges Walton’s (1984) notion that the viewer looks through the photograph to what it represents and that as a consequence, my vision operates in one direction. Of course, such looking back is to be expected in the school photograph but if we accept the science that proposes that these children are more visually orientated, then it is reasonable to suggest that their looking back might be somehow different, somehow ‘more’. Furthermore, is the way that I look at the school photograph (or any photograph) different to the way that children with a hearing-impairment might look at the school photograph (or any photograph). There are many variables of course within such questions, not only from the perspective that hearing-impaired children are not necessarily an homogenous group, but that children and adults deemed to have ‘normal’ hearing are themselves, also far from an homogenous group. This is something that I believe the dominant research paradigm seems to ignore, in favour of a more hygienic type of research that resists messy complicates. Nevertheless, if I frame this question as a biological, physiological one then the medical/ scientific research suggests that indeed there are physiological differences as a result of a hearing-impairment that evidently manifests itself in an enhanced form of vision. (Hong Lore & Song, 1991) If I accept this stance, It is safe to assume that this might affect how hearing-impaired children look, see and engage with photography and from within photographs themselves.

I refer to a discourse within which hearing-impaired children are immersed and framed as visual learners. Their bodies reflect this sensory

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163 I could also question as to whether the way I look at hearing-impaired children in my care is any different to the way that a hearing-impaired child might look at the children in their care.
privilege and is evident in their actions, their relationship with their educational environment and dictates their engagement with photographic materials. Photography privileges vision and in an educational context, insists that this body of knowledge is learned through the sensory modality of vision. This has historical foundations, reflective of a culture of vision from which it has emerged and from which it has solidified a common-sense link between seeing and knowing.

**Deaf Eyes Feel More**

The school photograph doesn’t exist in isolation. It is performed within a particular architectural school setting. In what ways can this architectural setting further perform to sustain the hearing-impaired child as a visual learner? The structure, fabric and layout of the buildings themselves are shaped by a discourse of vision that is invisible but how the setting is implicated in shaping the vision of hearing-impaired children is unclear, perhaps seen as inconsequential. The organisational desire for stability that such architectural surroundings present, sits in the background of the learning experiences of these children and consequently are somewhat overlooked. (Stivalet *et al.*, 1998)

The structure of the school buildings; the photographs that adorn the corridors; the organisation of classrooms; the gardens and in those areas that are deemed ‘off limits’ to the children, is all around and engulfs the child. Whilst visually explicit, such is not consciously acknowledged as the movements of children and adults are guided by an unspoken common-sense approach that forms the background of day to day events. The buildings are just there and are of little significance beyond their capability to keep children safe and maximise the potential for listening. Of course, within a school for hearing-impaired children, there is attention to the acoustic suitability of the surroundings in
some areas so that reverberation times are reduced. This further maximises
the potential for listening and speaking. As we have seen, an ocular centric
approach shapes reality, shapes the way the school curriculum, the hearing-
impaired child is structured and this extends to the architectural structure of the
buildings within which learning takes place. This process of visually structuring
‘schooling’ is so dominant however, that it is more or less invisible.

This is potentially significant, particularly if one accepts that the
heightened vision theory is localised to the periphery of vision in the hearing-
impaired child. (Bosworth & Dobkins, 2002; Hong Lore & Song, 1991) The effect
of the environment may be more influential on the child’s relationship with the
architectural surroundings, how they see their surroundings and how these
surroundings shape their seeing. That which is perhaps deemed benign,
something in the background that staff and pupils simply move through, may
have a greater educational impact than previously thought. To suggest that the
buildings may have an effect on vision however, is to suggest that the buildings
themselves have some kind of agency through which they can affect. I think of
the school buildings as something that stabilises modes of being and modes of
learning in that they provide a guide through which the child can travel on their
educational journey. Of course, there is the solid structure of the building, the
bricks and mortar etc., but then there is also what I will call the fabric of the
buildings themselves – the things that are placed on the bricks and mortar that
potentially changes the significance of the building itself. As a result, it is
probably more reasonable to suggest that the buildings sit somewhere between
materiality or structure (that which is noticeable through vision) and a kind of
agency that underpins an ideological imperative, but which is nevertheless
invisible to a pathology of seeing.

164 For those interested to learn more about reverberation times within the classroom and how
this might affect learning, see:
https://www.acousticalsurfaces.com/soundproofing_tips/html/control.htm

https://www.cooperhewitt.org/2018/02/27/cooper-hewitt-smithsonian-design-museum-to-
present-the-senses-design-beyond-vision/'The exhibition invites visitors to encounter design
with all their senses through several interactive installations, created in collaboration with
contemporary designers, from a furry wall with digital sensors that play music to a scent
commission by Christopher Brosius inspired by winter.”
To illustrate this thought, I present you with figure 20 which represents what is now the main entrance to the school as it was represented in a photograph taken around 1910. The compositional arrangement of the photograph seems to dictate that this was a considered composition. To use the popular metaphor of photographs being a ‘window on the world’, and in line with Kendal Walton’s proposal of the transparent photograph (1984) - the photograph seems to permit access to a time and place that is recognisable to me, and possibly to the children. I can never come into contact with the décor of this building as it was in 1910, in a physical sense but the photograph does permit me to have some close proximity with the décor, as it was. I can look through the frame of the photograph, beyond the surface materiality of the photograph that is reflective of a rule of perspective which organizes the viewing experience. If I compare this photograph with that in Figure 21, the past and the present seem to collide. Both images depict a different cultural value and this is evident through the different fabrics that are placed on the building, but the structure of the building itself shows that there has been little change. That demanded of the building therefore is placed upon the bricks and the mortar - the buildings do not necessarily have an inherent agency, but the architectural structure acquires an agency through its décor and subsequent interaction by those who use the buildings - the adults and the children. The photograph enables me to ‘get hold of’ (Benjamin, 2005, p.523) the architecture in a way that the reality denies such access. Perhaps a written description of Figure 20 will help bring me closer to experiencing this cultural time when the photograph was taken. Then there are the sounds and the ways in which these

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166 This image is part of a series that were left to the school when the building was bought. The remainder of the images can be found in appendix L. Some of these images are used in one of the research activities.

167 Battista Alberti described painting as the construction of an image that resembles a window: “First of all, on the surface on which I am going to paint, I draw a rectangle of whatever size I want, which I regard as an open window through which the subject to be painted is seen;...” Alberti, L. B. (1972) On painting; and, On sculpture : the Latin texts of 'De pictura' and 'De statuam'. ed. Grayson, C., London: London : Phaidon Press. P.55

168 As does the school child who acquires an agency through wearing a school uniform.
may have changed over time. I can imagine the sounds as they might have been 
at the time the photograph was taken. These sounds in part are initiated by 
aspects of the contents depicted. The clock in the background for instance 
engages my imagination and the experience that I bring to the image of what 
the sound of this clock might be, impacts on my understanding of that 
represented. I can listen to the sounds that surround the reception area in the 
present but I cannot access the actual sounds that were present in Figure 20 - 
the visual based photographic image does not permit me to do this.

Despite my attempts to move away from a vision-based engagement, 
the visual continues to dominate my discussion because I am entwined within 
an ideological fixation with this modality. However, as the visual landscapes 
have changed in these two photographs, so will have the sound landscapes. 
Perhaps any attempt of mine to access the sounds that were present in figure 
20 is restricted as a result of the language that is available to me through which I 
am able/ not able to access the time period of this image. There are four 
elements to this conundrum. There is my attempt to describe the photograph 
using written/ spoken language; there is my attempt to hear the sounds
that surrounded the capture of this photograph; then there is the materiality of the photograph itself and finally, there is the contents of the photograph. Of course, the latter is not accessible to me physically, in figure 20, in the way that they are physically accessible to me in figure 21. As regards figure 20, I might ask which version of this conundrum enables me to come closer to experiencing this place at that time - my verbal descriptions of the photograph of the reception area; my attempts to hear the sounds represented; my written ekphrasis or the actual contents of the place itself that I can experience physically - or is it a combination of all of these elements? My written ekphrasis does not merely represent the reception area but rather constructs an idea of the reception area and in doing so defines the limits of what is knowable about this area of the school. There is a temptation to think that language is somehow transparent in much the same way that photographic representations are thought to merely

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169 See Joseph Kosuth. ‘One and Three Chairs’. 1965. Available at: https://www.moma.org/collection/works/81435. The work questions three different types of representation - written text that describes a chair, a photograph of a chair and a ‘real’ chair and asks which is closer to a ‘reality’. The text constructs a notion of a chair through language. The photograph represents a three-dimensional structure of a chair in two dimensional terms and the object, the chair is physically present. This work is also referenced in Plateau 3 as part of one of the activities.
represent the world that they depict and that this representation is itself devoid of any ideological/discursive underpinnings. Rather than representing the reception area, the language that I use to describe the area displaces the visual representation in the process. I could suggest that the reception area might not actually exist without the language that is able to define it. The power of language to define the parameters of knowable knowledge, therefore, is reflective of the discourse of hearing-impairment that is underpinned by a language that defines what it is to ‘be’ hearing-impaired. It is a process that displaces the body and relegates it to the periphery of interest. In essence, the body is masked by a language that purports to emancipate it. In doing so, this perpetuates a cyclical event that continues to privilege particular knowledge formations of the hearing-impaired child - as one who is a visual learner and of photography as a visual medium.

Returning to the architectural setting evident in figures 20 and 21. How has the notion of an oral education for the hearing-impaired child been inscribed into the fabric of this building so that it ‘performs’ as an oral institution for the hearing-impaired but does so through vision? How does the space contribute to disciplining the children so that they ‘perform’ as visual learners, enabling them to become children that can be ‘looked at’, measured, tracked, objectified with a desire that they may become purposeful to society? If the building is to have meaning, then this meaning has to be built into the fabric itself so that it stabilises intent and promotes a particular ideology. Just how it does this, escapes attention and is silenced by common-sense assertions.

I resist the temptation to consider that the adults, the children who inhabit this building and the building itself somehow run on separate tracks, perhaps in the way that it was previously suggested that the modalities of vision and hearing run independently of each other. Instead, I suggest an entangled (Barad, 2007) nature, one that pushes against a dominant view that the buildings are separate from and independent of the bodies that inhabit them. That the buildings are unable to influence thought and behaviour and that they are just there in the background, their presence unacknowledged.
The latter is a much more difficult and subtler a concept to grasp.\textsuperscript{170} The buildings speak in a way that they are able to guide the actions of those that travel through them, alongside them. In this sense, they have a language and this language impacts on being, on motivation and intent. I am beginning to open up the concept of language as something other than that which has dictated the learning experiences of hearing-impaired children - words on paper or speech in the ether. I am considering language as an all-encompassing ‘sense’ that cannot be easily classified, compartmentalised, measured and assessed for its productive capabilities. Such a stance is reflective of a position proposed by a number of academics (Pallasmaa, 2005) that an architectural space is not only understood through the eyes and the intellect but also experienced through all the senses of the body, unifying the body and the senses with the space it inhabits.

\textquote{Experiencing architecture is multi-sensory; qualities of space, matter and scale are measured together by the eye, ear, nose, skin, tongue, skeleton and muscle. Architecture strengthens one’s sense of being in the world, and this is basically an enforced experience of self. Instead of mere vision, or the five classical senses, architecture involves several realms of sensory experience which interact and fuse into each other.} (p.41)

As I walk around the school buildings, I am surrounded by sounds, as are the hearing-impaired children. The children may not pathologically have the faculty of hearing but as some (Jonas, 1954) have suggested; blind people can see, they just do not have the faculty of vision. In line with this proposition, perhaps the hearing-impaired child can hear, but that they just don’t have the faculty of hearing. Figures 22 and 23 depict certain aspects of the architectural school surrounding that are more readily frequented by children. The use of the term ‘surrounding’ in this context is indicative of an assumption that such materiality in the form of buildings, classrooms, chairs, paint on the walls and carpets on the floors etc., are somehow separate from the body that moves through them. Nevertheless, the display of chairs in figure 23, shows the

\textsuperscript{170} I separate out thought and behaviour for the purposes of convenience at this stage of the thesis but will propose an entangled nature of such subsequently.
regimented way in which learning though vision is organised, ensuring that hearing-impaired children are facing forward, facing toward a speaker. Vision is clearly privileged in the architectural structuring of the elements within this photograph, further legitimised through the positioning of the photographer who falls in line with this organizing principle. This system is further reflected in the way that classrooms are organised to maximise speech recognition through lip-reading. There is a common-sense assumption that children need to see each other so that they can follow each other’s speech.\textsuperscript{171}

Figure 22 depicts a corridor that children and staff walk through and where children can often be found loitering or waiting for a teacher to arrive so that they can enter a classroom. In some of these corridors there is evidence that learning has escaped from the classroom and now takes place within different architectural surroundings that defy those specifically structured to enable effective communication. The demarcation of the classroom as a place for learning and the corridor as a place for waiting is less clear in such circumstances. Spaces are democratized in this sense and the idea of moving from one body of knowledge in the form of a specific subject to another body of knowledge in the form of another subject is problematic. The spaces do not necessarily change but the shape of the space changes as bodies enter and leave. The space is not a static one and I interact with it and it with me. A corridor no longer becomes a place that links to other places of learning but itself becomes a space for a kind of knowing. The kind of knowing that takes place in the corridors is one that is discarded to some extent by the educational fraternity because that is not a place that is designated as a place for learning. As regards the hearing-impaired child, it is not a place deemed to be acoustically or visibly viable for what is deemed to be effective communication. However, if we displace the idea that such communicative acts are dependent upon an ability to see, then this opens up for discussion, how other bodily senses might support such a desire to know, a desire for knowledge.

\textsuperscript{171} Where does speech happen? Where does it exist? Once spoken does it disappear or is there a form of latent speech in the same way that a photographic image can be latent beginning.
Figure 22: School Corridor. Photographer: K. Robinson (Author)

Figure 23: Assembly Hall. Photographer: K. Robinson (Author)
In a side-wards shift from a vision centric stance through which an individual hearing-impaired child engages with their architectural surroundings, to Walter Benjamin’s (2008) proposal that in the case of architecture, the tactile component of perception is fundamentally based on habitual bodily perception. The idea to displace the optical in favour of the tactile is illuminating. Children become familiar with their surroundings through habitual practice, reliving similar experiences over and over again. This is repetitive, but there is difference inscribed in the process. The school architectural environment is visibly different from other environments such as the home. However, this school is a boarding school so in some senses becomes the children’s ‘home’. They engage with these surroundings through their vision but this vision is shaped by a bodily perceptual experience in relation to these architectural surroundings. The role of vision is to organise practices and the architecture supports this in directing children how to perform within that environment.

However, as I walk through the campus at school, I am little aware of the architectural surroundings that engulf me and provide me with a reference point for my position in the school. The school setting is divided into subject areas and other areas that might be considered more peripheral to the children’s learning – the assembly hall, food hall, toilets etc. These sections are linked by paths or defined routes that guide the pupils and the staff through the school setting. The routes taken by children are usually dictated by a concept of time that is assumed to be shared by an educational system and children alike. The educational system assumes a scientific concept of time which jars with the experience of time ‘which escapes the limitations of such mechanization’. (Bergson, 1913 (1889), p.18) Children move through these spaces in a very regimented manner that is dictated by the structure of the

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school day. In that sense it differs to my engagement with the surroundings in
which I might ‘act’ more in a non-linear way. The children move from one ‘body’
of knowledge to another ‘body’ of knowledge and in so doing are in contact with
different spaces that impact on their sense of being in/ within those spaces. I
agree with Giles Deleuze (1988) assertion that patterns of behavior emerge
from this bodily interaction with the architectural environment, invisible to the
eye but not to the perceptual experience of the body which is enmeshed within
the environment and with which the body can be indistinguishable. Every so
often, however, I am physically reminded of my contact with the surfaces. I can
feel the ground that I walk on and the edges of buildings as I walk through and
past them. I might occasionally trip and will once again be reminded of the
contact that I have with the ground. This feeling quickly resides again into the
background and sits there quietly, not interrupting my more important task of
getting to my destination. The suggestion of a multi-sensorial engagement
with the surroundings undermines the supposed dominance of the visual
(Ingold, 2000) or perhaps proposes a shift in the discussion to a proposition that
the visual could be considered to be disseminated across the body. In what ways
could this multisensory relationship with the built school environment translate
to an engagement with photographic based imagery and one that displaces the
preeminent position of vision.

Touching Seeing - a haptic engagement

‘The term haptic visuality emphasizes the viewers inclination to perceive
haptically, but a work itself may offer haptic images. Haptic images do not
invite identification with a figure so much as they encourage a bodily
relationship between the viewer and the image. Thus it is less appropriate
to speak of the object of a haptic look than to speak of a dynamic
subjectivity between looker and image.’ (Marks, 2002, p.3)

174 Whilst moving from one area of the school to another area of the school is a physical act it is
also a psychological act. If I were to embrace the notion that the child is in continual change,
then the child leaving one body of knowledge and arriving at another body of knowledge will not
be same.
Engaging with the school photograph haptically resists a ‘reading’ of the image as a representation of an event or performance. Haptic visuality seems to promote a different kind of looking that does not default to vision. If it does not default to vision however, just where can this engagement be located in or on the body? I believe that photographs can ‘touch’ the viewer, or of course, a viewer might physically ‘touch’ a photograph – either way, this is the physical body engaging with a physical photograph. However, perhaps the former is less reliant on a physical contact – but rather to be touched by a photograph in the affective sense that challenges the limitations of understanding through vision alone.

‘The significance of tactile looking is that it is more act than reading: it produces more than it understands. In contrast, readings aimed at understanding rely on a visual conception of looking.’ (Olin, 2012, p.3)

A consideration of the photograph in an affective sense moves an engagement with images beyond words and the discourse that frames and limits such engagements. In this sense, perception is broad-based and does not simply defer to vision but to the whole of the body – a perceiving body. To engage with this concept, I move the discussion to that of film. According to Merleau-Ponty, (1964)

Figure 24: Pupils arrive at School 1949 (School Archives)
perception permits us to understand the meaning of the cinema. A movie is not thought; it is perceived (p.58)’ He continues, ‘If we now consider the film as a perceptual object, we can apply what we have said about perception in general to the perception of a film’ (p.54)

As further reiterated by Stoller (1997), this concept of ‘perception devolves not simply from vision….. but also from smell, taste, touch and hearing’. (p. xvi) The discourse within which my activities take place however does not permit such a consideration of perception. The words that I seek to describe this engagement lie somewhere beyond what the traditional five senses afford. (Goldberg, Wilson & Cullen, 2012) In being beyond however, dictates that they cannot be grasped through traditional means of representation – through language.

Sensing Seeing

Figures 24-27 have been removed from their original moving image context. This film footage is something that was uncovered within the school, some of which was within my own department but was of little interest to me until more recently. I handled this film, as others had before me, which was necessary in feeding it through a projector. This technology enabled a viewer to see the images projected on a blank canvas. Figure 24 is a still image captured from this moving image footage and represents pupils arriving at their new school in 1949. Whilst initially part of a moving image film, I would like to consider it as a moving still image. This enables me to make a shift from a semiotic analysis which has dominated my initial critical work in this thesis to another that considers how the images ‘affect’ the viewer. It is through a semiotic based reading that the contents of the photograph infer or connote particular meanings. It is an approach that requires that the viewer consider the photograph as a text – a text that can be read. The central vehicle has connotations of travel, of movement and is framed as if it has travelled into the central area of the photograph. The movement of the people indicated by their
forward motion has been arrested by the release of the shutter. The ‘fall off’\textsuperscript{175} around the edges of the image indicates that the periphery was of little concern to whoever was responsible for the film. The distance between the camera and the subjects further indicates that the photographer intended to include all of the adults and children - the buildings in the background, the area for vehicles in the foreground and the vehicles that were probably used for transporting individuals. These elements, when read by a viewer constructed a narrative that would have connotations of arrival. When viewing such material, following the event or more contemporaneously, the material always represents a memory of that event – something that existed in the past. This ‘affect’ however, jars with a semiotic reading that is constrained by language. According to Elizabeth Edwards (2005) the dominance of such a semiotic approach to ‘reading’ such texts reflected ‘the values attached to Western understandings of the hierarchy of the senses where seeing and hearing stand for the production of rational knowledge—and touch, smell and taste for the lower, “irrational” sensory’. (p.37) It will be difficult to embrace and develop an argument for the ‘irrational’ sensory as described given this is in opposition to an established hierarchical dogma as regards the senses. It is also perhaps in opposition to a curriculum and a pedagogy that is built upon the production of rational knowledge. However, it is only through disentangling my-self from a vision-based discourse that positions and sustains the hearing-impaired child as a visual learner and photography as a visual medium, that other positions can be considered. I am mindful that developing an alternative position however, runs a risk of reverting to that proposed by Casey O’Sullivan (2017)

‘Developing a theory of audition, olfaction, taste, or touch, even when it does not merely extrapolate from vision, but faces up to perceptual phenomena drawn from the relevant sense modality, risks succumbing to a more insidious form of visuocentric thinking.’ (P. 56)

\textsuperscript{175} For the reader who is interested to know more about the technicalities related to photographic light fall-off see: [https://www.fireflyphotography.co.nz/light-fall-off/](https://www.fireflyphotography.co.nz/light-fall-off/)
The position challenges the domination of vision and the hierarchical structuring of the senses implied in Aristotle’s, (350 B.C.E) famous doctrine that deemed some of the senses to be less noble. Indeed, the sense of touch was deemed to be at the periphery of the senses, and as the renaissance philosopher, Ficino wrote, ‘Nature has placed no sense further from the intelligence than touch’\(^\text{176}\) (1989: 124) In contrast, the sense of vision and that of hearing, have historically been aligned with a sense of knowing, a sense of intelligence, but contemporaneously, this dominance has been questioned by some academics (Rubenstein, 2015) in post-modernist thinking. In doing so, such proposes other ways of knowing. In resisting and questioning the dominance that vision has in perception\(^\text{177}\) and in knowledge acquisition, proposing a more complicated intertwining of sense, ‘a multi layered notion of sense.’ (Serres, 1985) highlighting both the artificiality of demarcating the senses, and what Serres refers to as the veil over reality that language affords. This veil over reality in the sense that language is in between the body and a reality from which it is separated is reflective of the hegemonic position that vision has held, as expressed by Pallasma (2005)

‘The gradually growing hegemony of the eye seems to be parallel with the development of western ego-consciousness and the gradually increasing separation of the world; vision separates us from the world whereas the other senses unite us with it.’ (p.25)

If photographs operate as a mode of language that can be ‘read’, then this adherence to a semiotic tradition, obscures a kind of reality that they represent but also obscures the possibility of alternative modes of knowing. Another way of knowing proposes different relations between the body and

\(^{176}\) The relegation of the senses other than vision to the periphery of interest has a long history. In discussing the role of touch in her book, Body Criticism; Imaging the Unseen in Enlightenment Art and medicine Stafford, B. M. (1991) Body Criticism; Imaging the Unseen in Enlightenment Art and Medicine. Cambridge: MIT Press. Barbara Maria Stafford suggests ‘that since the eighteen century, one trend in modernism has been to eliminate touch and other signs of manual construction’ (p.131)

photographic material and the objects, places and people that they represent. In considering photographs as objects, Elizabeth Edwards (Edwards, 2009) proposes that,

‘The photograph has always existed, not merely as an image but in relation to the human body, tactile in experienced time, objects functioning within every day practice.’ (p.335)

If I consider photographs as objects\textsuperscript{178} that enable a connection across communities rather than merely representations of a reality, then I can begin to engage with school photographs through vision rather than with vision. In the physical sense, I can hold and hence touch a photograph\textsuperscript{179} and the obvious assumption would be that this sense of touch is localised in the hands.\textsuperscript{180} However, as others have suggested, (Serres, 1985) this is not necessarily the case, and that the sense of touch is evident throughout the body.

‘in the skin, through the skin, the world and the body touch, defining their common border. Contingency means mutual touching: world and body meet and caress in the skin. I do not like to speak of the place where my body exists as a milieu, preferring rather to say that things mingle among themselves and that I am no exception to this, that I mingle with the world which mingles itself in me. The skin intervenes in the things of the world and brings about their mingling.’ (p.97)

\textsuperscript{178} Breitbach, J. (2011) 'THE PHOTO-AS-THING Photography and thing theory'. Eur. J. Engl. Stud., 15 (1), pp. 31-43. considers the Photograph as a ‘thing’, as ‘matter’ and in so doing shifts the focus of analysis from the photograph as ‘depiction’ to the materiality of the ‘thing’ itself but such also motivates a move from indexicality and traditional methods of reading images that were discussed earlier to what some Barthes, R. (1982) Camera Lucida: reflections on photography. London: Cape. has described as the sensorium.

\textsuperscript{179} The reader may well question the digital imagery and film in this context in that the technology that is in between the image and the viewer and therefore the role of physical touch is diminished.

\textsuperscript{180} Touch does of course play a role in photographic engagement along with the technology that is used to create imagery. In an educational context, hearing-impaired children often share their images via their mobile phones, via computers and tablets but what is ignored in these communicative acts is the influence of the technology that is used to communicate such images and the ‘fact’ that such technology is held (usually) in the hand. Furthermore, when children photograph, they do so by handling equipment. They hold cameras, adjust their settings, frame through the eye and press the shutter with a finger.
In this scenario, my perception is not channeled through particular modalities but is present across the body.\(^{181}\) If I consider touch to be throughout the body encompassing all that has been described, and photographs as objects which rather than being distinct in representational terms from the body, are part of it, then this opens up possibilities of different kinds of engagement. As Marks (2000) extrapolates:

‘when our eyes move across a richly textured surface, occasionally pausing but not really focusing, making us wonder what we are actually seeing, they are functioning like organs of touch, like fingers.’ (p.131)

Considering the eyes as an organ of touch that is ignited through vision, displaces the hegemonic position that vision has occupied and promotes multisensory modes of perception. In returning to the film of the school referenced in this plateau, the effect that the moving-image has upon the viewer is not the result of what can be read in the photographs but rather what can be felt when in ‘contact’ with the photographs. In order to explore this notion further, the film from which figures 24 -27 were extracted, was shown to current employees of the School, representing the formative and subsequent years in the development of the school.\(^{182}\) The video material spanned from around 1948 to the mid 1970s and initially documented the change of the building from a home into a school before focusing on the opening of the school by Princess Margaret. (fig. 25) There were several clips in the sequence that documented the narrative, including the arrival of the first group of pupils to the school in 1949. (fig. 24) One might describe this as a visual experience. Indeed, the auditorium in which this film was shown is set out to construct a viewing

\(^{181}\) Hearing through bone conduction is hearing through the body. A process of listening that negates the eardrum as sounds reach the cochlea through the bones. ‘Ludwig van Beethoven, the famous 18th century composer who was almost completely deaf, discovered Bone Conduction. Beethoven found a way to hear the sound of the piano through his jawbone by attaching a rod to his piano and clenching it in his teeth. He received perception of the sound when vibrations transfer from the piano to his jaw. This has proven that sound could reach our auditory system through another medium besides eardrums and the other medium is our bones.’ See http://www.goldendance.co.jp/English/boneconduct/01.html

\(^{182}\) This film material was discovered in the Mary Hare buildings in various locations, seemingly left to eventually be discarded. It is a reflection of a change in attitude to the preservation of such material more widely evidenced in other spheres, that the material has now survived.
body – positioned as it is to privilege vision in this experience. Whilst the positioning of the body in relation to the screen is one that foregrounds an engagement through the eyes, people in the auditorium, regardless of their hearing capacity appeared to be ‘touched’ by the experience. The images appeared to have an ‘affect’ (Deleuze, 1997). Of course, this metaphorical use of the term – touch - does not suggest that any tangible, physical contact had taken place between the viewer and the ‘object’, the film, but the sense of community was palpable. The images seemed to construct a connection between individuals, affecting their interpretation of what they had seen. Deleuze understands ‘affect as a passage from one state to another and as something distinct from emotion’ (1997, p.181). Whilst watching such imagery, I can think about the images that I see with my mind but I can feel the experience with my body. My mind is affecting my bodily emotions or to employ Deleuze, from my shifting from one state, before I saw such images, to another state following the experience. This shift in states challenges the dominant position of my schooled ‘vision’ and proposes entanglements (Barad, 2007) of my senses that resist a certain hierarchy of knowing – the kind that is promoted within the classroom.

‘The pleasures of the [lower] senses are typically felt as bodily sensations, whereas the pleasures associated with the [higher] senses are not.’ (Parsons & Carlson, 2008, p.178).

From where does this pleasure of the text derive? What is being looked at is essentially celluloid projected onto a screen. The content of this celluloid is something that the majority of people in the audience would have little direct connection. By this I mean that those in the audience did not experience that which is in the film at the same time that the footage was created. However, part of the pleasure is perhaps derived from a psychological agreement that such images can bring the past into the now, bring a memory into the present – both colliding in this moment (Heidegger, 1996). As a result, there is little to distinguish this ‘past’ from the ‘now’ as both are entangled in an experience. This negates the difficulty that I might have in trying, as I do, to hear the sounds
that Princess Margaret (fig. 25) may have heard at the time of filming, as if that might bring me in some way closer to the event. However, I have to reside myself to not being able to hear what she may have heard even though the technology that transmits the sounds enables me to decipher those particular sounds, voices. My ruminations are not necessary nevertheless, if I consider that the event has come to me and is with me in the present.

Whilst the relationship of vision to touch has been explored elsewhere, (Klatzky & Lederman, 1987) the relationship of hearing to touch has been less subject to critical analysis. The objects of vision seem ever present but whilst the objects of sounds also seem to be ever present, the sounds that on occasion emanate from their surfaces seem to disappear into the ether. Some sounds might reside in the background unless they become noticeable as noise or noticeable as intentional speech or music. The latter would possibly have impact on the viewing experience but the former as noise, or as peripheral sounds might go ‘un-noticed’. They might be un-noticed because such sounds might not be attached to something that can be seen.\(^\text{183}\) There seems always to be sound however, and never silence. During the viewing of these films, there are sounds from the equipment that is running the films, there are sounds from people in the auditorium. These sounds travel through the air causing physical sensations in the body, regardless if one has the pathology of hearing intact. If the skin as an organ is a receptor and producer of information then it would be difficult to theorise any separation of these sensations from the body, that is the body and the messages that the body receives. Residing in the background, sounds may not be seen and if they are not seen, then perhaps they are not heard.

The relations between photographs, between children and between photographs and children and the senses (Di Bello 2008) that are involved in their production has shifted a sensory focus from hearing and vision to the body. It is through a concept of the body as a receptor and producer of knowledge that children can ‘become’ a ‘body’ of photographic knowledge. As a

\(^{183}\) Perhaps some children go un-noticed in an educational context that privileges the visual, particularly if they are less likely to emanate sound.
body of photographic knowledge, children move with photography, rather than photography being a separate entity with which they engage.

Figure 25: School Film Extract. Date Unknown (School Archives)
Redacted in line with GDPR

Figure 26: School Film Extract. Date Unknown (School Archives)
Figure 27: School Film Extract. Date Unknown (School Archives)
Anonymised in line with GDPR
The School (ed) Photograph - Again

In that which I have designated to be part of a cyclical process, I briefly return again to the school photograph. (fig. 28) The compositional formation of those within the photograph above is such that the reader could be forgiven for thinking that it is the same photograph as that presented toward the beginning of this plateau (fig. 7). This repetitive process that results in the school photograph tends to erode any sense that there is difference (Deleuze, 1994) – difference of place, of individuality. However, differences can also arise within such repetition. I am reminded of Alison Knowles’ performance *The Identical Lunch* (1969) which reflected her habit of eating the same lunch – ‘a tuna fish sandwich on wheat toast, with lettuce and butter, no mayo and a cup of soup or a glass of buttermilk’ – at the same time every day. As a performance this enabled her to notice the differences that occurred through this repetition. Repetition does not negate difference. The school photograph may seem a repetitive process and to some extent it is, but differences arises in every one of these events, but these go unnoticed and appear inconsequential. Differences also arise in ‘reading’ the school photograph; in understanding the school photograph – an understanding that is less reliant on vision through which an initial engagement takes place.

When I look at the school photograph above, I do so with my eyes but this process is merely a pathological route through which I have access to the image. The feelings that I have about the event cannot be reduced to words, for to do so would be to look at the image and describe it in a language that is based on English in its written and spoken form and this would possibly miss the qualities that the visual image affords. It is an engagement that is beyond words.
(Yamada-Rice, 2010) My aural memory may not be as prominent in my thoughts as my visual memory but my body memory, what I feel through my skin, cuts across these sensory modalities. The memories that vision ignites is perhaps what actually dictates a departure from that modality, activating or igniting other sensory modalities. The experience of engaging with the school photograph, therefore, is perhaps somewhat beyond or outside of that deemed to be a visual experience. I might suggest that the photograph seems to remember everything (Kracauer & Levin, 1993) – but perhaps I should heed the comments of Susan Sontag, (1979) who suggests that ‘Photographs are not so much an instrument of memory as an invention of it or a replacement’. (p.128) Perhaps memories are in the same way that stillness might reside in the photographic image itself but memories unlike the stillness, need a viewer to be in contact with the image in order to ignite them. The stillness, however, is also ignited into a narrative when in contact with a viewer. This type of contact is central to a different kind of knowing through photography, but it is one that is difficult to measure and hence is not recognised as valid by the educational institution that is built on a cyclical rotation of engendering sameness. That sameness represented to some extent through the school photograph is sustained by remembering the event and this process assures the cyclical nature of that event. Memories in this sense are not about events that have happened in the past necessarily but events that are also yet to happen. These future memories thus contribute to a schooled identity that is yet to emerge.
To Sensing…

Knowledge of Bodies, Bodies of Knowledge.

The original School shield with the school motto - ‘Per Oculos Non Aures’ proposes that the hearing-impaired child learns through the eyes and through the ears. Despite some changes in this rhetoric through the history of this School, the underlying premise that relies on a conception of the senses as separate entities, remains. However, the notion of an artificial sensory divide

Figure 29: Original School Logo, 1949 (School Archives) Anonymised in line with GDPR

The original School shield with the school motto - ‘Per Oculos Non Aures’ proposes that the hearing-impaired child learns through the eyes and through the ears. Despite some changes in this rhetoric through the history of this School, the underlying premise that relies on a conception of the senses as separate entities, remains. However, the notion of an artificial sensory divide

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184 The original school shield includes on a scroll the Latin ‘Per Oculos Non Aures’. This translates to ‘Through the Eyes, Ears’, placing emphasis on these sensory modalities to that of learning.

185 As long ago as the 19th Century, William James (date) suggested that the senses are converged in childhood to the point of an experience that creates ‘one great blooming, buzzing confusion’. (ref) His starting point is one premised on an assumption that there is no separateness of the senses. A binary that seems to suggest that whilst a convergence of the senses results in a state of confusion, a separation results in a clear and less confused state. The latter of course can be easily aligned to the 19th Century philosophical trend that sought to establish the separation of the senses into those aligned with rationality, empiricism and a scientific methodology that demanded an objective, detached view of reality and one that could be controlled at will.
has increasingly become the subject of debate, challenged in scientific circles, (Joost X. Maier, Blankenship & Katz, 2015) and across other academic disciplines such as the humanities, (Paterson, 2007) philosophy and sociology (Callaghan, 2008) the arts (Di Bello & Koureas, 2010) and in literary based studies. (Syrotinski & Maclachlan, 2001) Such endeavors have attempted to displace established sight-based paradigms. Indeed, some academics have suggested there has been a sensual revolution (Howes, 2005) that more recently has sought to displace what was termed the ‘linguistic turn’ that has dominated late 20th century thought in the humanities and social sciences. In the education of hearing-impaired children, an obsession with English in its written and spoken form, continues to underpin educational pedagogy.

My investigation through the literature review seeks to build upon and extend the aforementioned narrative and engage with the proposition of an entangled nature of the senses, (Barad, 2007) the body, and a materiality of photography (Edwards & Hart, 2004; Tolia-Kelly, 2016) that focuses on relations between the ‘visual’ (photography and film – digital and analogue) the ‘material’; the body and the new kinds of thinking through photography that might emerge. In line with some commentators, (Olin, 2012) a visual conception of looking will be challenged, proposing a link between photography, photographic imagery, photographic practice, the body and thinking – a thinking that is evident across a unified body rather than within particular sensory modalities.

186 For a discussion that challenges the validity and usefulness of ‘paradigm’ see Maxwell, J.A Paradigms or toolkits? Philosophical and methodological as heuristics for mixed methods research in Mid-Western Educational Researcher. 2011, Volume 24, Issue 2, p.27-30

187 The position, whose most famous commentator was Roland Barthes saw the world as a text that could be read. All visual and aural based products are considered to be texts that can be read.
Perhaps it is time for a shift in that proposed in the original school logo -
‘Per Corpus Didici’ - to something that ‘feels’ more like:

‘Through the body I learn’
PLATEAU: ‘Feel What I’m Hearing’

‘Describe the aroma of coffee. - Why can’t it be done? Do we lack the words? And for what are words lacking? - But how do we get the idea that such a description must after all be possible? Have you ever felt the lack of such a description? Have you tried to describe the aroma and not succeeded?’ (Wittgenstein 1978: sec.610, p.159)
Entangled with Literature

I love coffee, the look, the smell, the taste, the touch of the cup and of course, the sounds that accompany the experience. Indeed, this experience is initially an auditory one, as the sounds that emanate from the coffee shop precede the visual and wider sensory experience that ensues. However, to privilege a particular sensory engagement in this encounter does not encapsulate that which I feel engages with all my senses. How can I communicate this experience to others in a manner that reflects my encounter? I might take a photograph of the cup of coffee in front of me (with my mobile phone of course which despite the name, functions mainly as a camera rather than a phone) or at least the pattern created by the Barista which adorns its surface – I might share this photograph with family on social media. The photograph communicates the look of the coffee but struggles to transmit my wider sensory entanglement where for instance, the sounds of that which surround me might initiate a visual scene within my mind. This entanglement as I describe it, just might constitute a form of synesthesia\footnote{For a discussion of the historical roots of synaesthesia see: Hochel, M., & Milan, E. G. (2008). Synaesthesia: The existing state of affairs. Cognitive Neuropsychology, 25 (1), 93 – 117.} which according to some commentators, (Plantinga, 2009) can present itself as either strong or weak.\footnote{Synesthesia: The word comes from the Greek \textit{syn} and \textit{aesthesis}. \textit{Syn} means ‘with’ or ‘together’ and \textit{aesthesis} means the senses, feeling or sensations. For the reader who wishes to learn more about synaesthesia, I recommend the following book: \textit{Wednesday is Indigo Blue: Discovering the Brain of Synesthesia}. By Richard E Cytowic and David M Eagleman} The strong type is underpinned by medical evidence which asserts that there is a genetic foundation for such, something that may run in families. (Baron-Cohen, 1996) The second however, the weak type is perhaps something that most people experience. I wonder whether my experience of this coffee encounter could be considered as a weak type of synesthesia where ‘the stimulation of one sense cause[s] a perception in another’ (Beugnet, 2007, p.73) or where certain sounds from this encounter are experienced from the shapes created on the top of my coffee (Cytowi, 2003). Or perhaps the sounds associated with this experience affect the colours that I perceive. (Ward, Huckstep & Tsakanikos, 2006). This entanglement of my senses are experienced...
elsewhere: when I am out for a meal, the sound of music in the background somehow affects the taste of what I am eating and according to some research, the shape of my cutlery further impacts on the taste of my food. Smith (2008) discusses the apparent olfactory interference with perceived taste in the case of wine, suggesting that the perceived sweetness of a wine can be altered by the presence of a vanilla aroma which causes the wine to ‘taste’ sweeter. It may be that such sensory experiences merely reflect what some have termed a state of “blooming buzzing confusion” (James, 1950). Despite this multi sensorial encounter, in order to communicate this experience, I have to enlist the help of words – words, in conjunction with the photograph, aid my coding of this experience in a manner that can be more easily de-coded by the receiver. My multi-sensory experience has now become a multi-media one. However, rather than consolidate the experience, words seem to further complicate my ability to express this experience. The words that I choose seem to lie outside of my sensory experience, operating on a different track to my sensory experience and whilst they may support my visual representation of this experience, they don’t seem to integrate with it. The words and the image seem to remain on separate tracks with little interference between the two. In addition, there also seems to be a limit to what the words can express of this encounter. Perhaps Wittgenstein (1922) in his much-quoted position was correct. That:-

‘The limits of my language are the limits of my mind. All I know is what I have words for.’ (1922)

The de-coding of this experience by the reader through the words that I present is legitimised if one accepts a particular type of logic that is inherent in

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190 In a research project entitled, ‘The taste of cutlery’, Harrar & Spence (2013) ‘The taste of cutlery: how the taste of food is affected by the weight, size, shape and colour of the cutlery used to eat it’. Flavour, (21), three experiments were conducted to investigate whether food tastes different when the visual and tactile properties of the plastic cutlery from which it is sampled were altered. The conclusion was that there was indeed an affect on the way that certain foods tasted depending upon the shape, size and colour of the implement that was used. The skeptic in me finds it difficult to disassociate the economic value of such research from that which questions the role of the senses within such interactions. Nevertheless, these findings challenge the work of earlier researchers who perhaps tended to assume that the ‘senses’ could be easily demarcated both philosophically and practically.
Wittgenstein’s ruminations – that my ability to think is restricted by the limitations of my language. It is an implicit logic that dominates the discourse in relation to the education of the hearing-impaired child in an oral context. Whist to defer to this logic, stabilizes meaning and enables a particular communicative act, it also restricts communicative possibilities. Indeed,

‘concentrating solely on linguistic meaning, such readings deny the very element that makes visual imagery of all kinds distinct from texts, that is to say, its sensual immediacy. This is not at all the same thing as simplicity but there is an undeniable impact on first sight that a written text cannot replicate’ (Mirzoeff, 1999, p. 15)

Perhaps, this ‘impact’ initiated by ‘first sight’ is less sensory specific than suggested and is more in line with an alternative logic – a logic of sense (Deleuze, 2004) which hitherto has perhaps been eclipsed by a logic which defers to a rationality.

If one embraces a logic of sense, then clearly, all that I know is not - all that I have words for...
‘While the acoustic-physiological properties of sound are important, in themselves such data does not help us to account for our use of memory, anticipation, feeling, values, and a host of other nonphysical and non-sensory constituents of experience. The perception of sonic properties alone, for example, do not determine the aesthetic qualities of a musical performance, just as visual properties alone do not determine the appreciation of the visual arts’ (Muldoon, 1996, p.I)
‘In order to see a photograph well, it is best to look away or close your eyes’ (Barthes, 1982, p.53)

It is fair to say perhaps, that an individual’s engagement with the school photograph is momentary, even though such an interaction might initially be intense. These photographs may be on permanent display in schools but even there, the visual contact is transitory as children and adults walk past with little more than fleeting glance. As time passes, such images seem to reside into the background, forgotten and become part of the architectural backdrop - no more significant perhaps than the chairs, the tables, the carpets and decor. These photographs might be renewed periodically and become of interest again momentarily, but certainly my own engagement with the school photograph in this context is predominantly through what I remember seeing ‘in’ the image, when I am no longer looking at the photograph. In this sense the photograph travels with the viewer rather than just something that the viewer travels past. The suggestion by Barthes that you can see a photograph by looking away seems counter intuitive but Barthes is highlighting the possibility of an imaginative engagement with the image, what

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191 Is this an example of the studium - photographs that may have passing interest ‘I glance through them’ Barthes, R. (1982) *Camera Lucida: reflections on photography*. London: Cape. (p.41)
192 This may be the kind of redundancy that Flusser refers to in the quotation on page 133.
193 See an exhibition by Steve McQueen in which year 3 pupils from schools across London are photographed by class https://www.tate.org.uk/whats-on/tate-britain/exhibition/steve-mcqueen-year-3

Figure 30: School Photograph 1990. (School Archives) Anonymised in line with GDPR
he might call the punctum (Barthes, 1982) ‘to allow the detail arise of its own accord into affective consciousness’ (p.55) In looking away, perhaps a space is provided for one to think about an image or as Victor Burgin (1982) has suggested, to think through photography. As was proposed in the opening of the preceding plateau, the school photograph, considered as a material object is discursively constructed to engage the sense of sight. It is the culmination of a performance that is devoted to vision. However, looking away from the school photograph challenges this notion and seems to ignite another form of engagement where a vision-based ‘knowing’ becomes more peripheral. Perhaps this peripheral space engages a different way of knowing – where even a sense of ‘not knowing’ (Polanyi, 1946; 1983) something might have some value. Following the thesis that other senses benefit when one sense is deprived - a space for thinking\(^\text{194}\) that does not default to vision, disrupts a sensory hierarchy to knowing and justifies my proposition that photography might not be visual at all.\(^\text{195}\)

Several academics (Kajimura & Nomura, 2016; Phelps, Doherty-Sneddon & Warnock, 2006; Smith, 2017) have pursued the value of such interactions to learning, investigating the value of ‘looking away’ to a sense of knowing and understanding. Such a proposition challenges the hegemony of the dominance of sight. Hence, it is worth more closely exploring the relationship between ‘looking away’, closing your eyes and a sense of ‘knowing’ before of course, returning to what might be at stake for the hearing-impaired child if one pursues this narrative.\(^\text{196}\)

The aforementioned research concluded that:

‘when asked questions, children often avert their gaze and that the frequency of such gaze aversion (GA) is related to the difficulty of cognitive

\(^{194}\) In a teaching context, it might be difficult for a teacher to determine if a child is thinking or if a child has simply given up.

\(^{195}\) The centrality of vision to other activities has been questioned by some academics. See Ingold, T. (2010) ‘Ways of mind-walking: reading, writing, painting’. Visual Studies, 25 (1), pp. 15-23. The question is posed as to whether walking is a visual activity.

\(^{196}\) Effect on theory of mind (Tom) – need to encourage eye contact as part of a communicative act.
processing, suggesting that GA is a good indicator of children’s thinking and comprehension.’ (Doherty-Sneddon & Phelps, 2007, p.93)

Gaze Aversion (GA) therefore, has been embraced as potentially useful during pedagogical interactions as it has been considered as a non-verbal indication of a child’s level of concentration (Glenberg, Schroeder & Robertson, 1998). This disengagement through averting the gaze in face to face communication, is seen to open a space in which the recipient can have time to think and respond. It has been suggested that the more difficult a question posed, then the greater length of time is devoted to GA. (Doherty-Sneddon, Phelps & Calderwood, 2009) What might be the value of looking away from photographs in a manner that is similar to this form of GA? Can GA provide opportunities to think through photography rather than rely on a semiotic approach that anchors the eyes to an image as though there is something ‘in’ an image that demands deciphering. Looking away from a photograph in order to activate a thinking process however, is counter intuitive but also implies that something else becomes the subject of vision and not the photograph itself. As James Elkins (1997) has suggested,

‘There is no looking that is not also directed at something, aimed at some purpose. Looking is looking at or for or just away. Everything that the eye falls on has some momentary interest and possible use.’ (p.22)

How might looking away at another, at something else, impact on the interpretation of the photographic image that was looked at initially? When hearing-impaired children look away, perhaps they are disengaging their hearing in addition to their vision as their hearing might to some extent be dependent upon their vision. This would minimise what some have suggested as cognitive overload (Kajimura & Nomura, 2016). However, such a proposition cannot be entertained within a discourse of vision because, listening in a traditional sense, is deemed not to be engaged in activities that are visual-based. However, engaging with a sensory shift but in line with Roland Barthes assertion, is it
possible that I could hear a photograph by looking away from the surface - or analogous to the example previously stated, by disengaging my hearing?

That implied in the aforementioned research suggests that looking away from a speaker, or in what I have suggested to look away from a photograph is a passive activity but considered as a space for a kind of active thought, then the reverse could be a valid proposition. Looking away in order to ‘know’ however, runs counter to many of the interactions with hearing-impaired children where in an educational context it is frequent to hear the phrase, ‘look at me when I’m talking to you’. This is not surprising, given the overwhelming literature (Harris & Mohay, 1997; Waxman & Spencer, 1997) that dictates a pedagogical approach that if the hearing-impaired child is to understand a teacher or guardian, then they must be engaged visually through lip-reading as well as potentially through audition. This position however, contrasts with other studies (Doherty-Sneddon, Bonner & Bruce, 2001) that have suggested there to be an interference in understanding if a child attends to facial expressions:

‘It was found that looking at a face interfered with children’s abilities to listen to descriptions of abstract shapes. Children also performed visuospatial memory tasks worse when they looked at someone’s face prior to responding than when they looked at a visuospatial pattern or at the floor. It was concluded that performance on certain tasks was hindered by monitoring another person’s face.’ (p.909)

Whether interference or an aid to understanding, this approach suggests a cross-modal interaction between vision and hearing in the development of an understanding. However, there seems an assumption that the visual will override the aural in such communicative acts. One area where the scientific

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198 This happens whenever I visit the cinema. When viewing a film, I can hear the sounds of people speaking coming from the speakers behind me but somehow, my eyes seem to persuade me that the sounds are coming from the mouths of people on the screen, the visual overriding the auditory.
base of such a proposition is evidential is in the McGurk effect. In 1976 scientists investigated and ‘discovered’ the importance of the eyes over the sense of hearing by demonstrating that the eyes could indeed, fool the ears in a peculiar phenomenon named the McGurk effect. (McGurk & Macdonald, 1976)

To evoke the illusion of this effect, subjects were shown a video of a speaker articulating the /ga/ sound, which is pronounced with the back of the tongue on the soft palate. At the same time, the audio of the /ba/ sound, pronounced with the two lips together, is presented through speakers. Simply averting your gaze from the speaker's lips results in a marked change to the phoneme that is heard. The gesture that produces the audible /da/ phoneme is in one sense a midpoint between those which produce the /ba/ and /ga/ phonemes. This McGurk effect occurs when conflicting auditory and visual information about speech is reconciled into a kind of 'average'. When, in these cases, information from vision conflicts with what you would expect to experience through another sense modality, vision exerts its influence and alters experience in the other modality. (BBC, 2012) The McGurk effect may not give the same results if tested with respondents within different cultural settings who are deemed to have developed different hierarchical sensory systems than that which is dominant in western societies. However, the issue of cultural differences in response to such an activity is pertinent if we consider the hearing-impaired child to be part of a cultural group that is defined by a hearing loss that dictates a difference from the dominant group and culture. However, there are also different cultural groups within the hearing-impaired community represented by those who use the term ‘Deaf’ with an upper case ‘D’ to reflect a sociocultural understanding of human identity and the lower case ‘d’ ‘deaf’ to reflect a more normative, and audiological and pathological understanding of human beings.

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199 This does suggest however, that such was always there simply waiting to be discovered or uncovered in a Foucauldian sense.

200 As Howes (2005) points out, the ranking of the human senses in terms of their perceived credibility and relation to the rationale varies from one culture or social context to another.

who cannot hear. In general, the latter is akin to those children who are/ have
been educated in an oral\textsuperscript{202} context and the former to those who have been
educated using a signed or manual mode of communication\textsuperscript{203}.

For Wober (1966), the possibility that there might be culturally
differentiated responses is because:

‘the pattern of relative importance of the different senses, by which a child
learns to perceive the world and in which pattern he develops his abilities.
These patterns may be predominantly visual in one culture, while in
another culture, auditory and proprioceptive senses may have a much
higher relative importance’ (p.182)

The discourse around visuality seems to secure the dominance of vision
in relation to perception, particularly within the cultural context of this thesis\textsuperscript{204}. If hearing-impaired children (‘deaf’ children) are to be considered as a cultural
group however, then their construction as visual learners is one within which
they have been subjected to the dominant visual centric position. This position
has impacted on their perception which has been overtly visual. The
pathological explanations that suggest that the hearing-impaired child is a visual
learner, therefore is itself underpinned by cultural explanations that have an
embedded history within western culture.

The dominance of vision in perception, however, has been challenged by
others\textsuperscript{205}, who have demonstrated how different senses blend together in aiding
the perception of speech. The concept of ‘looking away’ in order ‘to see a
photograph well’ (Barthes, 1982 p.53) challenges this visual conception of

\begin{footnotesize}
\begin{footnotes}
\item[202] According to McLuhan McLuhan, M. (1964) \textit{Understanding media : the extensions of man.}
London : Routledge &amp; Kegan Paul. , Gutenberg’s invention of the printing press was the
catalyst for radically altering attitudes towards writing and speech in favour of the former. That
which characterises the former is perhaps as being dependent on the eye over other sensory
modalities. In asserting that such a dependency is cultural, McLuhan, notes that interestingly
this change did not take place among indigenous peoples whose cultures remained at the level
of ‘oral-aural’ emphasis, with an associated emphasis on the privileged position of the hearing
ear.
\item[203] This is of course an oversimplification of a complex set of social. psychological, educational
categorisations that seek to homogenise particular groups.
\item[204] Underpinning this proposal is that which considers all of those individuals within a given
society as a homogenous group,
\item[205] Lawrence Rosenblum describes research examining how our different senses blend together
to help us perceive speech. See: ScienceDaily (2009) ‘Read My Lips: Using Multiple Senses In
Speech Perception.’. \textit{Science News.}
\end{footnotes}
\end{footnotesize}
looking but whilst such a challenge will provide me with a plateau from which I can leap, I am mindful of the discourse within which my journey through this thesis is situated – one that I will have to continually push against – after all, photographs are made to be looked at!

Looking away from a photograph is a choice\textsuperscript{206} but if sight in the pathological sense, is something that the body does not have, then how is it still possible to look away? This is a conundrum that can be relative to the concept of ‘looking’ that is engaged in such a discussion. If this concept defers to vision, then it would be reasonable to suggest that there would be a barrier, dictated by a common sense that defines an engagement with photography. However, as James Elkins (1997) has suggested, ‘Blindness is not the opposite of vision but it’s constant companion’ (p.205)\textsuperscript{207} The assertion that blindness is a companion of sight is to highlight a relational quality that defies sensory uniqueness. One beneficiary of such a proposition is reiterated by Jonas (1954)

“Blind men can ‘see’ by means of their hands, not because they are devoid of eyes but because they are beings endowed with the general faculty of ‘vision’ and only happen to be deprived of the primary organ of sight.” (p.511)\textsuperscript{208}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{Figure31.png}
\caption{Figure 31: Bruce Hall. From the Film ‘Shot in the Dark’ by Frank Amaan (2017) Reproduced with permission of the author.}
\end{figure}


\textsuperscript{207} Douglas McCulloh’s: McCulloh, D. (2012) ‘Shot in the dark: blindness and the zero point of photography’. \textit{Afterimage}, 39 (6), pp. 7-10., investigation into the world of photography undertaken by blind people, highlights the different working practices that are employed when people with a visual impairment engage with a medium that common-sense might assume to be dependent upon the sense of sight. Visit:

\textsuperscript{208} See also Jose Saramago’s novel \textit{Blindness} 1995 depicts a city in which everyone is Blind.
Douglas McCulloh’s (2012), investigation into the world of photography undertaken by people who are blind,\textsuperscript{209} highlights the working practices that are used when people with a visual-impairment engage with a medium that one might assume is dependent upon the sense of sight alone. In discussing the approach to photography by the blind photographer Evgen Bavear, whose photographic work is deemed to be a reflection of what he visualises, Douglas McCulloh (2012) forces a ‘reevaluation of our ideas about sight, blindness and photography’ (p.8). He further discusses the ways in which other blind photographers engage their senses when working with photography.\textsuperscript{210} Henry Butler, is one such photographer, described as an ‘acclaimed blues pianist’ who is ‘highly attuned to the auditory world, using sound to guide his street shooting in New Orleans’ (p.9)

Figure 32: Henry Butler (photographer); 'Untitled'. Reproduced with permission from the family of Henry Butler.\textsuperscript{211}

This kind of sensory compensation or enhancement, directed toward hearing or listening is perhaps, a kind of auditory imaging (Reisberg, 1992) that

\textsuperscript{209} I use this grammatical structure so as not to define an individual by their impairment.
\textsuperscript{210} In opposition to this somewhat serendipitous approach to constructing photographic imagery, by those with a visual impairment, McCulloh further highlights the ways in which the acquisition of photographic knowledge by those who have ‘normal’ vision, leads to a narrowing of that vision or what he terms ‘progressive blindness’. McCulloh, D. (2012) ‘Shot in the dark: blindness and the zero point of photography’. Afterimage, 39 (6), pp. 7-10.
\textsuperscript{211} Visit henrybutler.com
relies upon an auditory experience. This experience shapes how a photograph might be constructed by someone who is lacking the pathology of vision. The notion of auditory imaging seems to challenge vision-based perception and has been described as:

‘the introspective persistence of an auditory experience, including one constructed from components drawn from long-term memory, in the absence of direct sensory instigation of that experience.’ (Intons-Peterson, 1992, p.46)

The assumption that one can create an image in the mind, based upon auditory experience (Hubbard, 2010) and then replicate this image through photography is problematic when considered in relation to the hearing-impaired child. If the sound of waves crashing against rocks for example, have never been heard in a traditional sense then how might a hearing-impaired child have the ability to conjure up an image based on an absent sound-based experience? Evelyn Glennie (2002) reverts to a status quo position where vision figures prominently in a process of listening:

‘We can also see items move and vibrate. If I see a drumhead or cymbal vibrate or even see the leaves of a tree moving in the wind, then subconsciously my brain creates a corresponding sound.’ (p.50)

In this scenario, the visual cue triggers the concept of a sound, but Evelyn Glennie has experienced sounds in her earlier childhood which may have influenced her process of connecting sounds with images or what she sees with sounds.

‘I started going deaf at the age of 8 due to nerve deterioration. I began to complain about my ears being sore when I was riding on my bike in strong winds. I went to the doctor and was given some ear drops to help. However, it gradually grew to the point where I avoided going outside to avoid the wind. At the age of 11 my hearing became so poor that I needed to be fitted with hearing aids immediately.’ (Glennie, 2020, p.4)

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212 Recent research has highlighted the role of auditory experience to the development of language in the pre-natal child. Whilst this has been an accepted stance, it has been recognised that this is greater than previously thought. See: Gervain, J. (2018) ‘The role of prenatal experience in language development’. Current Opinion in Behavioral Sciences, 21 pp. 62-67.

213 To see the work of Evelyn Glennie, the reader should visit: https://www.evelyn.co.uk/
The narrowing of the possibilities through a concentration on image, blindness and sound however, could be unhelpful to a thesis that intends to develop a broader understanding of sensory engagements. Nevertheless, on a superficial level at least, common-sense dictates that blindness will have an obvious impact on photographic engagement and that conversely, a lack of hearing would have little, if any. However, my proposition implies a conception of sight that is beyond that dictated by pathological explanations of seeing. It is something that exists elsewhere in/on the body. If one adopts this proposition, then it becomes reasonable to ask where such sight might be located in/on the body. In their exploration of the haptic, Roberta Klatzky et al., (1987) invite the reader to a thought experiment.214

‘First, think of the attributes you would expect to see if you were looking at a cat. You would probably first think of the visible parts (e.g four legs, tails, whiskers) perhaps imagining their particular shape or size. Next suppose you were touching a cat without being able to see it. Which attributes now come to mind? You would be likely to think of the softness of the cat’s fur, the warmth of its body or its movement as it breathed. Our simple experiment suggests that object dimensions may be differentially salient for visual and haptic exploration.’ (p. 356)

The example suggests a loosening of the hold that a visual conception of looking places on the individual hearing-impaired child, teaching pedagogy and an engagement with photography. In proposing that sight might exist across the body, across the skin rather than localized in particular areas of the body, the dominance of vision in perception is challenged. Nevertheless, a tension is evident between a haptic notion of looking, evident across the body and a dominant language modality that defaults to a particular notion of reading, that is reliant on vision. Whilst there are different notions of vision, there are also different notions of reading. If vision is present across the body as suggested, touch is localized in the hands and in the context of the images in Fig. 33, the

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214 The reader may wish to jump to the Plateau, ‘Touch What I’m Feeling where this activity was undertaken with the research group.
‘reading’ of such is felt through the hands, through contact with the language modality of braille.

Figure 33: Patrick Tosani, Portrait n°1, 1984, 130 x 100 cm, photographie couleur c-print, ©Adagp 2021

Figure 34: Patrick Tosani, PO 43, 1985, 51 x 41 cm, photographie couleur c-print, ©Adagp 2021
The assumption underlying this engagement is that the content in photographic imagery can be understood through a form of English represented in braille and that this can be equated with the visual flat surface form of the photograph which in this instance, the braille obscures.\(^{215}\) However, it is an assumption that begs critical engagement. In the first instance, ‘feeling’ language through braille and reading a photograph through the eyes are not necessarily synonymous. Furthermore, the interpretation of an image through braille and the interpretation of an image through reading a written description cannot necessarily be equated. These assumptions are questionable and indeed suspect, given that the originator of the images in question is sighted and hence, introduces an inequality based on the presence and absence of vision. This binary is present in the work of figures 35, a and b. In what ways is it permissible for the sighted to ‘speak’ on behalf of those who are without this modality? This is perhaps a side issue so I will return to a notion of a tactile reading of photography, transferring a system of braille to that of photographic imagery as in figures 35, a and b.

The outline of a photographic image on the left is raised relative to its perceived importance of certain areas, resulting in the image on the right. Those deemed to be visually impaired\(^{216}\) can trace the outline of the image on the right with their hands and this, it is assumed will re-present an image of similarity in

\(^{215}\) Visit: [https://br.pinterest.com/pin/289778557248341170/?lp=true](https://br.pinterest.com/pin/289778557248341170/?lp=true)

\(^{216}\) The subject of how people who are blind engage with their surroundings has provided much ‘food for thought’ for many sighted academics.
the mind of the receiver. It is a similarity that is proposed through touch rather than vision. However, perhaps touch is limited as a means of gaining information from an image in this way and merely reinforces the image as a static entity. The assessment of movement in an image such as those presented in figures 35 a and b, relies upon an assumption that such images are static. Common-sense of course would suggest this to be the case, but to a sighted person perhaps, movement is suggested by the positioning of both arms. In order to be in these positions, the arms must have travelled, so movement is inferred. The subject of movement within images has been of interest for some researchers (Lappin & Kottas, 1981; Marr & Ullman, 1981) whose work has testified to a biological basis of vision. For some (Geisler, 1999) this is evident because moving objects in reality leave behind streaks in the visual system when the viewer tracks an object. This has been used as evidence of how streaks in a photograph could be read as movement. It could be assumed that a visually impaired person might not be able to read such streaks as movement if represented in braille - particularly if that which is dependent upon a biological based vision held true. However, in one study, (Kennedy, Gabias & Piertantoni, 1990) it was found that blind people were able to detect motion in raised lines comparable to sighted people. This challenges the evidence for the biological basis for vision, indicating a greater role for touch in vision. How can an image be created in the mind of someone who is deemed to have been lacking in visual-based experience? Is the ability to visualise for the visually-impaired individual more dependent upon the experience of sound rather than vision? This of course would be dependent on where sounds actually exist – are they attached to an object from which such sounds might emanate, or do they exist in the air in much the same way that we might consider odours to fill the air. The former would possibly be necessary for those with a visual-impairment to

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217 There appears to be an abundance of research that assumes a biological based function of vision. Margaret Livingstone’s contribution however, ‘Vision and Art: The Biology of Seeing’ Livingstone, M. (2002) Vision and Art: The Biology of Seeing. New York: Abrams. is one example where the biological functioning of vision is extended into the domain of art. This is a compelling read, but nevertheless continues to perpetuate the notion that seeing is essentially a visual activity premised on the biological functioning of vision.
be able to attach sounds to objects so that objects are able to ‘have’ meaning. If sounds just exist in the air as was remarked by Aristotle, ‘sound is a certain motion of air.’ (350 B.C.E) and cannot be attached to a source, then their meaning might be more ephemeral. Regardless, that which possibly unites both the visually-impaired and the hearing-impaired is the impact of language, in the traditional sense, on the ability to visualise.218

Language delays appear to be fundamental for both blind (Perez-Pereira & Conti-Ramsden, 1999) and hearing-impaired (Qi & Mitchell, 2011) children. If a thesis is pursued that language is required in order to think, then perhaps the impact of language delays that enable children to visualise is inevitable. Language experience based on auditory experience however, may have greater ramifications for the hearing-impaired child compared to the visually impaired individual. As reiterated by Meadow, (1980)

‘The basic deprivation of profound deafness is not the deprivation of sound; it is the deprivation of language. The deaf child cannot communicate clearly about her own needs, nor can her parents, teachers, and friends communicate with her easily. We take for granted that a four year hearing member of any culture has a complete working grasp and knowledge of her native language.’ (p.19)

The issue of what constitutes a native language for this cohort, however, is complicated but we might assume that it does not refer to visual language, if such a thing exists. If a kind of visual language does exist, then it is further assumed that such is innate within the child and does not require to be taught. Is there a critical period during development that a child will more easily acquire visual language skills in a manner that some believe all children will acquire verbal language? (Chomsky, 1976) 219 In what ways might an engagement with visual language be dependent upon a proficiency with the written and spoken

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218 There are also children/ adults deemed to be deafblind. Visit https://deafblind.org.uk/ for more information.

219 Noam Chomsky proposed the idea that humans are born with a Language Acquisition Device, also known as LAD. It is said to be a mental faculty that enables children to learn the grammar of a language and this innate knowledge is called Universal Grammar. This naturalistic approach to language development differs from that of behaviourist B.F. Skinner who claimed that language is learnt and not innate.
language modality? If to be able to construct images in the mind is dependent
upon language, then such a proposition challenges more established doctrines
that suggest that thinking through images bypasses the constraints of thinking
through words. For Freud (1927) it is certainly a form of communication that
precedes language:

‘Thinking in pictures, stands nearer unconscious processes than does
thinking in words, and is unquestionably older than the latter both
ontogenetically and phylogenetically’. (p.359)

Thinking ‘in’ pictures, however suggests that the pictures that are thought ‘in’
are static. Thinking through photographs or through pictures suggests a
processual engagement, a constant moving through pictures in a philosophical/
psychological sense where the pathological sense of sight is negated. This is
evident in the photographic working practices of several photographers who
describe themselves as visually impaired. Peter Eckert (2019) is one such
photographer who describes himself as a blind photographer.220 We might
assume therefore, that his seeing is not aligned with a concept of looking that
has dominated the discussion earlier in this thesis. Peter Eckert describes
himself as ‘a very visual person, I just can’t see’. (Eckert, 2020) If we accept that
eyes in a pathological sense are capable of vision, but that this differs to a
notion of looking, then it is reasonable to suggest that Eckert is proposing a
different kind of vision - a kind that embraces different sensory modalities that
does not necessarily default to vision.221 In what ways can this notion of looking
construct my reading of photographs as a sighted, hearing person? How can I
access the photographic work Peter Eckert and how might this differ if I was
hearing-impaired?

220 Visit: https://peteekert.com/
221 A ‘Touch Sight’ camera has been developed by designers, Chueh Lee, Liqing Zou, Ning Xu, Saiyou Ma, Dan Hu, Fengshun Jiang & Zhenhui Sun for Yanko Design. Visit:
https://www.yankodesign.com/2008/08/13/this-camera-is-outta-sight/
The photograph created by Peter Eckert in Figure 36 for example, does not appear to have a referent that I can recognise. Therefore, it does not seem to dictate a particular process of reading that is dependent upon the representational quality of the medium. It seems to demand something else.

How can an image of this type create meaning that I can access? In the first instance the image appears not to conform to any established generic conventions that might govern or guide a reading. Therefore, I have no reference point or category that I could easily place it within. One might say that this is a visually attractive image in its use of colours and compositional
arrangement of the main content, but I am not able to say with any certainty what the photograph is trying to communicate, if anything. Of course, even to suggest that I might be able to read something from the photograph is indicative of what I understand the purpose of photographs to be. I expect photographs to have a purpose, to be communicative\textsuperscript{222} and when this is not clearly the case, because I cannot read their contents easily, then this disrupts my ability to interact with the image. Perhaps a semiotic approach to ‘reading’ the surface of photographs as if the contents, the subject and layout could be read like any other written based text is a way of engaging with this image but this approach seems somewhat redundant given the surface content of this image. One fundamental difference in reading an image of this type and reading text is that the latter is driven sequentially and the former, more aligned with a Deleuzian (1984) nomadic meander. The image does not offer a clear entry point for the viewer though convention might dictate that I approach the image from the left, there is no stipulation to do so. Reading text however, tames the eye and stabilises it to a particular convention - it normalises the reading process. Reading images of this type tends to free the eye from such a convention and in so doing frees a thought process that would otherwise be constrained. Whilst I have experienced the production of similar photographic work by students as in that which is used to head this thesis, the institution, within which such images might be produced, further tames the output through conventionalised presentational methods. The image has to be mounted, aligned with other images and presented in a manner that appeals to conventional reading strategies. Hearing-impaired children have been schooled in reading in the traditional sense,\textsuperscript{223} but this learned behaviour may simply be redundant when

\begin{flushright}
\textsuperscript{222} This introduces a dichotomy - photographs are silent but at the same time, they ‘speak’ to me.
\end{flushright}
attempting to engage with an image of this type? I propose that reading photographs and reading written texts engage with totally different reading processes. Whilst written text unfolds in a linear manner and therefore dictates a linear process of engagement through the eyes, reading photographs of the type in Figure 36, does not necessarily dictate a similar linearity. Of course the former is not as straightforward as it might first appear and much research has been undertaken to ascertain how the movement of the eyes when reading can inform an understanding of how children read written texts. (Joseph, Nation & Liversedge, 2013) Reading photographs however, is perhaps much more of a non-linear process. That the visual access to an image is not necessarily dictated by a westernised convention that mirrors that expected in written English, particularly when confronted by that presented by Peter Eckert. (Fig 36) Indeed, where the eyes fixate on an aspect of an image is perhaps more complicated than that related to written text. Perhaps images cannot be easily broken down into constituent parts as sentences might be broken down. (Foulsham, 2015) Whilst the convention of reading text tames the eye, not all photographs observe such strict conventions. A viewer might fixate on particular parts of a photograph in an attempt to understand but this does not appear to be the result of an established convention.

Research which has focused around the visually impaired and their relation to visual-based activities has been prolific, cutting across scientific, psychological and academic interest as well as making an appearance in popular bookstores. Some parallels can be drawn with the hearing-impaired cohort. For example, how might the creation and interpretation of photographic hearing-impaired children may use visual rather than sound-based strategies in learning to read but that a lack of appropriate methods to support the development of reading in this manner continues to result in slow progress in reading development.


225 Eye tracking research at Southampton university.

226 In contrast, the images found in comic books could be described as the direct opposite of those presented by Ekhart in the viewer is directed to read in a particular manner that aids a particular reading.

based imagery be impacted if participants are defined as hearing-impaired. The auditory imaging effect might not hold true as previously described if hearing-impaired children do not have an auditory experience from which to draw. On the one hand, this might underpin an evident desire to be more visually orientated and solidify common-sense opinion.

‘Deaf photographers tend to use their vision to make up for the loss of their hearing. They are accurate and they look at things deeply. They give attention to little details that others may tend to overlook. This is a result of the fact that deaf people use their eyes not just to see, but also to listen. This grants them a special perspective in the visual arts.’ (Dalit Avnon in McKinsey, 2014)

‘Hearing the Photograph,’ (Fig 37) was an exhibition held at the David Yellin Academic College of Education in Israel, (2014) showcasing the work of Deaf and hard-of-hearing Israeli photographers. Dalit Avnon was one of the photographers whose photographic work was described as ‘highly detailed as a result of the particular close attention that is paid to her subject.’ (McKinsey, 2014) This close attention to detail, it is assumed is as the result of a deficit in...
hearing and reflects opinions already addressed and established in the previous plateau.\textsuperscript{228} The reader may wish to jump back at this point. Whilst this stance has been shaped by medical, scientific, educational and broader social and cultural assumptions, there are nevertheless examples where such opinions have been challenged. Indeed, conclusions suggest that the incidence of vision problems in the deaf population is actually higher than in their hearing peers. (Braly, 1938; Green, 1977; Stockwell, 1951) It is a stance that has been corroborated in more recent studies (Hollingsworth \textit{et al.}, 2013; Ostadimoghaddam \textit{et al.}, 2015)

‘Visual defects and ocular abnormalities have consistently been documented as being more prevalent in deaf individuals than comparative groups of hearing individuals’ (p.305)

In their literature review, the dominant view that positions the hearing-impaired child as a visual learner is questioned, dispelling it as one of mere convenience. If this is the case, then one might question in whose interest such a visionary stance might serve. Nevertheless, when Dalit Avnon asserted that Deaf people use their eyes to listen, she is perhaps asserting something quite different, that is beyond simple causational effect. It is a useful development for this plateau, because it suggests a flexibility in sensory awareness that resists the narrative of a linear cause and effect. That proposed by Dalit Avnon could suggest there to be a cross modality between the senses where the separateness of individual sensory entities and their unitary application to knowledge acquisition is challenged. Such opinions may historically have remained the province of those that sit at the periphery of scientific enquiry and whose opinions therefore can be easily displaced as lacking integrity. However, there are shifts in the scientific community who have uncovered/discovered\textsuperscript{229}

\begin{footnotesize}
\textsuperscript{228} I make a cross cultural assumption that vision pervades in different cultures, but I do not believe this to be the case more broadly. I use the example here as one where the modality of vision is fore-fronted and explicated through the use of photography. The assumption that dictates that this cohort of children are visual learners however, cuts across cultural boundaries in Deaf (D) and hearing-impaired (d) education.

\textsuperscript{229} Of course this position assumes that there was something there waiting to be discovered in the first place and that this merely needed uncovering.
\end{footnotesize}
evidence that indeed, such cross modality is tenable. The revelation that a boy missing the visual part of their brain can see, reported in the *New Scientist* (Klein, 2017) is reflective of a growing interest in cross modulation from this community. Whilst the methods employed in pursuit of such knowledge do not reflect my own interests, they raise awareness in the general public and given the context of such views, carry some credibility. Indeed, an educational hearing-impaired community may themselves be receptive to such an idea if it is initially framed from a scientific based stance. As the neuro-scientific basis of such opinions is also steadily, but with some conviction making an appearance
in educational contexts, then the impact might be felt more localized as part of a discourse which hitherto has been resistant to such a proposal, at least in legitimising specific pedagogy.

The notion that ‘vision’ is the primary modality for the input of information for the hearing-impaired child (Parasnis & Samar, 1985) that eclipses that of audition justifies positioning the hearing-impaired child as a visual learner and that of photography as a visual medium. These assertions, however negate the possibilities that audition/ lack of audition impacts on visual-based activities. This assumption has been investigated by a number of researchers (Quittner et al., 1994) who conducted two experiments ‘on’ hearing-impaired children with cochlea implants; hearing-impaired children who were aided post aurally and a group of hearing children. Across these experiments, children were assessed on their responses to certain visual signals and not to others. It is important to note that these tests did not include any audition so that ‘sounds’ could be eliminated as a contributing factor to the way that participants responded. However, the researchers concluded that the ability to ‘hear’ generally did impact the findings as those who were post aurally aided performed less well than those who were fitted with cochlea implants.²³⁰ It was further reported that hearing children performed better on these tests than those who were hearing-impaired. The researchers concluded therefore, that as the results could not have been because of any access to sound during the tests, it must be due the various levels of auditory ‘experience’ and that this directly impacted on the child’s ability to perform on the visual based tasks. In acknowledging that auditory ‘experience’ was a major influencing factor affecting achievement in these tests rather than deafness per se, the research highlighted the role that the other senses might have on the ‘performance’ of children in these tasks. There is an inherent problem in this approach however, for it makes assumptions that the senses are easily demarcated and can be isolated from one another in order to justify a particular approach to research.

²³⁰ The assumption being that a cochlea would allow greater access to sounds than would that provided by hearing aids.
Conversely, the somewhat ‘messy’ and broad notion of ‘experience’ may not so easily be tamed by such an approach. Nevertheless, these conclusions do build some complexity into the commonly held assumption that deaf children perform better on visual-based (non-verbal) tasks than their hearing peers and in clinical terms, there is some evidence of a cross modality that resists sensory separation.

‘The altered sensory experience of profound early onset deafness provokes sometimes large scale neural reorganisations. In particular, auditory-visual cross-modal plasticity occurs, wherein redundant auditory cortex becomes recruited to vision’. (Codina et al., 2011a, p.1)

Important studies of adaptation in the brain were begun in the nineteen-seventies (Neville & Lawson, 1986). Studies showed that in prelingually deaf children, the auditory parts of the brain had not degenerated or atrophied but that they had remained active and functional. Indeed, in Neville’s term, they had been, ‘reallocated’ and transformed for processing visual language. Comparable studies in those born blind, show that the visual areas of the cortex, may be reallocated in function, and used to process sound and touch. (Neville & Lawson, 1986)

If one accepts this notion of brain ‘plasticity’, it follows that although there may be implications in defining D/deaf children as being able to see ‘better’ or in having greater ‘visual awareness’ in relation to their hearing peers, this cannot necessarily imply that they will simply perform ‘better’ on visual-based tasks. The notion that the neurological ‘evidence’ that dictates that D/deaf children ‘see’ more would have a positive effect on their engagement with the ‘visual’ in creative engagements, needs further exploration. The focus of one particular piece of research however, (Codina et al., 2011b) was to build upon this notion of ‘plasticity’ in the auditory/visual cortex, and investigated the changes (if any) that took place as a result of deafness that might affect visual sensitivity at the retina. The research employed a technique known as Ocular Coherence Tomography (OCT)231 to test whether there was a relationship

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231 For an accessible review of OCT, visit: https://www.nature.com/articles/6700729/
between changes that are perceived to occur in the retina as a result of deafness, to changes in vision sensitivities. Previous research tended to focus on changes at the level of the auditory cortex as already stated and the positive impact that this might have on the sense of vision. This research however, attempted to define the particular aspects of visual attention that are changed by deafness and builds upon other research (Bavelier, Dye & Hauser, 2006; Dye, Baril & Bavelier, 2007) with a similar hypothesis. The investigation suggested that rather than all aspects of vision displaying an improvement in the hearing-impaired child, there tended to be an improvement, which was localized to the periphery. This study focused on the implications for peripheral vision across deaf children aged between 5 and 15 and compared it with the development of peripheral vision in hearing children of the same age. This study concluded that although peripheral vision was deemed ‘slower to detect’ in the hearing-impaired population in the age group 5 – 8, it was significantly ‘faster’ and exceeded their hearing peers by the time they reached the age of 13 – 15. The research suggested that the neural reorganisation or ‘plasticity’ of the neural regions of the retina as well as of the brain, may account for this increase in visual sensitivity. Similar research has also been conducted (Bosworth & Dobkins, 2002; Hong Lore & Song, 1991) which further concluded that D/deaf individuals have a heightened sense of visual awareness at the periphery in comparison to their hearing peers. Approaching the issue from a neurological perspective provides some convincing arguments about the nature of visual sensitivity in D/deaf individuals and the latter research locates a specific peripheral area of the retina that becomes enhanced to vision. This will undoubtedly have pedagogical implications for those who teach D/deaf children particularly as regards minimizing potential disruptive elements within the classroom that might exist at the periphery. However, such research does not address issues related to how this enhancement might impact on what I would suggest are more complex ‘visual’ based tasks that are undertaken when

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232 It has been suggested that deaf children are easily distracted when the task requires them to focus centrally. This assertion is grounded in clinical research that suggests that deaf children have enhanced visual sensitivity at the periphery. The implication for pedagogy is clear.
hearing-impaired children engage with ‘creative’ based activities such as photography. Certainly, the role of auditory ‘experience’ is highlighted to have impact on such engagements but any possible impact on a notion of ‘visual’ sensitivity pertaining to creative based activities is not fully explored.

Likewise, the clinical based research of the latter examples fail to engage with the ways in which this notion of ‘experience’ might impact on the results. However, this has been addressed to some extent by a number of other researchers, (Finney & Dobkins, 2001; Hong Lore & Song, 1991) who suggested that if D/deaf children do have enhanced visual abilities, particularly at the periphery, then one possible explanation may relate to their ‘experience’ of engaging with sign language and what has been termed as the ‘visuospatial’ properties it exhibits, as opposed to simply being as a result of their deafness per se.

‘Linguistic information is conveyed by the use of the hands and lips, and by facial expression. Thus, this information is distributed over a broad spatial area. Since the relative in formativeness of the articulators, i.e., hands, face, and lips, varies dynamically in time, demands are placed on the receiver to modulate attention to the various articulators from moment-to-moment over a large spatial area.’ (Parasnis & Samar, 1985, p.314)

This notion has been further explored by a number of other researchers (Emmorey, Kosslyn & Bellugi, 1993) who investigated and compared the relation between the use of ASL and spatial imagery abilities of D/deaf signers; hearing signers (those who had acquired ASL) and hearing non—signers. The investigation was built upon the assumption that because ASL (and BSL) makes use of a wide visio-spatial area then this would impact positively on the individuals ability to ‘generate visual mental images, to maintain them, and to rotate them’ (Emmorey, Kosslyn & Bellugi, p.139). It was interesting to note that in addition to the somewhat laboratory research undertaken, the impact of when each individual acquired sign language and the environment in which this was learned, was also addressed.

I am sympathetic to this position as it shifts the balance away from the impact of changes at a neurological level to the impact of changes in the social
environment. If one concedes that peripheral vision may be heightened for those D/deaf children who have been brought up and/ or educated within a signing environment, it might be reasonable to suggest that the reverse is true for those raised and/ or educated within an oral environment. Is it possible therefore, that the D/deaf child, regardless of the language modality adopted may have been alert to the visual at the periphery throughout their life but to differing degrees? The question as regards how this may have impacted on their engagement with creative visual-based activities such as photography remains unanswered. The reader may jump off at this point to a discussion of creativity in relation to photography which is undertaken later in this plateau.

In his discussion of ‘Looking at Photographs’, Victor Burgin (1982) suggests that although painting and film are seen as the result of a voluntary act – most photographs are not seen by deliberate choice. ‘Photographs are received rather as environment’. (Burgin, 1982, p.130) If the D/deaf child is deemed to be visually sensitive to their peripheral environment, and that photographs are to be considered as part of this environment, then it may be reasonable to suggest that this cohort may have been more exposed to visual information than their hearing peers. Perhaps it is reasonable to surmise that this in part, may have positively impacted on their acquisition of a broader visual-based ‘language’ than their hearing peers. The extent to which the visual was more present in the upbringing of the D/deaf child relative to a child with ‘normal’ hearing is worthy of investigation but beyond the scope of the current work. There is of course the possibility that visual images within a visual environment are ‘simply’ remembered more easily than any other forms of representation. This notion has been investigated by a number of researchers. (Paivio, Rogers & Smythe, 1968) In this instance, the research team coined the phrase, the ‘Picture Superiority Effect’ which concluded that images were indeed remembered better than words. The advantage of images over words according to this research appears to lie in the findings that images are coded twice in the ‘cognitive’ system – once in visual code and again in a verbal code - as opposed

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233 The reader may want to jump to page 185 for a discussion of creativity.
to words, which appear to be coded only once in verbal code. This is not wholly convincing however, as one might suggest that if the respondent imagined a picture of a chair when reading the word chair, then they may in effect be coding the stimulus verbally and visually as in the picture condition. The verbal system, it is stated, processes incoming information sequentially, whereas the ‘imaginal’ system processes it more holistically. (Paivio, 1991) This highlights potential discrepancies with the ways in which these two different modes of representation are interpreted. The demands placed upon the hearing-impaired child when attempting to decode text-based information sequentially are well documented and has thought to reflect their relatively poor performance in verbal and written standardized assessment tasks. (Qi & Mitchell, 2012)

Nevertheless, the notion of a ‘dual coding’ process does attend to the possibility that there is more than the sense of vision that is engaged when remembering images. (Paivio, 1991) The focus on promoting the prominence of vision over the written or spoken word in such research may simply reflect the underlying ideological position of the researchers and the context within which the research has taken place. Others however, (Crutcher et al., 2010) have suggested that the ‘dual coding’ theory may not necessarily be restricted to the establishment of the visual over words. The premise of their research, underpinned by the theory of ‘dual coding’ has been extended to other sensory modalities, in particular to that of sound. The purpose of this research was to investigate the possibility of an auditory analog of the picture superiority effect. The focus was on whether environmental sounds, such as that of thunder, would be remembered better than the words that describe that sound. The researchers conducted four experiments which tested in varying degrees whether sounds were recalled better than verbal labels. In experiment one, the stimuli consisted of 40 recorded sounds and 40 spoken verbal labels. Respondents were required to listen to the sounds and verbal labels, sequentially whilst fixing their vision to a point on the computer screen. Although not explicit, it was clearly acknowledged by the researchers that ‘vision’ would in some sense impact on the results and so this was addressed accordingly. Once all the stimuli had been heard, then respondents were asked
to recall the stimuli by writing down one word to represent the sound and one word to represent the spoken word. The researchers confirmed their prediction that there would be greater recall of sounds than words, mirroring the findings for visual stimuli in the picture superiority effect. It is interesting to note however, that although the researchers are defining a difference between particular sounds and their corresponding words, they fail to acknowledge that as the words are spoken, they are in fact ‘sounds’ themselves. In effect therefore, rather than testing whether or not sounds are recalled better than words, this experiment is more clearly testing whether particular types of sounds presented via a particular delivery method, are recalled better than another particular type of sound (spoken) presented through a different mode of delivery. In their second experiment, the research was extended to consider whether there would be an improvement in the recall of words if a respondent imagined, for instance the sound of thunder whilst reading the word thunder. The premise was built upon the ‘dual coding’ theory as the application of this method would suggest that as the word would be coded twice, it would be easier to retrieve relative to the verbal-label-only condition. Each participant listened to 40 sounds, 40 spoken verbal labels or 40 spoken verbal labels whilst imagining listening to the sound to which the word referred. The researcher’s hypothesis was confirmed as the average recall for the verbal plus imagined sound condition exceeded recall for the verbal-labels-alone condition. Once again however, the research failed to acknowledge the fact that as the words were spoken, they were themselves presented as ‘sound’. There doesn’t appear to be a rationale for presenting the words in the verbal (spoken) form, rather than simply in the written form. Nevertheless, the research does question the superiority of the ‘Picture Superiority Effect’ through extending the focus to other sensory modalities.

The work on multisensory inputs has clearly focused on concurrent visual and/or written/ verbal information. However, that reviewed here suggests that there is a shift toward a consideration of the impact of other sensory modalities in such engagements and their effect on recall. This has been explored by another group of researchers (Lwin, Morrin & Krishna, 2010) who
have tested the effect that ‘scent’ may have on verbal recall. Their investigations centred on whether the:

‘olfactory sensory input will enhance memory for verbal information in a manner similar to that of pictorial information, essentially extending the additively hypothesis of dual coding theory to the realm of olfactory input. In other words, dual coding theory would be applicable not only to verbal+pictorial stimuli but also to verbal+pictorial+olfactory stimuli.’ (p.319)

The investigations demonstrate what they have termed a ‘superadditive’ effect on verbal recall, extending the premise of the dual coding theory through introducing ‘scent’ as a third component with its own code. (Paivio, 1991) The extent to which the olfactory sense might be ignited by the visual is not investigated. It is assumed that the area of the brain that deals with the sense of smell, is independent of those that deal with the verbal and the visual. The sense of smell therefore, could be added to that already defined which will further enhance verbal recall. This leaves the senses of touch and that of taste and their relationships to processing visual imagery. As regards the former (though not related to verbal recall), one particular area of research (Klatzky, Lederman & Reed, 1987) investigated the relationship between the visual and touch and concluded that the haptic and visual systems have distinct encoding pathways, with haptics oriented toward the encoding of substance rather than shape. In order to substantiate this claim, a group of respondents were asked to sort a set of objects by touch alone, with the exclusion of vision. They were then asked to sort a set of images of the objects. It was found that when completing the task without vision, the objects were sorted by texture and hardness whilst those responding to the visual images, sorted them according to shape and size. The researchers concluded therefore that there must be separate encoding pathways that process the information in these differing ways. The researchers also suggested that haptics has not previously been considered because a narrowly defined definition, has in the past reduced it to what they call ‘an inferior form of vision’ (Klatzky, Lederman & Reed, 1987, p.357) Although not addressed as such, the results further extend the dual coding theory.
That discussed latterly has tended to focus on individual sensory modalities and their effect on enhancing verbal recall. It would appear that all can impact positively on the ability to recall words. However, this research does not appear to take into account the effect of environmental factors or the background of the individuals concerned in the research. The respondents appear to be treated as homogenous groups which fails to address the complexities that arise when one takes into account the backgrounds of the individuals who partake in such investigations. In addition to this specific issue, the broader context within which such research is conducted and its possible impact on outcome should not be ignored. On the former issue, the claim that images are ‘superior’ to words as demonstrated in the picture superiority effect, assumes that the processes involved when ‘images’ and ‘words’ are ‘read’, are similar, regardless of the background of the individual engaged. In respect of this study, it has been well documented as a result of several investigations reviewed elsewhere, that the way in which ‘deaf’ children learn to ‘read’ and hence comprehend written text differs to the ways in which their hearing peers learn to ‘read’. (Musselman, 2000) This ‘difference’ has initiated a particular pedagogical approach to teaching ‘reading’ to the hearing-impaired child. The extent to which visual images in a creative context could be ‘read’ differently by the hearing-impaired child and the hearing child has been subject to less research exploration. This is further complicated when one attempts to locate any investigation of the relationship of the visual with the written within contemporary educational analysis. This is principally because of an assumption that the printed word and the image are essentially different and separate means of communication. In a fairly recent study however (Yamada-Rice, 2010) into the visual communication practices of children within the home, the author highlights that pictures have become more like spoken language because of the immediacy with which communication can take place. The author points to research conducted elsewhere (Yannicopoulou, 2004) into what is termed the ‘multimodal’ aspect of communication. The author uses comic strips to investigate the possible ways in which hearing children learn to ‘read’ through engaging with a multitude of elements which when combined, create a
particular meaning. More pertinent however, is the suggestion that certain technology allows for a ‘seamlessness’ between the ‘text’ and the ‘image’ and that they are interchangeable in communicative acts. This may be something that is more prominent in the lives of the D/deaf children than with hearing children – the assumption being that hearing-impaired children are more reliant with what is commonly accepted to be visual and so engage with this form of communication more readily. Perhaps this is an example of where the text is more obviously seen as visual, not always adhering to conventionalised written language norms. In this context, it may be that images simply cannot communicate meaning effectively in the way that text appears to even in the case of D/deaf children who have been defined as ‘language’ delayed. In discussing a photograph of his dead mother, Barthes (1982), rather than showing a photograph, attempts to evoke the essence of the individual through a verbal narrative. This form of ekphrasis – ‘the verbal representation of visual representation’ (Heffernan, 1993, p.3) dominates and raises the question to what precisely the verbal narrative can offer over the visual. The proposition is in opposition to that of commentators who suggest that communication is becoming more visual. (Kress, 2000) In support of this assertion, there is academic research that substantiates the claim quite convincingly. A number of scholars (Cohn, Taylor & Pederson, 2017) have suggested that over a period of eight decades, the language content of American comics has decreased whilst the visual storytelling element evident in the narrative structures has substantially increased. Perhaps the visual is steadily displacing the written as a mode of communication and at some point, this will need to be addressed by an educational system that continues to defer to more traditional forms of communication.

The relationship between words and images is clearly complex. Recognising the possible limitations of both words in isolation and images in isolation, Duane Michals (1985) comments in an interview:

‘A photograph of my parents or my father doesn’t tell me for a second what I thought of my father, which for me is more important than what the man looks like. So then I had to evolve into writing. Not that writing
Perhaps these two ‘lines’ of interpretation – the ‘textual’ and the ‘visual’ operate on separate ‘tracks’ with one continually remaining dominant over the other. However, despite a move toward engaging with the visual and the sensual in educational contexts, there continues to be a legacy of the dominance of the textual. The overriding ‘textual’ approach to the analysis and construction of photographic imagery has according to some commentators (Callow, 2005b) privileged a particular way of thinking about imagery or what has been termed ‘texts’ at the expense of other possibilities. Indeed, a much used phrase is that there is a ‘language of photography’. This has led some commentators (Feldman & Woods, 1981) to take a position that as such, this ‘language’ can be learned in much the same way that written/spoken language can be learned as both have been defined to have ‘grammatical rules’ that can be applied. If Feldman et al; are correct then the difficulties as regards developing a visual language for the hearing-impaired child, might equally be problematic. However, attempting to align the issues associated with acquiring written/spoken language with that in acquiring a visual-based language might be a limiting factor. Indeed if we accept that the theoretical approach to the analysis of photographic imagery known as semiotics, (Barthes, 1967) which in some sense has demonstrated that no such ‘language’ exists, then one must accept that the complexity of codes that can be drawn upon are so wide and potentially varied that they cannot be quantified. Whilst I am sympathetic to the value of a semiotic approach to the analysis of photographs as ‘texts’, I agree with others (Callow, 2005a) who call for a broader, interdisciplinary approach:

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234 No page numbers are given in the book. However, the quote is extracted from an interview with Duane Michals by Marco Livingstone conducted in Duane Michals Manhatten apartment on 6th September 1984. The full interview is printed toward the latter part of this book.

235 The term text has assumed prominence as an overarching concept for all manner of works, such as novels, picture books, advertisements, electronic media, film, artworks and even theatrical performance. Callow, J. (2005b) 'Literacy and the Visual: Broadening Our Vision'. English Teaching: Practice and Critique, 4 (1), pp. 6-19.
“Are there other ways to experience, appreciate and critique visual images which might enrich or complement current literacy approaches?” (Callow, 2005b)

The literary approaches defer to the written/spoken modality that encompasses learning. This literary approach frames what is possible, the possibilities and limitations of creative explorations through photographic practice. This however, draws upon many assumptions as regards the notion of creativity. Regardless, I will consider this notion as one that is discursively constructed and understood within an educational framework that legitimises the term within a curriculum. The term ‘creativity’ may be slippery, difficult to define yet it is frequently used in educational contexts as though there was a common understanding. Indeed, the concept is central to many activities undertaken in photographic education and underpins the design of current specifications at GCSE and at ‘A’ Level. This applies to both the judging of creative photographic output and in the creation of such material. I will assess the former first. When judging visual photographic artefacts, one overriding consideration is their evident creativity. This places an emphasis on the viewer, the teacher who, despite a personal and professional call to objectivity, decides if a photographic activity and the resultant photographs can be deemed to be creative. An agreement between more than one viewer or teacher may be necessary in order to legitimise the decision. As expressed by Teresa Amabile (1982) ‘A product or response is creative to the extent that appropriate observers independently agree it is creative’ (p.1001) The suggestion implied is that creativity lies within the actual product as if it is something that is both seeable and therefore, sayable (Foucault, 2008; Mitchell, 1994), and subsequently referenced in speech and writing. However, in order to escape the constraints of such a proposition, the author further states that ‘it can also be

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237 It is doubtful perhaps that the school photograph would be viewed as a creative artefact though those that create such products may think differently.
regarded as the process by which something so judged is produced.’ (p.1001)

Simply scratching the surface of a concept of creativity highlights the complexities involved and hence, the difficulties in arriving at a definition. Despite this, many scholars have attempted to do just that and in doing so have provided a useful base upon which to further an analysis of how a notion of creativity either impedes or enhances creative production if the individual creator and/or viewer is hearing-impaired.

Perhaps one of the least ambiguous definitions and for some (Runco & Jaeger, 2012) that which has become a standard definition of creativity, is that provided by Stein (1953). In his article entitled Creativity and Culture, he defines the creative work to be:

‘a novel work that is accepted as tenable or useful or satisfying by a group in some point in time . . . . By “novel” I mean that the creative product did not exist previously in precisely the same form . . . . The extent to which a work is novel depends on the extent to which it deviates from the traditional or the status quo. This may well depend on the nature of the problem that is attacked, the fund of knowledge or experience that exists in the field at the time, and the characteristics of the creative individual and those of the individuals with whom he [or she] is communicating.’ (p.311-312)

Clearly, Stein is placing an emphasis on what he defines as two main characteristics of creativity: (i) the ‘product’ that is created including the extent to which this ‘product’ could be defined as ‘novel’ and (ii) the individual behind the products creation. Two further areas that might impact on a notion of creativity, are the processes involved in creating a product and more importantly perhaps, the institutional context within which particular constructs of creativity are legitimised.

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239 Students are creators and viewers in a continuous exchange in these positions.
In referencing Stein’s description as a starting point for an analysis, we might demarcate to four broad areas of concern:-

- the individual
- the process
- the product
- the context

Indeed, many scholars have aligned themselves with one of these areas when attempting to define creativity.\(^240\) There are some who have considered ‘creativity’ to pertain to a particular individual. (Barron, 1981; Batey & Furnham, 2006; Guildford, 1950; Kant, 1978); to be evident in the process of ‘creating’ something or solving a problem; (Gardner, 1993) to be evident in the product described as a ‘novel outcome’; (Guildford, 1977, p.161) and there are those who consider ‘it’ to be something which perhaps defies definition as it is in a continual state of flux in relation to social and ideological shifts – in specific institutional contexts and at differing historical times. In this sense, that which could be considered as a ‘creative act’ today may not have been viewed as such in a different historical period.\(^241\) (Bleakley, 2004) Whilst the concept may be seen to change over time, there are those who have sought to sideline the issue through attempts to assess creativity through a series of tests that defy the impact of differing historical contexts.\(^242\) Most notable perhaps is that evidenced in the ‘Torrance Tests of Creative Thinking’ (Torrance, 1966) (TTCT) both figural and verbal.\(^243\) Whilst the context has changed, the tests have endured. Indeed,


\(^{241}\) Whilst some creative acts may be considered as novel by the context, the domain, they then quickly become the norm.

\(^{242}\) According to some researchers Kim, K. H. (2011) ‘The Creativity Crisis: The Decrease in Creative Thinking Scores on the Torrance Tests of Creative Thinking’. Creativity Research Journal, 23 (4), pp. 285-295. creative thinking is declining. ‘The decline is steady and persistent, from 1990 to present, and ranges across the various components tested by the TTCT.’ (p.287)

\(^{243}\) The TTCT is the most commonly used test for creative thinking but Torrance created others such as Thinking Creatively in Action and Movement (TCAM) for preschool children; and Sounds and Images and Onomatopoeia and Words, published together as Thinking Creatively with Sounds and Words (TCSW). Finally, the Abbreviated Torrance Test for Adults (ATTA)
this may be responsible for what Kyung Hee Kim (2011) regards as the underpinning reason for a decrease in TTCT scores over time: ‘Results also indicated that since 1990, even as IQ scores have risen, creative thinking scores have significantly decreased.’ (p.1) In this assessment, creativity is described as:

‘a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results’ (Torrance, 1974, p.8)

At the heart of this description, there is a clear and explicit focus on a linearity that is assumed to underpin a creative process. This is nothing new and despite shifting attitudes to what constitutes creativity, the process of linearity appears to have endured. In his book, The Art of Thought (1926), Graham Wallas suggested that there were four stages to this linearity – ‘Preparation, Incubation, Illumination and Verification’ (p.10) At the ‘preparation’ stage (stage 1) information and related ideas are gathered, brought together. At the (stage 2) ‘incubation’ stage, that which is gathered is in internally elaborated and organised. At the (stage 3) ‘illumination’ stage, an idea emerges and in the (stage 4) ‘verification’ stage, the idea is evaluated and further elaborated into a final form. This ‘four-stage description of the creative process’ (Runco, 2014, p.21) clearly has a linear structure, with a beginning, middle and end and acts as a guide to those who undertake ‘creative’ activities to a defined closure – the ‘verification’ stage. Ideas presented in this linear structure appear to have undoubtedly influenced the ‘process’ of linearity laid down in current Art and Design examination papers and the associated assessment procedures.

In what ways might this linear process limit the possibilities that might otherwise ensue if the perceived constraint imposed was removed or disrupted? Is it possible that such a process could begin in the middle, at the end or at a point that defies the tree like structure of learning previous described?²⁴⁴ Of

²⁴⁴ The reader may wish to re-familiarise themselves with Thomas Reid’s description of this process on page 29.
course, this linearity may be necessary within educational contexts to reflect the underlying need to make progress and to reflect the demands encapsulated within examination papers. Indeed, the concept of ‘process’ is encapsulated in a theory that underpins accepted educational pedagogy as espoused by Vygotsky:

‘The zone of proximal development defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state’ (Vygotsky, 1978, p.86)

Is it possible that such a process may have the effect of ‘taming’ the notion of creativity and perpetuating particular conceptualisations? Nevertheless, the four stages referred to in this plateau do not necessarily imply the same levels of control over this creative process. Whilst stage 1 and stage 4 require the individual to perform a type of creativity in a particular way, stages 2 and 3 are perhaps less dictatorial and permit there to be a period of freedom of thought and hence practice. The ‘incubation’ period and the ‘illumination’ period is perhaps where possibilities can be explored, reflected upon and experimented and where ‘lines of flight’ (Deleuze) can be generated, connections made and new forms of knowledge created. These stages of the creative process were central to Torrance’s (Torrance, 1979; Torrance & Safter, 1990) later ‘incubation’ model which was a three stage process and in comparison with that proposed by Wallace, was deemed to be more open ended, lacking the closure of other models. This open-ended approach is perhaps something akin to that espoused by John Cage:

‘attention moves towards the observation and audition of many things at once, including those that are environmental-becomes, that is, inclusive rather than exclusive-no question of making, in the sense of forming understandable structures, can arise (one is tourist), and here the word experimental is apt. Providing it is understood not as descriptive of an act to be later judged in terms of success or failure but simply as an act the outcome of which is unknown’ (Cage, 1961, p.13)

The three stages, referred to in Torrance’s descriptions: stage 1: Heightening expectations; Stage 2: Deepening expectations and Stage 3:
Keeping it going is summarised by Torrance and Sisk (1997) as the incubation model of teaching.

‘Before creative thinking can occur, something has to be done to heighten anticipation and expectation and to prepare learners to see clear connections between what they are expected to learn and their future life (the next minute or hour, the next day, the next year, or 25 years from now). After this arousal, it is necessary to help students dig into the problem, acquire more information, encounter the unexpected, and continue deepening expectations. Finally, there must be practice in doing something with the new information, immediately or later.’ (p. 91)

Such a description provides a framework to develop a particular creative approach. It is one however, that still indicates a linearity toward specific goals but in the latter structure, there are clear differences from other models and in that dictated in standard teaching pedagogy, where a consolidation of learning is encapsulated in a plenary. Whilst these assessment strategies provide a basis upon which to frame creativity, they defer to a sensory ‘norm’. It is necessary therefore, to consider where the hearing-impaired child could be situated in relation to the various theories that define a concept of creativity and how or if a hearing-impairment would impact on activities deemed creative.

Given the prevailing and historically persistent position that hearing-impaired children are delayed in their ‘language’ development, (Conrad, 1979; Furth, 1973; Quigley & V, 1984) it will come as little surprise that when required to respond to the verbal creative assessment of the TTCT, that they have been reported to perform less well than their hearing peers. Conversely, hearing-impaired children performed equally or more creative than their hearing peers on the figural (drawing/picture responses) creative test. (Stanzione, Perez & Lederberg, 2012) The results from this research may well support the view that hearing-impaired children are ‘visual learners’ (Bavelier, Dye & Hauser, 2006) and that their engagement and relatively high performance on visual based tasks is simply a reflection of this stance. However, such a binary is perhaps less helpful given the implied assumption that the ‘verbal’ and the ‘visual’ can be separated and ‘tested’ independently. In addition, such tests perhaps assume a ‘common’ approach by respondents and thereby disregard the complexities of
engagement, particularly when D/deaf children undertake such tests. Indeed, such tests simply confirm that some individuals are simply good at responding to tests! Furthermore, the ‘individual’ in this discussion, has been neglected somewhat.

‘In its narrow sense, creativity refers to the abilities that are most characteristic of creative people. Creative abilities determine whether the individual has the power to exhibit creative behavior to a noteworthy degree. Whether or not the individual who has the requisite abilities will actually produce results of a creative nature will depend upon his motivational and temperamental traits.’ (Guildford, 1950, p.444)

How do certain individuals present as being creative in a specific educational context for the hearing-impaired child? Is it something that is evident in what is created by an individual, agreed upon by several viewers as already stated or is it something that is evident in the body, in the person that defies external criticism? Is it something that is constructed through a consensual discourse that seeks to tame the notion and the processes involved for the desire to maintain educational purposes? Are certain ‘bodies’ more creative than others and if such is deemed to be within the body, where in the body can it be located? Can the body, which is framed as hearing-impaired be considered to be more or less creative because of a defined sensory impediment? These are broad questions, several of which are beyond the scope of this thesis and rely perhaps on a more detailed interrogation of the notion of creativity. The impact of a sensory hearing-impairment on creativity is dependent upon the hypothesis one adopts. There is either a sensory enhancement to vision as the result of a hearing-impairment or a sensory deprivation to vision and if vision is deemed necessary for creative exploration, then impact is evident. The institutional context within which this thesis resides and the somewhat accepted position within this context, is in line with the former with the latter perhaps conveniently sidelined. The notion of the individual as genius (Kant, 1892) is clearly a definition that is quickly undermined if one considers the implications of the context within which ‘creative’ acts take place. The rules and regulations of the educational ‘system’ sets the parameters
of what are permissible as creative acts and what is permissible to be defined as credible creative output. Indeed, some researchers (Csikszentmihalyi, 1996) suggest that,

‘Creativity can be observed only in the interrelations of a system made up of three main parts. The first of these is the domain, which consists of a set of rules and procedures ... The second component of creativity is the field, which includes all the individuals who act as gatekeepers to the domain. It is their job to decide whether a new idea or product should be included in the domain... Finally, the third component of the creative system is the individual person’. (p.229)

It is against this institutional framework that particular notions of creativity are constructed, circulate and ultimately legitimised. The question, therefore, is how particular notions of ‘creativity’ manifest themselves within this particular context and how certain definitions seem to appeal to ‘common-sense’ whilst excluding all other possible explanations. Notions of creativity that circulate in the utterances and actions of those that ‘operate’ within this particular context are reflective of and sustained by deeply embedded structures that constitute a ‘school’ and ‘schooling’. In general, they manifest themselves through both the architectural spaces and through the gestures, bodily movements and utterances of those people that inhabit those spaces. It is not difficult to see how the architectural system is constructed to guide the inhabitants through an education that ultimately places merit on certain ‘subjects’ in the curriculum over other subjects and dictates that those deemed to be ‘creative’ to be of less value’. Such a position is reflective of a wider conservative ideology that is ‘rooted’ in the political construction of the ‘curriculum’ and maintained by those ‘professionals’ deemed to be experts in its delivery. The school uniform and the associated emblems further help to construct a particular context and hence shape a sense of identity for the D/deaf child. These are constraints upon the child that maintain and sustain an appearance of naturalness, remaining unquestioned yet alone challenged. Here then lies an initial problem related to accepted notions of ‘creativity’. An initial

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245 I use terminology again that refers to the tree like structure of knowledge production.
framing of the term would suggest that for it to develop there would need to be a sense of freedom to explore but given that creativity can only exist within an educational context that imposes what can be permitted, such creative possibilities are framed by the domain. Pursuing something that might be considered to be new or novel is only possible if the domain permits or legitimises this notion and therefore, legitimises the individual as ‘creative’. This is not to negate that which might seem central to any notion of creativity – the creator – but to situate the ‘creator’ as a product of a ‘system’ which both defines and permits particular ‘creative’ acts. The hearing-impaired child therefore is a construction who performs within particular constraints that define and permit particular performances.

The challenge therefore, is to provide an educational context which facilitates the “generic coding systems that permit one to go beyond the data to new and possibly fruitful predictions” (Bruner & Anglin, 1974) giving hearing-impaired children the confidence to ‘play’ creatively with visual symbols with no pressure to conform to established notions of what a ‘final’ product should ‘look’ like. To pursue nomadic forms of creative enquiry, which permit a type of experimentation and creative play that is beyond institutional expectations and beyond the framework of the language that frames the hearing-impaired child as a visual learner. This may be an impossible task within an institutional framework that constrains the processes involved but does provide the possibility of lines of flight, that potentially enable escape from the ‘frame’ of containment.
Research Design

‘Research is to see what everybody else has seen, and to think what nobody else has thought’ Albert Szent-Gyorgyi (1937)
Research Methodology

In order to disrupt the foundations upon which assumptions around the hearing-impaired child and their propensity for visual learning have been built, I will engage a more nuanced, fluid and open assessment that is not afraid to problematise that which is deemed as common-sense. The research methodology that underpins this thesis is the work of Deleuze & Guattari (1988) with their concept of the rhizome, and Glaser and Strauss (1967) with their work on grounded theory. The former will be embraced more philosophically whilst the latter will impact directly on the practical, investigative photographic work undertaken with children. What proceeds therefore, is an attempt to justify the application of these two stances in relation to the aims of this thesis.\(^\text{246}\)

Despite an educational and research imperative that is built upon a static conceptualisation of the hearing-impaired child and a static conceptualisation of the senses, I believe that D/deaf children are a highly heterogenous population

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\(^{246}\) The reader may wish to ‘jump back’ to page 28 (shaping the thesis) to re familiarise themselves with the underlying philosophical approach.
with characteristics that intersect with complexity across language, impairment, communication and cultural identity. (Baker-Shenk & Kyle, 1990) An educational system that demands a sense of stability however, deems it necessary to demarcate and frame these diverse aspects in an ideological imperative of sustaining educational progress. The moral and ethical questions that might arise, appear to be sidelined by a question that relates to how effective the school can be in producing certain outcomes. In pursuit of this ideal, complex concepts such as the hearing-impaired child become reduced to a simplified discourse of classification and one such segmentation is the framing of the hearing-impaired child as a visual learner. This is reflected to some extent in a curriculum that is demarcated in line with sensory separateness. In failing to recognise a fluidity between these separate entities is to perhaps miss an opportunity to engage with other ways of knowing the hearing-impaired child, their propensity for knowing and of course, that which designates photography as a visual medium. The philosophic research methodology adopted attempts to resist the paradigmatic structuring of knowledge through quantitative gathering of data but proposes a more qualitative approach to knowledge acquisition. It is an approach that is in line with that of Tracy (1995) who suggests that fruitful qualitative research “should suggest productive ways to reframe old issues, create links between previously unrelated issues, and raise new questions that are interesting and merit attention” (p. 210). The concept of the hearing-impaired child as a visual learner has an historical base but begs to be reframed. This concept of qualitative research over and above generalizability closely reflects the underlying purpose of this thesis which is investigative in purpose and open ended in structure. The research focus around the hearing-impaired child has inevitably, yet unproblematically focused on the sensory modality of hearing and the perceived impact that this has had on vision and language acquisition. When a particular sense(s) is/are privileged in this manner, certain pedagogic implications are inevitable. The senses that have been left behind,
forgotten in the discourse are deemed to be less important and marginalised. In essence, this marginalisation can be ‘evidenced’ in a curriculum that is demarcated to some extent by a mind and body dualism that dictates that certain subjects are ‘learned’ through vision and hearing whilst others defer more to touch or what will be described as the contact senses. The resistance to a qualitative approach to developing an understanding of the latter may be due to several reasons (i) an ideological impetus that has dictated the positioning of ‘creative’ subjects such as photography, at the periphery of the curriculum and hence at the periphery of research interest; (ii) the discursive (Foucault, 1974) impetus that defines and sustains a particular attitude within particular educational contexts toward a perceived ‘value’ of these subjects; and perhaps more pertinent to this study - (iii) a proposition that dictates a methodological shift away from empirical based research that focused on D/deafness as a central inhibitor to success and finally, (iv) to a lack of homogeneity within the D/deaf population that arouses suspicion as to the effectiveness and ‘value’ of a qualitative approach to researching a given phenomenon. As a result, the logical-scientific (Bruner, 1996) methodologies employed to study D/deafness and the perceived impact on language development remains to dominate research interest. It is a common-sense approach underpinned by a medical stance that frames a hearing-impairment as a problem - and one that needs to be resolved and brought into line with dominant ideological and discursive constructions of the body. The binary I

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247 Refer to a period when the senses were deemed to be inter-related, defying sensory separateness.

248 Through contact senses, I refer to smell, taste and touch. The reader may question the sense of smell as being a contact sense. However, I consider olfaction to put the perceiver in contact with the properties of the object that produce the smell. This is in opposition to Aristotle’s proposition that odour, like sound and vision are never exercised through direct contact.

249 This move may come as unexpected to the reader who has entered the thesis at this point but is indicative of my position that moves away from a focus on vision and that deemed to be an essential aspect of an engagement with photography.

250 This is not to suggest that the scrutiny of the senses and their relation to knowing is anything new. According to some academics Verstraete, P. (2005) ‘The taming of disability: phrenology and bio-power on the road to the destruction of otherness in France (1800-60)’. History of Education, 34 (2), pp. 119-134. both deafness and blindness became philosophical problems at the end of the eighteenth century where intellectuals who were spurred by the sensualist
present in these differing research paradigms, however, is perhaps unhelpful as it suggests an artificial demarcation which in my research practice, I do not wish to reflect. A Logical, scientific based research approach is captured through an engagement with some form of qualitative narrative that is explanatory. Conversely, the narrative based methods with which I will engage, draw upon a range of activities undertaken with/by children that will have at least some basis with a logical form of thinking. Indeed, the pupils are not necessarily able to demarcate between these two forms of research and therefore, their activities fall from their interests and not from a particular research perspective. The challenge therefore is to maintain a philosophic thought process and to honour the input from the children, but to resist the temptation to fall in line with a scientific reporting style with which the reader might be more familiar. The conceptual approach of the rhizome that underlies this thesis is embraced because it enables a narrative based consideration that cuts across disciplinary boundaries. Based on the concept of the rhizome, I attempt to de-centre the sensory modality of hearing so that conceptually, it can be freed from the discourse that sustains this positionality.

My research approach moves away from the scientific based paradigms discussed previously that I suspect have been responsible for positioning and sustaining the hearing-impaired child as one who is in need of correction. It is a research base that is built upon a notion of deductive reasoning - a theory that commences with an already established theory, that seeks to further establish if that theory applies to specific instances. The process has been described as ‘top down’ (Jing & Sarah, 2010) in nature, starting with an existing theory, moving to a hypothesis, observation and ultimately confirmation which is central to a process deemed logical. The implied objectivity in deductive reasoning assures a degree of ‘reliability’ in the results – results which are presented visually, further solidifying a connection between seeing and knowing. The deductive

theories of Etienne-Bonnot de Condillac (1714-80) and John Locke (1632-1704) ‘tried to understand how a sensorially disabled person was able to reason and develop ideas’ (p.119)

251 These boundaries I will define as: the hearing-impaired child, photography, medical, speech and language fraternities and the scientific research that has framed the body as hearing-impaired with an implied propensity for visual-based learning.
process has historically underpinned research methodology surrounding ‘D/deafness’. The emphasis has been on audiology, speech and language and the impact on the development of language(s) in differing modalities. This, with the intention to ‘correct’ or align that focused upon with that defined as ‘normal’ within the hearing community. This constant testing, verifying and modifying of existing data in relation to D/deaf children, has contributed to and legitimised particular educational stances, further contributing to a level of ideological containment. In so doing, it will be suggested, that the process of deductive reasoning has positioned D/deafness as a static, medical, biological phenomenon and something that can be studied objectively. It could therefore be suggested, that as a consequence of the process of deductive reasoning, D/deafness and the conceptualisation of this sensory modality by those with ‘normal’ hearing has disembodied this ‘sense’ from the body. In so doing, the process of deductive reasoning has made a ‘top down’ mode of research a manageable one, reflecting an educational ideology that emphasises ‘progress.’ In line with Alecia Jackson and Lisa Mazzei (2009), I believe that such has guided a research process toward a comfortable solution and driven toward what has been termed as ‘making easy sense’. (p.4) Glaser and Strauss (1967) question the very nature of the logico deductive theory, that is based on ‘ungrounded assumptions’ (p.4) as, according to their position, ‘it fails to provide a convincing account through it’s somewhat, opportunistic use of theories that have dubious fit and working capacity’ (p.4) Through placing ‘value’ on what can be ‘tested’ and what can be ‘verified’, perhaps the ‘data’ or possible lines of enquiry that don’t comply with the linearity implied in deductive reasoning, are left out. Their ‘non-compliance’ are precisely the avenues of investigation which may open up a space of enquiry otherwise missed. As suggested by some, (Jackson & Mazzei, 2012) the deductive process encourages the researcher to, ‘attend to the themes and narratives – rather than the places of inconsistency, of uncertainty and of productive rending.’ (p.31) 252

252 For this reason, I have avoided the use of the software, NVIVO which codes research and therefore the researcher and thereby shapes outcomes in line with dominant expectations. Visit: https://www.qsrinternational.com/nvivo/nvivo-products/nvivo-12-plus
In considering ways to ‘fold in’ the experience of the hearing-impaired child within the experience of research, I propose a more grounded approach in line with that which is outlined so succinctly by Lodico (2006), in which it is suggested that the researcher uses observations to build an abstraction or to describe a picture of the phenomenon that is being studied. This inductive, ‘bottom up’ approach to research as evident in Grounded Theory (1967) appears less to move toward a desired outcome and more toward an exploratory position. It may be detrimental to create a binary relationship however, and I agree with Bruner (1986b) that,

‘There are two modes of cognitive functioning, two modes of thought, each providing distinctive ways of ordering experience, of constructing reality. The two (though complementary) are irreducible to one another. Efforts to reduce one mode to the other or to ignore one at the expense of the other inevitably fail to capture the rich diversity of thought.’ (p.11)

Indeed, Glaser and Strauss (1967) stress a multi modal research methodology.

‘In many instances both forms of data are necessary – not quantitative used to test qualitative, but both used as supplements, as mutual verification and, most important for us, as different forms of data on the same subject, which, when compared, will each generate theory’ (p.18)

The underlying purpose of Grounded Theory therefore, is to, ‘generate or discover a theory’ from, ‘data systematically obtained’ (Glaser & Strauss, 1967, p.2) rather than test an existing theory. That is, the researcher begins with a particular research situation rather than a hypothesis, gathers data as the research progresses and begins to identify patterns and regularities. The researcher may formulate some tentative hypotheses and finally develop a particular theory. Jing & Sarah (2010) describe the process as, ‘an ever developing entity, not as a perfect product’. (1967, p.32) Critiques of grounded Theory have suggested that there is a lack of verification in the methodology which impacts on the credibility of the results. However, simply because this aspect of the research methodology is not made explicit, does not necessarily mean that it is not integral to the process.
'In discovering theory, one generates conceptual categories or their properties from evidence; then the evidence from which the category emerged is used to illustrate the concept.' (1967, p.23)

Although principally this is an inductive approach, there is also clearly an aspect of deduction. Furthermore, it is an approach which has inevitable consequences for the positioning of the hearing-impaired child in relation to research, placing them alongside rather than being the subjects of, research – addressing the concerns of some (Young & Ros, 2011) where D/deaf children:

‘have been consistently treated as outsiders in research through their construction as the subjects of research – they are the sample, they provide the data. Research is done ‘on’ them, or ‘for’ them, but rarely ‘with’ them, or from and by us’. (p.12)

It is a position corroborated by others (Marschark, 2007a; Parasnis, 1996) who have noted that D/deaf children are commonly positioned as the objects of research, be it psychological, linguistic, educational or social. Whilst I do not wish to fall in line with such methodological approaches, I am mindful of the intention of more participatory research methods which seek to position the child more centrally but succumb to what P Alderson (1995) highlights through reference to historical examples of research, where children’s voices have been sought but have often been filtered by those adults who are the gatekeepers of that research. The challenge is to democratise the research process and learn from and with research participants. This is clearly a challenge within an educational system that is built hierarchically with distinct power differentials between teachers and learners. To address this concern to some extent, the research undertaken with children will take place outside of formal curriculum time. Attendance to and participation in any activities will be on a voluntary basis. Whilst this approach could present difficulties for myself in gathering data to ‘write up’, it is in line with a methodology that attempts to engender a sense of agency within the research participants. Indeed, compliance or non-compliance within this research process, flexing their agency explicitly, is itself a form of data that will be folded into the analysis.


**Research Methods**

The methods that I employ and describe are built upon my methodological stance outlined previously. I intend to engage with pupils through the completion of a range of activities\(^{253}\) that unfold as the research progresses. These activities were not pre-determined but emerged from the initial research questions; my own engagement with the academic literature and from the concerns raised by pupils in the research group. Many of the activities and investigations that follow in the activities will be conducted outside of formal curriculum time though there will be several that will draw directly from pupils academic studies in photography, particularly in the minor activities where there will be an attempt to set the parameters and define the concerns that will be pursued in the activities defined as ‘Major’.

To borrow the current metaphorical terminology adopted by OFSTED, I deep dive (OFSTED, 2019) into the educational journey of the hearing-impaired child at a point where they ‘begin’ their formal education in photography. Whilst pupils at this school who choose to embark on the study of photography have no prior experience of the subject in an educational context, they perhaps do have experience of using digital photography through an engagement with their mobile technologies. They have also been primed in other ways, through an internal marketing process that seeks to recruit pupils to individual subjects in the curriculum at KS4 and KS5. They have been subject to and been the subject of, curriculum talks, received literature that promotes the benefits of particular educational programmes of study and ‘informed’ by teachers. Whilst the research activities with and by children might appear to be at the beginning of an educational process therefore, I prefer to think of it as something that is more middling, interrupting an already established engagement with photographic practices.

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\(^{253}\) These activities can be found in appendix F and G and will be referenced in the plateau: ‘Touch what I’m feeling’
A grounded approach (Glaser & Strauss, 1967) to research resists the hierarchical structuring of knowledge and has consequences for folding in the research participants to the research process, positioning them as integral to the research and acknowledging their agency. Indeed, this research could not take place without the involvement of pupils so raising their agency within the research process, is an ethical and moral priority. In line with a grounded theory approach, I begin by assuming that I have little knowledge of the open based questions that I pose in this thesis. Furthermore, I assume that the pupils have little knowledge of the areas of concern. The purpose is to employ this approach to develop theory and build knowledge that may have impact on pedagogy and curriculum changes in photography. Grounded theory is characterised by theoretical sampling but developing theory requires some forms of data to be collected and then analysed. This analysis will proceed with two areas of the following plateau. The first is that developed in the minor activities and that identified as codes to be pursued in the Major activities. These initial minor activities gave the opportunity for initial coding which enabled the generation of ideas or ‘codes’ that could be pursued. These codes will be stated at the end of the minor activities. The ownership of these codes is intended to be democratic and therefore throughout these activities, discussions were held that sought to establish the views of the participants but as a member of the research group, the views of the author were also included. This, with the intentions that an agreement could be reached as to how to proceed with the Major activities and which codes will underpin the activities and analysis in that part of the thesis. I had taken notes after every session that informed the analysis that progressed alongside the activities. At the end of each session, a short discussion took place held by one of the pupils. The results of these conversations impacted on the type and purpose of ensuing activities. This helped build a ‘thick description’ (Geertz, 1973) that enabled more substantive sampling through the major activities.
It is intended that the collection of data for this research will be drawn from across three groups of students, all of whom are undertaking a formal course of study in Photography, either at GCSE or Advanced level. Figure 40 represents the research process across a two-year period in graphical format and illustrates the relationship between these groups.

![Figure 40: Overview of research process](image)

Each group of students are at different stages in their photographic education. All students are hearing-impaired and have different levels of a hearing impediment. The audiological data for group 1 (the main research group) can be found in appendix D. The audiological data for groups 2 and 3 can be found in appendix E. Group 1, who become Group 4 at the end of the research period, will be the main research group and will meet once a week at lunchtime for a session of 30 minutes throughout the two-year research
period. This group consists of five pupils who are at the beginning of their formal education in photography when the research period began. Their initial thoughts as to why they chose Photography as a subject to study, form part of the initial activity cited in the minor activities in Appendix F. The research sessions are situated outside of formal curriculum time and the activities conducted do not directly (with some exceptions) draw upon the work that the children are undertaking in their formal course of photography. The intention is that such activities are independent of the schooled pedagogy that guides that practice. That said, Groups 1, 2 and 3, (Groups 2 and 3 become Groups 4 and 5) will be independently undertaking their controlled test in photography across an eight-week period, aspects of which will be referenced in support of the analysis.

All responses to the activities were undertaken as a group, of which I was a member, and were in reflection to the changing shape of this research. None, other than the initial activities, were pre-conceived but emerged out of concerns that became more visible as the research progressed and were informed by concerns raised through the initial plateau’s and through the concerns of individuals within the research group. This research is intended to be a collaborative endeavour. The practical responses that are referenced in this plateau represent a small sample of the work undertaken during the activity sessions. The extended practical responses can be found in Appendix F and Appendix G. As this plateau unfolds, the reader may wish to ‘jump to’ aspects of these appendices as appropriate.

**Research Group**

The research group were self-selecting in that all year 11 photography students were invited to take part in this research and to attend an ‘information giving’ meeting. From this meeting 10 pupils elected to take part, to be participants. Following the initial sessions however, several decided not to
continue their participation. Their agency in this decision was respected and reflective of the approach submitted to the ethical committee.

The five members of the research group (Group 1) will be referenced as ‘T’, ‘M’, ‘E’, ‘R’, ‘I’. I will add myself to this group, ‘K’. There are other members of the school community who are photography students and who have contributed to aspects of this research but, as they are not part of the main research group, they have not been directly referenced. This, in an attempt to adhere to a degree of anonymity in the research though this is clearly difficult given the research context is a particular educational environment, with particular children and of course their photographs. One evident issue is that children may appear in some of the imagery, but they may not have given consent. However, all children at the school give consent for their photographs to be used by the school unless parents or individual children, specifically object. This has been addressed and any children that have expressed not to be visually represented, have been obscured visually or removed completely.

Pupil Consent

The pupils involved in this study will be aged between 14 and 18 years, though members of the research group are aged between 14 and 16. In order to participate in this research, respect will be shown through seeking their informed consent. Whilst this is not necessary because of the age(s) of those involved and the fact that I would deem them to have the ‘capacity’ to decide about whether to be involved in the research, their consent will still be sought.

As already highlighted, one established effect of a hearing impairment is that children are generally defined as ‘language’ delayed. There is a possibility therefore that they may not fully understand the terms on which they are to agree or otherwise. In response to this situation, the nature of the research will be explained to participants face to face and in an overt manner. This will be

254 Corresponding audiological information can be found in Appendix D.
provided as part of the initial ‘information giving’ meeting. In addition, this information will be presented to parents/guardians in written form and further supplied to students as part of a consent form. This is in an effort to ensure that a transparency of research is maintained. The level of detail discussed however will be minimised for several reasons: (i) it may be of little interest to the participants and an insistence on providing detailed explanations could be intrusive and (ii) that a detailed discussion of the purposes of the research may invalidate engagement as children may attempt to shape their work to ‘fit’ a criteria. It was emphasised to pupils that this research will actively involve them as participants and that this approach may well be something different to the way that they may have been positioned in other research. Indeed, during the process of recruiting participants, their experience of being the subject of research was discussed and several talked openly about their experience of multiple visits to the hospital to have their hearing investigated; for testing if their hearing had deteriorated; for fitting new hearing aids or having operations to have a cochlea fitted. They said that they had undertaken many tests throughout their lives, several to determine their proficiency in English. They said that they knew why they had been tested and all were keen to improve their English so they were happy to undertake tests and to attend speech and language sessions as necessary. They were all keen to improve their speech, the audible quality of their speech seemed to be more important to the children as they wanted to be able to be understood when in the community. Their embarrassment at not being able to be understood was an overriding factor. It was emphasized that this research was not about testing their capability and that they would not be directly the subject of research. It was emphasised that they would be co-researchers and that their opinions would always be sought and that they would direct many of the activities that will be undertaken. In this respect, it was emphasised that the traditional teacher/pupil relationship with which they are familiar, will be challenged.
My Relationship with the Research group

There are clear difficulties that stem from how one conceptualises the ‘child’. In the case of the proposed research - either as an active agent or as a subject of research. In order to learn more about the D/deaf child’s experience of creating and interpreting photographic imagery, it is my intention to position the children as participants – active agents - in the research rather than positioning them as subjects upon which the research is conducted. The relationship with the child in the proposed research context will differ therefore, from ‘traditional teaching’ situations so that the unequal power relations that some (Freire, 1996) have observed as evident in traditional educational contexts are acknowledged but ‘worked against’. The role of the teacher as someone who transfers a body of knowledge will be challenged through the facilitation of a process which intends to explore and open up possibilities/ questioning rather than facilitating a process which seeks to confirm what is already known. This is not to deny however, that I am still their teacher and I acknowledge that their responses to the research ‘set-up’ will in some way be influenced by this dynamic and I remain open to this possibility. Nevertheless, I agree with some scholars (Banks, 2001; Pink, 2003) that it is only through developing mutual trust through engaging with participants that a researcher can come to know the phenomenon that they are studying. Although there are issues which arise from my close relationship with the children, this could be deemed to be a positive, rather than a negative influence on the research process.

Child Agency in this Research

There are issues of maintaining a balance of power in this research and I will attempt to reflect the methodological process by those (Cook & Hess, 2007) who have used photography to explore children’s voices and opinions on topics from their perspective, thereby circumventing the adult view. Known as ‘Photo Voice’, it is a method that provides ‘... an approach where photographs taken by the researcher or participants are used to elicit, draw out, evoke responses
from participants’ (Riley & Manias, 2004). It is a process through which participants make sense of what they see and experience and make links between their personal identities, local contexts, society, history, and culture. (Harper, 2002) It is intended that this research process will involve cooperative enquiry. In embracing children as active participants in the research, it is clear that the intention is to improve their agency but I acknowledge that this cannot be a given. I also acknowledge that within a school environment, there are institutional constraints which directly impact on the degree of agency that can be achieved. Children may feel unable to dissent because most of the activities that are undertaken within school generally and across the curriculum, are compulsory. I need to think carefully therefore, of ways to improve their agency whilst acknowledging the institutional factors which may limit this. The extent to which a research situation can improve child agency is further problematized when one recognises that children are generally subordinate to adults in an educational context and that they are used to being positioned as receivers of information who may perhaps feel they have minimal impact on influencing or shaping that information. Despite the efforts made in an educational context, to improve student voice and provide opportunities for students to affect their surroundings, it cannot be taken as a given that this will be the outcome. It may be the case that the child is viewed as a passive recipient of the circumstances and ones that are unable to affect their surroundings. The school system is one that a structure of authority and power has to be maintained in order to function along pre-determined lines. However, this does not take into account the possibility that children create their own realities that do not necessarily reflect the desires of those in power. To some extent, this could perhaps impact on the failure of the implementation of many sanctions that are placed on those who do not conform. Many such rules attempt to position the child so that they can be controlled and those in power are often surprised when some do not conform. Such positioning does not take into account the possibility that children are not necessarily static, that they are in a continuous process of ‘becoming’ and that they are in the continuous process of shaping their own identities. These identities may be fluid, changing day by day and well in
advance of those that seek to constrain this desire. This view of the child engaged in this research, therefore, accepts children’s agency as something which is bi-directional – children ‘affecting’ as well as being ‘affected’ by their institutional surroundings and those who seek to control them. In order to engage with child agency that respects this position, it is important that I engage with the children directly in the process of gaining their assent and whilst acknowledging that there are adult gatekeepers whose assent will also need to be gained, this should not be seen to over-ride the voice of the children.
PLATEAU: ‘Touch What I’m Feeling’

‘that persons and things do not exist as bounded entities, set aside from their surroundings, but rather arise, each as a nexus of creative growth and development within an unbounded and continually unfolding field of relations. This is not to say that they are undifferentiated, or they all merge into a kind of blur. It is rather to argue that their differentiation is a function of their placement within the relational manifold.’ (Ingold, 2000, p.xv)
Critical Analysis and Findings

The underpinning philosophical stance of this plateau is one that displaces the premise that the school photograph is an object to be looked at. It displaces the premise that those children within the frame are subjected to a hearing gaze that is reflective of a power differential embedded within modernist notions of vision and visuality. Rather, this plateau proposes a post-modern, post-humanist stance, proposing that hearing-impaired pupils within the frame look back at the viewer, that they have an agency that disrupts and challenges the philosophical and somewhat practical stance that has positioned them as visual learners. In doing so, this plateau will push against that already proposed that positions the school photograph as a container of the bodies and identities of those within the frame. If children are not considered to be contained by this frame, then their relationship with the educational environment that sits in the background of their learning, becomes a focus for attention. This environment will be considered as dynamic, despite the ritualistic and cyclical events such as the school photograph that take place which seek to confirm otherwise. Furthermore, considered as bodies that are dynamic rather than static, individuals move through this environment and they interact with it, which in return, shapes their movements and their vision. However, there is always potential for escape from this somewhat overbearing, vision-based concept. If considered as a multi-sensory experience that is not privileged in one
area of the body; in one area of educational activity or in particular place in the educational environment that is demarcated by curriculum differences. As an educational subject, Photography, it will be proposed, does not only exist within the photography department that a modernist view of learning might dictate, but is evident throughout the educational environment and across the bodies of the children and the technologies with which they seek to engage. In this multi-sensory, multi-modal concept of Photography - Photograph-ing does not happen at any one time but moves with children through time, in constant movement and constant interaction with the school environment. Through a proposition that all of the elements that constitute this educational framework are in constant flux, a movement that never settles, enables a thought process that permits a consideration of this relationship as multi-sensory. It is a position from which the notion that photographic images are ‘read’ and understood as texts that tame interpretations and understanding is challenged. The ramifications of such a stance is to question the validity of considering the hearing-impaired child as a visual learner and Photography as a visual medium. Are there other modalities through which hearing-impaired children could engage with photography? Is it possible that a broader concept of vision could be embraced that disrupts the sensory hierarchy that privileges vision?
Minor Preliminary Activities

‘We know more than we can tell.’ (Polanyi, 1983, p.4)
Achievement in Photography

At the outset of these activities, it is worthwhile questioning the presumed suitability of this cohort of children to the educational subject of photography. If this subject area is deemed to be a visual medium, and hearing-impaired children are framed as visual learners, then it becomes safe to assume that within this context, hearing-impaired children might have a propensity in the subject.

The data in figures 42 and 43 represents the various levels of hearing-impairment for two different cohorts of children at different stages of their photographic education. Their achievement in the external examinations is displayed in the column on the right-hand side. This data indicates that there appears to be some correlation between levels of hearing-impairment and success in the subject - i.e the greater the level of hearing impairment, the higher the result attained in external examinations. However, close scrutiny might suggest that such a correlation is far from conclusive, particularly as critics would point out, with such small cohorts this would be far from persuasive. Of course, such data can be interpreted in any way that the institution and other stake holders wish. To be purposeful, such data will be interpreted positively in a manner that reflects the dominant educational ideology. In attempting to make a correlation between levels of hearing and attainment in photography, I am merely coming to overly simplify a category which in my initial plateaus, I sought to resist. Nevertheless, it is an over-simplification that has real effects in solidifying the suitability of this subject for this particular cohort. The fact that I can even think that a correlation, reflective of a positivistic stance, might exist is merely reflective of my own entanglement within a vision-based culture. As already stated, the lack of homogeneity within the population of hearing-impaired children means that even with large numbers, such a correlation would be suspect. Nevertheless, such data is intended to provide the basis for what is seen to be appropriate interventions. The associated issues of language capability is masked by the overriding insistence that photography is a purely visual medium, and therefore is less impacted, by a language impediment.
The visualization of data in this manner and the interpretation of the content as it is read, enables a visualization of the individual body that it comes to mask. Despite the high esteem that such data might be held, it tells me very little about the individuals beyond their biological differences that results in audiological data. Whilst the educational system produces this data in a relentless effort to justify decisions as regards ensuring pupil progress, I agree
with those (Selwyn, 2015) who suggest that ‘data analysis begins to produce educational settings, as much as educational settings producing data.’ (p.72) In producing educational settings, such data also produces the individuals within the setting. To use the terminology embraced by this data outlook, the ‘results’ define possibilities through their insistence that all progress can be tracked and that the individual can be governed on their educational journey.

In an attempt to undermine such a quantifiable process, I approach my rhizomatic analysis in the middle. I focus on the child and privilege their voice over the data which appears effortlessly, to represent and mask their being.
Why did I Choose Photography?

Why do children choose to study Photography as a GCSE subject? It seems a reasonable place to dive in, given the opportunity to hear the voice of the child from the outset. Indeed, in general, children are rarely posed this question as it is assumed perhaps, that they ‘know’ – after all they chose to study the subject. However, I was curious to know more about their motivation; what they think they will be learning through an engagement with this ‘body’ of

Well, I think Photography is a big part of your creativity, since you could turn the photo like from a hot environment to a cold environment or put png images on a background like they’re really into the photo. It’s a huge part of your creativity.

I think we are going to learn about cameras, deeper abilities into a camera, how to edit photos, maybe the history of cameras and photos and take pictures around the school.

I would mainly like to learn more about editing, as well as cameras.

Figure 44: Pupil Response 1

Why have I chosen photography?
I find interesting to learn and I never try this so this is opportunity for me to try out and to enjoy it and have fun to learn. Photography sound interesting subject.
What is photography?
I think photography about express your feeling, show people what you are feeling.
What do you think we are going to learn this subject?
To learn how to use dark room and how to use computer with photography. How to use Camera and etc...
What would you like to learn?
I would like to learn how to use dark room and use camera to express my feeling into photography and just to enjoy learn and fun.

Figure 45: Pupil Response 1 (T)
knowledge and what they hope to achieve? These are complicated questions but were simplified and posed to a group of year 10 pupils (Group 1) as they were about to embark on a two-year course of photographic study. Two response are represented in Figures 44 and 45. The response in Figure 46 is that of the author.

In these responses, it is clear that the pupils want to engage with the subject of photography because of two areas that I will define as being (i) the ‘technical’ aspect of photography and (ii) the perceived ‘creative’ challenges that it is deemed to pose. I will address these two areas of interest separately but rather than considering this as a beginning of their study, I prefer to think of it as continuing a process of learning that is merely interrupted by more formalized instruction.

The Technical

In order to support their creative ventures, it would appear that both pupils would like to acquire knowledge that will help them take what they consider to be ‘better photographs’. This is somewhat surprising however, given that such a desire is set against a context where pupils use their mobile phones and other forms of mobile technology to take, edit

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255 S members of this group form the research group.
256 Further responses can be found in Appendix F.
257 I make an assumption here that the child chooses photography rather than photography choosing the child. The latter suggests that photography is moving across the institution rather than being static, existing in one area of the school.
and share photographs regularly. The automated aspect that digital photography affords however, is seemingly sidelined by pupils who want to engage with the technology and in some cases historical processes. Pupil T makes reference to the use of the Darkroom and having had no prior experience of a darkroom in this educational context at least, one might question where the pupil had developed their understanding of this term. Is this desire to acquire knowledge of this subject area, a desire to acquire an identity as a photographer - to ‘become’ a photographer? The proposition that everyone is able to be a photographer in recent times, supported by the development of technology that is easily accessible, possibly means that to raise your own status in this area above others, necessitates to undertake a more formal course of study. Furthermore, this enables the child to acquire an identity as a photographer through the acquisition of technical knowledge which will underpin their creative exploration of the medium. The knowledge that children want to gain in this subject is part of a process of learning ‘how’ to do something. In doing so, pupils adopt an identity to go with the development of a series of behaviors that are associated with becoming a photographer. Some have described this change in behavior as performative (Baker & Lattuca, 2010). Considering such a process as a performance, implies that a change takes place over time as pupils move through a formal curriculum. It is an identity that becomes attached to individual children and it is one that is recognisable to others as the materiality of photography exists somehow external to the body and is visible to others. As hearing aid equipment is placed on the body, so is photographic equipment that the children use and this equipment becomes an extension to their body. As this equipment is visible to others, it is ‘read’ perhaps as a sign of proficiency by other children and staff. How is this identity embodied by children as the visible signs of photography are removed as children travel from one curriculum area to another? Have pupils of photography embodied an identity that is somehow recognisable to other hearing-impaired children whose assumed heightened

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258 This is not however, currently permitted during school time as mobile phones are not allowed in school.
sense of vision enables them to identify subtle changes in the demeanor of those around them? Vision therefore, is implicated in how individuals see each other, and how individuals are seen by the institution that monitors and assesses their identity.

The Creative

The creative aspects of the subject of photography appear to be prevalent in both responses. To some extent, the use of the term ‘creative’ is already been pre-determined by a system of education that demarcates curriculum subjects into Art and Science with Photography currently sitting firmly in the former. The separation of such in this manner is reflective of the need to make the curriculum work economically and to give a clear identity to a subject so that pupils can aspire to ‘become’. In these responses, pupils express a desire to learn photography as it would enable them to ‘express your feeling’ (Pupil 1) and that it is a ‘huge part of your creativity’. (Pupil T) As expressed elsewhere, the term ‘creative’ is itself a slippery one but one that I have observed to be used as if it has a common understanding. Furthermore, there are individual children who are deemed by the institution to be more creative than others. Indeed, there seems to be an unwritten agreement between teachers as regards who is to be considered as more creative within a particular cohort of children. Nevertheless, a common-sense approach that leads to a particular understanding of creativity that lurks in the corridors of education, beyond the verbal descriptions that might lead to a better understanding or at least some understanding. Critics seem clear that there is an economic value to engaging in creative based subjects but as we have seen in the previous plateau, less clear on what actually constitutes creativity and what indeed makes one activity more or less creative than another. This is crucial however, if we are to

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259 This has not always been the case as regards the study of Photography for school aged children. A significant proportion of time was devoted to the technical study of the subject. Indeed, my own ‘A’ level in this subject included two written examinations – one based on the history of photography and the other on the technical aspects of the subject.
know what is actually being assessed when pupils engage in creative subjects such as photography. It is worthwhile understanding where their understanding of creativity is first established and if their sense of being ‘creative’ is dependent upon vision and in some respects, as a result of their identity as a Deaf/ hearing-impaired individual.

To be creative does not appear to be difficult for children who seem able to engage with a process of creating photographs. They do not question what this process entails – they appear to ‘know’ how to be creative and how to become a photographer.

**Becoming a Photographer**

A combination of skills in the technical and creative aspects of photography underpins the desire to become a photographer. Becoming something ‘other’ implies a change. Becoming a photographer implies the acquisition of an identity that is somehow different to one’s current state of being. This has been evident to my vision on a number of occasions when children handle photographic equipment, there is a visible change in their physical demeanor as they grapple with switches, dials and lenses. They look at the equipment, but they also touch, feel and explore the material. The eyes have a function in this engagement, but it is the hands that appear to do the work. This initial engagement with the technology is repeated on subsequent contact with the equipment. The function of vision remains the same, but the body seems to remember the previous contact and whilst rehearsing this contact with the equipment, there seems to be a scaffolding of bodily knowledge. At the outset, the body seems to be acquiring another identity that is in part due to acquiring knowledge about how this equipment works. However, pupils are required to take on multiple identities through their engagement with a range of subject disciplines and becoming a photographer—whatever that might be— is just one of these identities. I might ask if there was ever an original self or whether, in line with Judith Butler’s (1988) proposition, that such identities are constituted by repetitive performance, then the
curriculum which is followed by children will undoubtedly affect their sense of who they are.

This notion of change is a continual becoming, but it is a state of change that jars with the educational stability that is demanded by a system that is built upon a static sense of being. It is only then that a productive engagement with assessments can be made. Engaging with a notion of becoming, threatens this process but at the same time has to be engaged. It has to be engaged because the process of education is on the one hand to shape bodies with particular identities that are deemed to be ultimately useful to wider society. These identities can of course be manipulated by children but in a boarding school, there appears few opportunities for children to express themselves without the overbearing vision of adults and that demanded by the educational system. Like the architectural spaces of the school surroundings that change over time, and acquire different identities through a change in the décor, through the arrangement of objects, tables and chairs, so the identity of individual children is in constant change – it is a change however, that is constrained by a system that defines children as visual learners. Is there an opportunity through photography for students to engage in the manipulation of their own identities?

**Resisting the Identity**

The research group were presented with their school photographs and it was evident from their responses that they were not pleased. Of course, this response may have been simple embarrassment of seeing themselves and of others seeing them but with little hesitation, pupils began to analyse their representation – a representation that is usually out of their control and does not necessarily reflect how they would like to be seen.

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260 I am reminded of hearing my voice play back in a recording and not being pleased. Of course what you hear in such recordings is not the same as what you hear when you speak – the latter being heard through bone conduction as well as air conduction.
Whilst expressing her dislike of the photograph verbally, the pupil also chose to point out aspects of the image that made her feel, ‘depressed’ using the written modality. I wondered however, if this response was itself learned behavior and reflective of a rebellious stance expected of a teenager. This member of the group is the most vocal and has some standing in the group and her response may have been infectious in the sense that others replicated this approach. Others in the group relied less on a written approach and decided instead to destroy their image through tearing it into pieces.

Figure 48: T response. Redacted in line with GDPR

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261 See Appendix F for further examples.
In what ways do these three types (including the verbal modality) of manipulation differ? In what ways do the approaches adopted, reflect the confidence that each child has with their chosen method of communication. If standardized testing in speech and language was taken into account, then this would certainly confirm this to be the case. However, this privileging of the written and the verbal negates that which might be communicated more visually. The manipulation of the photograph through tearing it up and reconfiguring suggests a dislike of the original. However, there are elements that have been retained that would be recognizable to a familiar viewer within this context. Perhaps T wanted to be recognised as this would confirm his stance to others without him having to explain this verbally or through written text. T would talk as he was undertaking this manipulation of the image, but he did not record his comments and said that this new representation reflected how he felt about himself in the school photograph. Pupils were attempting to take ownership of their own representation through this process which raises questions as to who actually owns the vision. The children who were the subject of Lewis Hine’s gaze\(^{262}\) may have been powerless to the camera’s ability to represent their bodies but this negates their potential to resist the look. Indeed, in being complicit to that camera’s gaze, the children represented may have made a conscious decision to be represented in a particular way, controlling their body position and performing to the camera, knowing that such would help their plight. The agency of the child is not evident to the viewer whose knowledge of the context is less secure, but this does not necessarily mean that agency is not something that is ‘within’ the child. The children represented by Lewis Hine may well have been controlling their own representation and whilst they may not have had access to the resulting material photographic object, this does not minimise their agency in this exchange. Likewise, the agency of the children in the research group is evidenced to some extent in their attempts to violate their assumed school identity. This does not however, mean that this is the only way that their agency can be expressed but within what has been

\(^{262}\) The reader may wish to jump back to the discussion of the work of Lewis Hine from page 95.
arranged to be a safe research environment, outside of formal curriculum time, this may permit excessive form of being that the institution cannot easily constrain.

**Becoming an ‘Other’**

‘Photography, moreover, began historically, as an art of the Person: of identity, of civil status, of what we might call, in all senses of the term, the body’s formality.’ (Barthes, 1982, p.79)

Following a study of the work of Cindy Sherman, ‘*Untitled Film Stills*’ (1998) pupils wanted to consider their own identities and explore notions of their being and who they might become through engaging with photographic representations. As photography students engage with the technical and creative aspects of this subject, their sense of who they are changes but how does this jar against the identity that has been suggested, has been placed upon them? One aspect of this imposed identity is perhaps that of being complicit in being positioned as a visual learner. To suggest that pupils ‘see’ their world from one vantage point however is to negate the complexities of being and becoming within which pupils and adults are entwined. Pupils are expected to adopt a multitude of identities as they weave their way through the different curriculum demands that are placed upon them. The system of education demands a stability of identity and one aspect of this is through the adoption of a school uniform. The school uniform places an identity on the child and places them within a group of which they are part. Of course, the repetition implied in this process where everyone ‘dresses up’ as if they were in a performance implies a sameness across the cohort but there is also individual differences. There is a fluidity between identities, shifting in and out and through different identities, a resistance to some representations and an acceptance of others. Through photography, pupils are able to play with the representation that they have been given, taking ownership of something that owns them. They become the object of another’s look, an institutional look which seeks to position their
bodies as bodies that are in need. This desire for control of the look, of looking
and seeing is implicit within the structure of schooling and so readily in evidence
in the photographs that furnish the school environment. The system looks on
with a power that is invested in vision and there are few opportunities for the
child to challenge this visionary positioning of their being. If photography as a
practice can be considered to be creative, then an engagement with the subject
possibly enables its users to resist already accepted identities and/or to create
their own.

Figure 49: Group 5. Photographic response. Reproduced with permission of
the author.
There are multiple visual perspectives of the child – that they are ‘looked at’ from many different perspectives – educational, medical, audiological, historical, constructed and objectified in an effort to control and improve upon as society demands. The individual perspective, however, is one that is only achievable perhaps, relative to the constraints that the children circulate within. The disciplinary gaze (Foucault, 1980) has become an ordering principle that impacts on their construction of a self-image – they monitor their self-image in a system that appears to give freedom. However, these personal motivations manifest a form of self-discipline and one that reflects the overall educational ideology that the child is situated within. The illusion of freedom is maintained through a social agreement within the school and between the bodies that are implicated in this agreement. In acquiring the technical and creative aspects of the medium of photography as defined by the educational system requires a contract between bodies - the physical bodies of hearing-impaired children; the physical apparatus related to learning about and through the photographic and a conceptual body of knowledge. These bodies interact and mingle in a constant state of flux that resists the somewhat traditional view of knowledge transfer from teacher to learner that is still embedded in traditional pedagogic practice.

This discussion draws on sociocultural approaches that regard identity as discursively constituted, as formed and performed socially and not simply something existing ‘inside’ the individual. This aligns with Butler’s (1993) notion that there is no essential ‘identity’; rather that identity is a discursive performativity that is iterated and reiterated. The identity that children acquire through their engagement with photography is closely linked to the knowledge they acquire of the subject. In essence, individual identity is formed by what children know. The more that they know about photography, the more they can define themselves as a photographer. This identity travels with the children as they move between different bodies of knowledge in the curriculum. The question arises as to the extent to which this identity is owned by the children or whether it is something that is imposed upon them with the limitations of any knowledge about the subject being pre-defined by the institution. In a similar way that hearing aids/ cochlea implants initiate a kind of technological
experience, that gives children a memory that does not necessarily belong to them, so the experience that they acquire through their engagement with photographic technology initiates a memory that again does not belong to them. Memory therefore may be central to identity formations and these may transcend biological differences that establish a lack of hearing as an impairment.

**Becoming a teacher of photography**

If memory is influential in adopting an identity expressed in the visual mannerisms of a photography teacher. Adopting the identity of becoming a teacher appeared natural to the children in the research group who wanted to know if they could be a teacher. They decided that each of them would organize and deliver a session to the rest of the group. The session was to be photographic based, but was left open ended so that the pupils could direct proceedings, raising their agency in this process and enabling their voice. This involved the children using the knowledge they had learned about photography and their perceived notion of what it was to be a teacher in order to deliver this session. As I became one of the pupils in such an activity, I had to change identities, reflecting a fluidity in a sense of being, moving in and out of identities that I had acquired. Whilst the intention was to set up a space in which traditional boundaries between teacher and pupil were broken down, I was conscious of still being perceived as ‘in charge’. Nevertheless, I was particularly interested in how the children might structure a session such as this. How would their teaching reflect the way that they had been taught and how a particular pedagogic approach of which they had been schooled would be reflected in this task.

One pupil had clearly planned this session and it was interesting that others in the group had addressed the girl as ‘Miss’, confirming an acceptance of this identity as a teacher. The teacher had set a task for the children to

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263 In this activity, the use of the word ‘teacher’ will refer to the child who has taken this identity.
complete. Children were required to produce three photographs that told a story. She asked the pupils to write a plan and stressed that it, ‘does not have to be neat but that it had to tell a story.’ I wondered what the teacher meant by the term, story. Nevertheless, all children in the research group bar one embarked on the task though it was clear that they did not fully understand what was required of them and continually bombarded the teacher with questions. The teacher shouted at one point, ‘I cannot control this class’. Nevertheless, children grabbed camera’s and left the room to take photographs. Once they returned to the class (only two out of five did return) they printed out their work. That produced by one pupil is represented in figure 50. The pupil had responded to the set task by producing three images that for them, told a story. The story that is told however, is not one that is easily read, perhaps because this is a personal reflection on the relationships that the child has with other pupils. The image at the top of the sequence seems to represent some resistance to being the subject of a photograph though in the second and third images there appears to be some compliance. There is perhaps a clear binary here in that the pupil taking the photographs is doing so because she has been told to do so by the teacher. The subjects of the photographs however, are relaxing during lunchtime and possibly do not wish their leisure time to be disrupted. The relaxed pose on the windowsill in the school corridor further testifies the lack of formality. The corridor is a place for relaxing and not learning or being subjected to the gaze of another’s look – even though this other is another pupil. The child who is photographed may not be aware of the change in identity of the child who is performing as a teacher. This clash of identities might well have resulted in unexpected behaviour. The time of the day (lunchtime) further reinforced for the pupil being photographed in the first image, that they could resist being photographed in this way. Their resistance is a sign of their agency. That their personal space was violated by the intrusion of the camera. Whilst the children who were subjected to the gaze of the camera by Lewis Hine were positioned to be compliant to being photographed, no such

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264 Other responses to other lessons can be found in Appendix F.
compliance was evident in this image. This could be reflective of a power 
equalisation in this encounter which would not necessarily be present if an adult 
had command of the technology. Is this therefore, an example of photographic 
work that exists outside of the constraints imposed by a curriculum and that this 
could account for a ‘difference’ in representational performances. Whilst there 
is an evident resistance through a gesture, a sign (language) such can still be 
tamed by the photographer who ‘owned’ this image and could manipulate at 
will. Furthermore, the image could be tamed by a system of education that 
demands that such an image be presented in a format deemed appropriate – a 
sketchbook, mounted on board or similar expected method.

The formation of Identity seems central to these activities - both in the 
performances that were constructed by individual children in the presence of 
other children and by those whose identity seems to have changed in response 
to the presence of a camera. These identities perform however, within certain 
institutional expectations. This is an evident constraint and sometimes a 
battleground over representations. It is a battleground where vision is fore-
fronted and is seemingly in control.

The research group discussed how they felt about the role of their vision 
in their lives at school. All expressed the importance of their vision and that this 
was something that they would not want to be without. They said they relied on 
vision for their learning and that they wouldn’t be able to anything without their 
vision. I suggested that they had been termed ‘visual learners’ by some teachers 
but none of them had come across this expression. It is a term that circulates 
between teachers, but it appears less so to have been absorbed by children. 
They said they first of all needed vision to sign to their friends and that they 
could not rely on speech and their hearing. They discussed some of the issues 
they experienced in their communication with others. They were aware of the 
variety of hearing impairment in their friends and they said they knew who they 
could speak to and who they had to engage in signing. ‘Everyone is so different’ 
said T and, ‘some friends I cannot talk to because they don’t hear me’. ‘I’ said 
that ‘some children are thought to be more clever because they can talk but I 
talk and I am not clever’. It was clear that pupils were aware of the identities of
others beyond what they could ‘see’. Their relationships with other hearing-impaired children was in part dictated by what the ‘other’ could hear, speak and/or sign. The educational system may try to homogenise the cohort for reasons of economy, but this merely masks the complexities of identity formation. Hearing-impaired children are complicated beings whose framing as visual learners is far from straightforward.

**Initial coding**

At the end of the minor activities, the research group met to discuss what questions arose from this research. All pupils had an input to this discussion and it was agreed that everyone would state just one concern or interest that arose from these activities and which could form the basis of the Major activities. From this discussion, several questions emerged:

- E ‘Why is it difficult to make stories in words’?
- I ‘Are my photograph better than my writing’?
- M ‘Do photographs have sounds but that I just can’t hear them’?
- T ‘How come I can remember my photographs but not stories’?
- R ‘Why do I have to wear a school uniform, what does it do’?
- K ‘Does my hearing mean that I interpret photographs different to you?’

These concerns will form the basis of that pursued in the Major Activities.
Figure 50: Photographs by M. Redacted in line with GDPR
Major Activities

‘Nature has placed no sense further from the intelligence than touch’
(Ficino, 1989, p.124)
Showing Seeing

‘Pictures contain clues to be traced, gaps to be filled, connections to be made, ambiguities to be negotiated, games to be played, puzzles to be solved, codes to be deciphered, meanings to be construed, conjectures to be tested, positions to be adopted, conclusions to be drawn -- all of this by spectators bodily performing human acts of imaginative appropriation.’ (Van Den Berg, 2004, p. Online Journal)

I have often referred to this sequence of photographs in my teaching of photography and media studies with groups of hearing-impaired children. The sequence continues to fascinate, and I have returned to it frequently over the course of my career. Each time that I return to it, it seems to be different in some way. I am not referring to the content of the images as this has remained familiar. What has changed is not necessarily the images themselves but the context of my viewing of the images – the situation, the surroundings in which I view the images and the historical time, that surely has some impact on my

Figure 51: Duane Michals Things Are Queer, 1973/1973 Nine gelatin silver prints with hand-applied text 3 3/8 x 5 1/8 inches (each image); 5 x 8 inches (each sheet) © Duane Michals. Courtesy of DC Moore Gallery, New York
evolving interpretations. In addition, I am not the same person as I was when I last looked at this sequence – I have changed physiologically and psychologically and this undoubtedly affects my relationship and interpretation of/with the sequence. As the images move through the differing educational environments, different classrooms, their meanings are far from static but rather more fluid and not fixed. This raises an issue as regards where meaning resides in relation to these images. Does meaning somehow reside within the images or perhaps does meaning arise from an interaction of the images, the viewer and their experience and the surroundings that initiates images of this kind to have an agency. In order to interrogate this dichotomy, I will initially assume that meaning lies within the images themselves and must be decoded if they are to be understood. This decoding of images falls in line with traditional notions of reading images but if embraced, this may be particularly problematic for a child with a hearing-impaired. This defined problem however has predominantly been situated in relation to reading, writing and speaking in a traditional sense. Any issues that might arise which are related to the reading of visual based photographic imagery, appears somewhat sidelined. The research group discussed their preference for written or visual material and all preferred visual communication rather than written communication. They said that this was a better way for them to communicate with their friends and that they often used images in texts or on WhatsApp. They also said that sometimes their friends didn’t always understand what they were trying to say using images so that there was confusion sometimes. They also said that if they wanted to give someone detail that they would use words. ‘R’ said that he could not write lots of detail because he said he didn’t have enough words. He said that he would rather speak as he was able to organise what he wanted to say better than in writing. I asked him if he would use images to communicate with his friends and he said he would rather do this but also said, ‘you can’t control images like I can

The image appears in different formats which also potentially impacts on interpretations. The sequence appears in books, in postcards, on the internet and then the original work can probably be sourced elsewhere. This raises issues concerning the materiality of the work and how different engagements with different material forms of the work might well affect an interpretation.
control speaking. Images have like a mind of their own’. Indeed, whilst reading text is an educational imperative across the educational system and something that pervades the education of the hearing-impaired child, learning to read visual based imagery is sidelined, assumed to be a natural ability that does not need to be taught. However, as art theorist George Legrady (1990) argues, ‘competence in reading visual imagery is an acquired skill similar to the process of learning language, a social activity defined by the norms of a particular culture.’ (p.267) and as regards hearing-impaired children,

‘Although deaf children naturally have a greater reliance on vision, that does not mean they will become skilled visual learners naturally… It is therefore essential that deaf children acquire both language fluency and skill in visual learning strategies.’ (Marschark & Hauser, 2011)

Nevertheless, in attempting to understand relations between hearing-impaired children and the practice of photography, it seems reasonable to dive in where an assumption persists that the reading of visual imagery requires little skill and relies on an innate, natural ability. I begin therefore with my own assumptions as regards how such a sequence might be read and that a lack of hearing would not have any effect on the ability to interpret such a visual sequence – an assumption that will be explored by the research group.

In order to problematise my assumptions, it will be necessary to adopt an alternative position to provoke discussion. In the first instance, I will assume that the reading of such a sequence will reflect established westernised conventions that underpin the processes involved in reading more generally. I wondered if there would be a degree of universality in the way that such images might be organised by individuals within the research group and if this could be reflective of a tendency to organise visual material in a particular way that might reflect standard narrative constructions. To explore this notion further, the sequence referred to here was given to the research group as a series of individual photographs. The images were placed in a random order and pupils

266 I use provocations as a device to ‘provoke’ thought rather than pose a question that is answered. This is in line with my methodological philosophy.
were invited to organize them in a way that they made ‘sense’ to them. One such response is given in Fig. 52 and others can be found in appendix G. What could drive the arrangement of images in this manner? There is a sequence presented and in the first instance that which might be considered as a title to the work is not given prominence but placed at number 2, reading conventionally. As children might well be schooled in giving their work a title before they proceed, then a similar approach might have been expected. Perhaps the placing of the title in this sequence is an indicator of the child being schooled in alternative narratives through film and television, where titles are often shown following a pre-sequence of images. The response here could fall in line with that proposition and an indication of how external influences bear down on interpretations. Indeed, two of the five responses placed the title of the sequence in the second position whilst the remaining three pupils placed it at the end of the sequence. In the latter, perhaps the pupils had located the image/ text as clearly text and thereby placed it aside – after all, this was a visual based task and as such, children may have simply wanted to engage with what they perceived to be the visual aspects of the task. None of the responses replicate exactly that in the original sequence. If any of them had done so, then this might simply confirm their familiarity with the sequence itself. What the individuals brought to the task was their own experience of narratives, of stories and this undoubtedly influenced their construction of this work. ‘T’ said he wanted to create story that made sense to him and ‘I’ commented that that the images could go in any order depending on ‘how I feel’. Their experience combined with their understanding of narrative as something that does not necessarily have rules, resulted in their individual arrangement of the images.

‘We have ways of using imagination to understand what can never be fully understood’ (Bruner 1980)
Figure 52: ‘T’ response to organising images into a narrative. Duane Michals Things Are Queer, 1973/1973 Nine gelatin silver prints with hand-applied text 3 3/8 x 5 1/8 inches (each image); 5 x 8 inches (each sheet) © Duane Michals. Courtesy of DC Moore Gallery, New York
The analogy of ‘reading’ images with ‘reading’ text is of course nothing new but is perhaps, deeply problematic in a cultural and educational context for the hearing-impaired child where the verbal and the written dominates as a visual mode of communication. ‘M’ said that she enjoyed playing with images in this way because there was a sense of freedom that she didn’t experience when writing. She said, ‘people are always trying to make my English better but that doesn’t happen in images cus there is more freedom’.

If there is a place where meaning resides in these images, then perhaps it is accessed through a language, through being able to read the content of the photographs to unlock their meaning. As a viewer of these images (fig. 51) myself and as someone who is deemed to have their senses intact, I am placed centrally and invited to enter the space of the photographs which is demarcated by the frame. The possibility that I can enter a particular photographic space of this type, in this manner relies on a modernist, post-Renaissance concept of perspective which further implies that the meaning is within that space – a meaning that I can only access perhaps, through entering that space.

I see the contents of the photographs clearly and I read the sequence from left to right beginning at the upper left-hand corner and progressing across the top three images; then the middle three images and finally the bottom three images. I complete my reading of the sequence at the bottom right image. Where should my vision roam from that point when there is little to indicate where it should travel to next? I clearly know intuitively where to begin and where to end my viewing of this sequence, and I can follow or create a narrative as it unfolds over time but to do so, I draw upon my past experiences and accumulated knowledge of reading text and reading images. Clearly, there is a link between my knowledge of how to read such imagery and this knowledge impacts on what I see, As Aldous Huxley claimed, ‘the more you know, the more you see’ (Lester, 1995, p.62) Whilst my ability to read text and develop an expanding vocabulary has been taught to me, I don’t recall being taught to read

Conversely, when looking at the school photograph, I don’t enter in the way that perspective dictates but scan across the photograph and the contents.
images. If this is the case, then I could assume that the difficulties that arise in
the learning of written / spoken language for the hearing-impaired child, could
be replicated in learning to read visual-based photographic images - but it is a
position that is overshadowed. Why should I assume that there is a gold
standard that dictates how these images should be read and arranged? There is
a tendency to fall in line with a dominant position here that images in such an
eexample should follow a particular sequence. Pupils expressed that they wanted
to create their own stories from the images and not just simply to put them in a
correct order. This is complex and equates what I believe to be two very
different systems of communication - the visual and the written\textsuperscript{268} - and
something that masks a complexity that pervades both. It is a complexity
however, that is recognised within written language modalities but less so with
a visual based language, if such a thing is assumed to exist. As has been
highlighted in other plateaus, a hearing-impairment is defined to be detrimental
to the development of language, but this has predominantly been in relation to
the written and verbal modalities. The question arises therefore, as to whether
the processes involved in reading photographic imagery are dependent or
independent of linguistic competence. The pupils responded with enthusiasm
and talked about the images as they were arranging them, presenting a logic to
their arrangement. It was a logic that did not reflect the logic of the original
sequence. This highlights the different notions of logic that exist. The pupils logic
may not be reflective of the dominant type of logic that is in place and
demanded by the institution, but it is a logic nevertheless.

As far back as the 1960’s, Vernon McCay (1972) concluded that deaf
children were able to complete Piaget type tasks which were framed to
characterise thought, with the same efficiency as those hearing children who
demonstrated more sophisticated levels of linguistic competence. It could be
assumed therefore, that the thought processes involved in reading visual-based
photographic imagery is to some extent, independent of linguistic competence.

\textsuperscript{268}Whilst I equate the written with the verbal, I acknowledge that these are different mods of
communication with complexities that reflect the written and visual divide.
Pupils discussed how they were arranging the images as they were doing it, therefore their chosen arrangements were as much a reflection of what they were saying rather than anything that could be read in the images. This focus on ‘cognition’ however, pre-supposes that ‘knowledge’ resides in or is acquired through particular areas of the body and is in line with the prominent position that meaning lies within images, and that ‘reading’ images decodes this meaning. This, however is detrimental to a proposition of a more embodied approach to learning and one that seeks to problematise the hearing-impaired child as a visual learner and of photography as a visual medium.

Nevertheless, given the suggestion that the hearing-impaired child engages with the world visually, then one might suppose that they have acquired a visual-based knowledge over time that reflects this vision-based engagement. Perhaps it is in the interest of the educational institution to dissociate ‘readings’ in the traditional sense and the type of ‘readings’ associated with visual material. This can legitimise the demarcation of a curriculum along lines that dictate where the associated modalities will best serve individual hearing-impaired children. Science subjects and humanities are assumed to require a critical engagement with language whilst those subjects positioned to be more practical in nature, such as photography, do not. In challenging such a common sense demarcation, my initial reading of this photographic sequence (Fig. 51) implies that language is central to my understanding. Indeed, the only way that I can express my understanding to others is through recourse to verbal/ written ekphrasis. This is reflective of the dominant discourse within a school for the hearing-impaired that promotes oralism and therefore fosters this stance. I am therefore in a perpetual quandary for:

‘concentrating solely on linguistic meaning, such readings deny the very element that makes visual imagery of all kinds distinct from texts, that is to say, its sensual immediacy. This is not at all the same thing as simplicity but there is an undeniable impact on first sight that a written text cannot replicate’ (Mirzoeff, 1999, p. 15)
My attempts to understand the sequence (fig. 51) reveal my inability to say or to write with any degree of certainty, what I have seen and what it means. This is a somewhat frustrating process and one that exposes a gap in my own knowledge. It is one that cannot adequately be satisfied through the use of words however, or perhaps I don’t have the words, the vocabulary with which to describe or perhaps such words don’t actually exist. Nevertheless, ekphrasis, dictates the verbal/ written dominance over the visual. Duane Michal’s assertion that the eyes know nothing, problematizing the assumption that there is inextricable link between what we ‘see’ and what we ‘know’, is clearly open for critical debate. The pupil’s engagement with these images was from their individual perspective. If knowing was to arrange these images in an order that followed established conventions, then it could be concluded that this was not achieved. However, children took charge and expressed their own narratives – narratives that pushed boundaries of established expectations.

The sequence, ‘Things are Queer’ (1973) has of course, been subject to analytical scrutiny other than this dichotomy, ‘as an allegory for the current ambitions of lesbian and gay studies to go beyond documenting specific homosexual identities and cultural practice.’ (Weinberg, 1996, p.11) for instance. However, the interest of the group pertains to that which has been discussed earlier in this thesis and posited by some to be beyond biological based vision - ‘perception’. In referencing the term ‘perception’, the intention is to broaden the concept of the visual beyond that dictated by common-sense. In doing so, I intend to challenge my own and others (Shams, Kamitani & Shimojo, 2000) assumptions that whilst a multisensory concept of ‘perception’ is acknowledged, such continues to defer to the ‘visual’. This however, was not evident when children were interacting with these images. They talked about what they were doing as they were doing it and their visual engagement with the images seemed somehow to follow their talk. Contemporary thought might suggest that ‘Vision dominates philosophical and empirical thinking about perception and perceptual experience.’ (O’Callaghan, 2008, p.316) but I intend to open up and problematise such an assertion following how pupils engaged with this activity, posing a question - just how visual is a visual engagement with the
photographic for the hearing impaired-child and more pertinently, what can the
dissociation of the visual from vision afford?

My proposition is that meaning, if it can be located does not solely reside
within images but is beyond that dictated by a visual engagement. This
meaning, perhaps lies outside of the image, beyond the frame that contains the
visual content and cannot be seen and cannot be heard in a way that modernist
concepts of vision and hearing might frame such an engagement. If this is the
case, then how can meaning be ‘caught’ by the hearing-impaired child if such is
more ephemeral, outside of words and outside of the denotative qualities of the
images themselves? Is it possible to resist the invitation to be positioned in
relation to an image through perspective, particularly by a child who is hearing-
impaired where a heightened sense of vision is assumed? The relationship
between reading imagery and the knowledge gained from such reading begs
further exploration particularly within the educational context of this thesis.

The photographic sequence (fig 50) invites me to have a relationship
with it. I ‘look’ at the images but they engage my looking and in a metaphorical
sense, and ‘look back’. Through this process of looking, such images demand a
kind of engagement that launches a desire beyond what the images permit me
to ‘see’ or to read. (Barthes, 1982). How can these images ‘look back’ at the
viewer when there is no evident bodies within the images that I could consider
to have the ability to ‘look’? Can still images such as these have a sense of
agency? Perhaps a sense of agency if such exists, is ignited when the children
engage with them. This proposition calls into question the dominance of ‘vision’
in this engagement because although it might be reasonable to suggest that the
photographs are accessed through this modality, this simply ignites other
perceptual modalities that are less reliant on ‘vision’. However, if I can’t see
these perceptual modalities or be able to describe them using the language that
sustains vision’s dominance, then I am less likely to think of them as having
credible impact on my interpretation of photographic imagery. Furthermore, my
ruminations assume that my vision and the vision of the hearing-impaired
children in the research group is somehow the same but as I have noted in
previous plateaus, this is an over simplification and fails to recognise both the
differences in the pathology of seeing, as outlined by the scientific community, and more importantly for this thesis, the cultural influences on what is seen and how this seeing is seen.

The completed sequence (fig. 51) was presented to the research group as a provocation. Pupils decided to make a visual photographic response to the sequence and one response is presented below. In this response, there is a sense that the camera is travelling through an area of the school. In fig 53, there are comparisons that can be made with that produced by Duane Michal’s. There are close ups which focus the attention of the viewer on particular aspects of the body and the photographs have been organized in a way that give a sense of a narrative. The pupil has arranged them to be read that reflects a conventional process of reading. Whilst these are still photographic images there is a sense of movement and a narrative that has been captured. The narrative culminates in a larger photograph that convention might dictate to be of greater importance. The construction of the photographs in this manner could be an indication that the pupil has developed a sense of storytelling through imagery that is aligned with standardised narratives found in comic book strips. However, there is no return in this sequence, to the original image as in the sequence presented by Duane Michals. Perhaps this was not seen by the pupil; not remembered by the pupil or ‘seen’ but ‘seen’ as insignificant. Perhaps the sequence produced by the child reflects the educational journey of which the pupil is undergoing. ‘M’ said that she ‘just wanted to have fun’ and did not think too much about the sequence that she had, indeed seen. ‘M’ said that she enjoyed organising someone else who was the girl in the images. She said she wanted her to ‘fall down the stairs as this might make a good photograph’. The original images flow in a circular manner but the educational journey is linear, progressive and rarely returning to the beginning. Repetition is evident throughout an educational system but the child is on a journey which is interrupted by repetition, such as the school photograph, but their journey is continual. - the past is rarely revisited by the institution. The child said that she wanted to ‘end the story and not go back to the beginning’. Which highlighted that she had remembered this flow of images but chose not to include this aspect in her sequence.
In what way might a hearing-impairment ‘in’ the photographer, be discernable within the images presented in this sequence? Historically, research has suggested that hearing-impaired children are very literal and concrete in their language and cognitive functioning. (Quigley & V, 1984) Is this position reinforced in the sequence that is presented in figure 53? The sequence could be said to be literal in the sense that it displays an event in a very staggered process. One element is followed by the next element and so on, reflecting film in the analogue era, where movement is represented by one image being replaced by another image in close succession. I am in danger of being complicit in the proposition that hearing-impaired children do not demonstrate creativity in the linguistic realm and that this is reflected in visual terms evidenced in the sequence 53. I do not believe this to be the case as this tends to make easy sense, where the visual is considered as something that can be read in a similar way to reading written language. It has subsequently been considered that hearing-impaired children are just as creative as their hearing peers but are simply not so easily adaptable to the modality of English in its written and spoken form. If I resist this semiotic approach to understanding such a sequence and approach from a more multisensory position, then perhaps, I can arrive at a different conclusion.

If I attempt to listen to the sequence, then what kinds of knowledge might this afford? In order for me to be able to do this, I need to ‘enter’ the image, be within the image, looking out rather than simply looking at it. Through entering the image, I can hear the sounds that are emanating from the children whose noises will surround the activity. The sound of the feet of the child hitting the ground and the sounds that emanate from other children and the surroundings that are beyond the frame of the physical photographs that are in front of my viewing. I could also feel the contact that is made between the subject of the photograph and the fabric of the ground, the steps that are traversed. None of this interpretation is available to me if I rely solely on my

269 The reader may wish to jump back to the previous plateau for a discussion of creativity.
270 The reader may wish to jump back to the previous plateau to re-familiarise themselves with the area of creativity in relation to the hearing-impaired child.
vision. However, this is not to negate the role of vision in such an interaction. Perhaps this interaction is one where the haptic, the sensory more broadly and vision in the pathological and cultural sense, collide to develop particular understandings.

‘M’ said that ‘I don’t hear anything from the pictures I just use my looking’. But that, ‘I can hear the sounds of people around me when taking my photographs its annoying sounds sometimes’. Given that this pupil is hearing-impaired, raises questions as to how these sounds are heard. The pupil said that she could feel the sound of the pupil hitting the ground but could also, ‘feel the sound through her body’. This contact with the ground suggests another way of receiving information about the event that that circumvents hearing and vision. It is one that sits at the edge of understanding, the edge of the senses. What appeared to be emerging from this research was a preference for the visual but a visual that was beyond words, a sort of felt visual rather than visual, visual. Indeed, I find it difficult to verbalise what I understand from the sequence by Duane Michal’s because there seems to be something that is just outside of the words that I seek to represent this experience. There is a kind of ‘knowing’ that rises from this visual engagement but I cannot say with any certainty, where the resulting knowledge resides – whether it is in the images and / or in the body that has initiated this knowledge production. There are some things that I seem to know but there are also some things that are unknown to me. Perhaps the knowledge gained through this interaction is knowledge that is ‘felt’ rather than knowledge that is reflective of my seeing. This falls in line with the response by ‘M’. What I feel from my engagement with this image sequence cannot be located in the intellect, in the part of my brain that science dictates that such exists – it is somewhere else. This highlights a different kind of sensory engagement. If my vision fails me or constrains the knowledge that I might gain from such interactions, then I need to acknowledge the possibility of other forms of knowing that don’t default to this sensory modality.
Indeed, whilst my vision might be engaged in enabling me to identify the material that carries the photographic imagery, my engagement is initially through my sense of touch, as I interact with the paper-based material in book form. As I turn the pages of the book, I am conscious of the paper that holds the images. My engagement with the images on a computer screen further emphasises my sense of touch, as I manipulate the technology through movements of the mouse that controls that which I see. Pupils preference to view this sequence was in paper rather than on a computer. ‘T’ said, ‘we are always on computers for research.’ Nevertheless, both these engagements have been initiated through a sense of touch well before vision is engaged. This challenges the assumed hierarchical engagement of the senses where vision is placed securely in a prominent position and touch is the furthest from the intellect.

‘The significance of tactile looking is that it is more act than reading: it produces more than it understands. In contrast, readings aimed at understanding rely on a visual conception of looking.’ (Olin, 2012, p.3)

Vision therefore, is guided by my touch and my vision only seems to settle when photographs are before me. Touch in this sense is not simply located within the hands, within the fingers but throughout the body. I am in touch with my physical surrounds and the images in the book or on the computer screen are part of this environment, as is the physicality of my body. ‘M’ was in touch with the camera that was in touch with the body which was in touch with the ground. The act of photographing has no clear beginning or end but is perpetual and exists across rather than within physical spaces. These physical spaces are sensory environments that children move through and who are continually in contact with the physicality of space. The sense of touch is prominent in this creative interaction.
Touching Photography

Whilst vision may be deemed to be the dominant sensory modality during engagements with visual based activities such as photography, it is touch that pervades the interactions with the medium. This sensory engagement in photographic activities however, seems to go unnoticed, perceived to have little effect on learning. Whilst touch might be evident throughout the body, it is possibly localized in the fingers. The finger has perhaps always been implicated in pressing the shutter on a camera and more recently perhaps in touching the digital shutter on a camera phone or swiping from one image to another as digital images are viewed on various technological platforms. The finger is part of the body, so the concept of touching needs a broader conceptual engagement than that which might simply localize it within the finger.

In the first instance, when cameras are placed in front of the research group, they are not simply looked at. Rather they are handled, felt, parts are identified and pressed, twisted and separated. They are scrutinised through touch and whilst there is an interaction between this sense and their sense of vision, the former seems more prevalent. It seems that to engage with photography and the act of photographing is to engage with the materials of photography and this engagement is initiated through touch. The materials of photography and photographing in this educational context includes camera’s, mobile phones, laptops, darkroom materials, chemicals, computers, film stock, software and paper. Furthermore, there is the presentation of photographic output in sketchbooks, on computer screens and sometimes framed and hung in places around the architectural setting of the school. These physical places suggest a contact with the environment, the fabric of the buildings that are situated in the background of direct contact. However, it is this sense of touch that is sidelined in a cultural and educational context where a sensory hierarchy stipulates the sense is the furthest from the intellect. Furthest from the intellect in that touch is placed at the peripheries of the body, localized in the hands and evidently in the finger, evidence of the cartesian split between the mind and the body. Indeed, the sense of touch is what pervades such activities and I believe is
central to the creation and interpretation of work in this medium. A discussion of photography and photographing from this sensory standpoint resists the acceptance that photography is based on the visual and the verbal. This, I believe limits possibilities through the production of safe and cyclical outcomes.

**Touching Photograms**

The research group discussed the different types of photography that they used in their personal and educational lives. They mentioned cameras, mobile phones, computers and the darkroom. They said they enjoyed the darkroom because it was different. They said that they had learned something new that they didn’t know about photography. They said that they enjoyed getting their hands wet in the chemicals. To explore the relationship between touch and sensory engagements beyond vision, and a sense of knowing, I refer to a photographic activity - the creation of Photograms. The activity falls in line with the delivery of a subject that defaults to a scientific, modernist understanding of the ways in which light affects photographic paper. This desire to demonstrate the science that underpins the making of such imagery tends to overshadow that which is perhaps more central to the creation of such work – a physical engagement with the materials that are needed to create such artefacts. Indeed, if it is considered that the body is implicated, then the activity can be considered as explicitly multi-sensory, engaging with the sense of touch throughout the process and indeed, privileging this sense over that of vision. This is not to deny a role to vision – indeed, it could be argued that vision is necessary for such engagements and in the viewing of the final images, but this role it is acknowledged, reflects an embedded position within a discourse that continually defers to the visual. Nevertheless, the process itself is one that is reliant on a sense of touch, through walking in which the body is in constant contact with the ground to finding objects that are deemed to be suitable for this process to an engagement with photographic paper and the chemicals that

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271 The reader may be interested in creating their own photograms. A search for instructions will result in numerous, informative websites that break down the process in accessible steps.
enable a latent image to be realised. The use and manipulation of light is central to this activity. Indeed, light itself could be considered to have a material base which can be controlled and manipulated. It is light that is in contact with the body that creates and is necessary for the creation of photograms. This is a process of image creation that could be seen to be the antithesis to that which is produced digitally. The latter might be seen as something that engages the sense of sight alone but I will suggest that this again, is only the case within a discourse that permits such a stance. The creative explorations through the production of photograms provides opportunities for a different kind of knowing and touch is deeply implicated. That produced however, continues to be tamed by a dominant discourse of vision that dictates a value to certain kinds of knowledge whilst de-valuing others. That produced and given a value is the result of schooled vision, a pedagogic voice that is shaped by the institutional discourse within which it exists. If the photograms created have a kind of knowledge, locked into their surface, then how is this differentiated by a pedagogic voice that dictates certain kinds of knowledge to be worthy of being retained whilst other kinds of knowledge are discarded. Perhaps some photograms can be more easily ‘read’ by the hearing-impaired child and by the institution. Is this a purely visual decision? Touch is clearly implicated in the creation of these photograms and influential in their understanding, but this seems to have little credibility. Perhaps these images have sounds that are reflective of their compositions and dictate their worthiness. If some photograms are considered to be ‘louder’ than others, is this simply related to the visual arrangement of shapes that are evident across the surface of some photograms. Do certain arrangements have an auditory element that is inscribed in the image and related to certain compositional arrangements – visual arrangements? These two issues will be further discussed in the following activity.
What is perhaps most noticeable from previous discussions of photographic imagery or from that gained from a discussion regarding the surface of photographs or indeed, what Ian Walker (2005) might suggest as ‘Through the Picture Plane’, is the surface quality of the images produced through the photogram process. The photograms presented in figures 54 and 55 share a commonality in their presentation. Both sets of images seem to lack any depth that might be dictated by the rules of perspective and hence their information, their locked in knowledge, contained by the frame, tends to be on the surface. The contents are not only shown but they also tell, to someone who is ‘knowledgeable’ in reading such imagery, they might well be accepted as credible representations of their referents. In what ways does imagery that purports to represent its referent faithfully differ from that that which might not have a referent that is recognisable to vision. Furthermore, does a hearing-impaired child prefer one or the other and is this dictated in part by an impairment that has resulted in a language delay. The answer, might lie in that which dictates a link between seeing and knowing, a link that might be solidified through a clarity in images that dictates their usefulness. The more visual clarity within an image, then the more ‘knowledge’ that an image may be deemed to contain and provide to the reader. This however, introduces a problematic. I previously suggested that photograms have knowledge ‘in’ them and that this knowledge is somehow locked within an image but can be unlocked through entering an image, though a suspension of disbelief. (Kendall, 1980) Let me suppose for the moment that this might be the case and that this directly impacts on the type of imagery that might be preferred by those with a hearing-impairment.272 In my previous plateau, I suggested that there might be a preference for a high level of visual clarity in such images. It is a position which appeared to be cross culturally accepted and supported by the scientific and

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272 The reader could jump back to the previous plateau and review the work included in the exhibition entitled, ‘Hearing the Photograph’ which included photographs by Dalit Avnon – a photographer who defines herself as hearing-impaired.
medical fraternities. However, whilst that produced in the photograms in Figures 54 and 55 might be said to have visual clarity to the point where that represented could be identified, they do not permit access to a knowledge through that which might be shaped by perspective. The photograms presented here are visually impenetrable because I cannot look beyond their surface. I cannot look through their ‘window’ (Walton, 1984a) onto a world which they represent. In this sense, I am aware of the materiality of their presence and this seems to overshadow their assumed indexicality, providing access to a kind of knowledge that is reflective of the representational qualities of photographic imagery. Figures 54 and 55 share a great deal in common but whilst those in figure 54 were retained by children, those in figure 55 were discarded knowledge.
Figure S4: Retained Photograms
Touching Knowledge – Knowledge Discarded

Figure 55: Discarded Photograms
Discarded photograms are usually left in the bin or lying on the floor. I have often collected these images and wondered why certain images did not conform to certain visual expectations. Was there a certain redundancy (Flusser, 1984) inherent in the photograms themselves, or did a certain redundancy go before the children and was already imposed by the system within which these photograms existed. Is there a knowledge that the hearing-impaired child brings with them which has developed over time and is in line with a dominant institutional vision that further frames their vision? Is there a redundancy dictated by the readability or otherwise of an image which further dictates a value on certain photograms over and above others. Or is there a challenge to accepted representational norms that cannot be accommodated by children because they cannot be explained through the verbal and/or written expression? Does a process of retaining and discarding merely reflect that expected of an educational system that is driven by hierarchies of the senses where vision continues to occupy a privileged position? There are many questions of increasing complexity.

On the surface, the photograms of those presented in figures 54 and 55, appear to be very similar but once scrutinized, their differences become apparent. This is a repetitive activity that is undertaken yearly with new cohorts of photography pupils but such repetition, whilst giving the impression of engendering sameness, is actually very different. The photograms may ‘look’ similar and these similarities can be identified, but considered as a culmination of a photographic performative process which differs, every time that it occurs, these differences cannot always be easily defined. It may be advantageous therefore, to initially describe some of the similarities between those photograms that were retained and those that were discarded. All photograms in both Figures 54 and 55 appear to represent various objects and natural forms but their composition seems to be somewhat random, not adhering to any established ‘rules’ such as that inherited from Renaissance painting, dictated perhaps by ‘the rule of thirds’. (Thomas Smith, 2018) The content of the photograms seems to be on the surface of the paper which has the effect of
minimizing any sense of depth to the images. In resisting Walton’s (1984a) assertions that we see through the photographic surface to that which is represented, we do not see through the photograms to anything that is beyond. Vision seems to be arrested at the surface of the photogram. The two sets of photograms are both in black and white with varying degrees of contrast and they are similar in size. The similarities seem obvious but any differences that might dictate why one set is retained whilst the other set is discarded is less so. On closer inspection, it would appear to my vision that those represented in fig 54 appear to be more detailed in terms of what they represent. Is this representative of their indexical relation to a reality, dictating a value to the images which is not evident in images that don’t appear to have such visual clarity? The bottom left hand photogram in both sets of images might serve to illustrate this point. In figure 54, (bottom left image) there is a sense that the objects have been captured and that their stillness has been recorded. Conversely, that at the bottom of figure 55 (bottom left image) appears to have a greater degree of blurred edges that might affect the images visual credibility and have negative impact on the viewer. Is this something that would be noticed more readily by a hearing-impaired child who has been primed toward the visual? When presented with the following photogram which was also discarded, the research group were asked if they would keep or discard the image if it were theirs.

Photographs that do not conform to a perspectival arrangement through which the viewer is invited to enter are problematic for the viewer. I am reminded of the series of photographs by Robert Adams (2008) entitled, ‘The New West’ in which on a number of occasions the viewer is confronted with images that highlight the surface on which the image is printed – thereby resisting an invitation to enter the images. See: Adams, R. (2008) The new West : landscapes along the Colorado Front range. New York: New York : Aperture.
All pupils reported that they would discard the image in figure 56. Further discussion ensued which sought to clarify the reasons why such an image might be discarded and not included in their sketchbook work. All responses indicated that a lack of visual clarity meant that you could not tell what the image was supposed to show, to represent. ‘T’ said that, the image is useless to my studies’ I surmise from this that there is a ‘value’ placed on the image in terms of its usefulness which is dictated by its visual clarity. In addition, there is an acknowledgement of the effect that this might have on an imagined viewer. That the viewer might be ‘affected’ through this vision-based contact but not in a way that photographs are thought to affect a viewer. This shared cultural understanding of photographic interpretations was reflected across the cohort. What kind of knowledge might be represented in/ on this photogram that was resisted by this cohort of hearing-impaired children and what kind of different engagements could be promoted that a) don’t necessarily defer to vision and b) engender a different kind of contact?

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274 This activity was extended further across a range of other photograms. a series of twenty randomly collected photograms were presented to the research group. Each member of the research group was asked to separate out those that they felt were worthy of keeping and those that they though should be discarded. See Major Activity Appendix G for results.
I am complicit with the proposition that there has to be some kind of ‘contact’ with the photogram but suggest that this could be framed in relation to sensory modalities beyond vision - hearing, smell, taste and/or touch – resulting in a kind of ‘embodied cognition’ (Clark, 1997) that amalgamates body and mind and resists the representational insistence that photographs are constructed in relation to language and received as texts that can be read. I agree with Marcel Duchamp, (1957) that it is only through contact that an image can come to mean anything – that it does not really mean anything or even exist until someone is looking at it. However, this engagement does not have to defer to vision? Does the image exist if someone attempts to listen to it, touches it or smells it? This implies that photographs, in this case photograms have an agency that is ignited through contact but in its insistence to defer to the visual form of looking, it neglects the role that other sensory engagements. Touching photograms initiates a different kind of knowledge, perhaps an engagement with unknown, unknowns, the yet to be explored that cannot always be represented through speech or writing. Photograms seems to exist at the edges of photography and at the edges of representation. That which is at the edges of something and is a little fuzzier, lacking definition and clarity is representative of an abstract photography that reflects a ‘play’ with imagery that may not be in evidence where photography is tied to a particular referent. If there is a link between seeing and knowing and this is solidified by the visual clarity of photographic based imagery for the hearing-impaired, then it is clear to see why certain photograms are retained whilst others are discarded. Perhaps a ‘play’ with the context within which such images exist would enable an engagement with images of this kind in a manner that does not demand that they are read. In this scenario, knowledge emerges from the visuals rather than from language but an escape from language seems little possible as it tames the visual to viewer expectations. Is it possible to place images within different contexts and that such contexts may give a variety of effects that exist outside of that

dictated by language and consequently outside of vision, As John Tagg (1993) has pointed out,

‘what makes a photograph real is the fact that the photograph is more than merely print and paper ... what is real is not just the material item, but also the discursive system of which the image bears its part’ (p.4)

The discursive system within which these images circulate is one where language dominates, but language can also offer ways to escape the constraints it places upon thought. The research group were invited to consider what they thought was represented in figure 56. It was suggested that the image could be like a ‘space picture’ or ‘a painting’. Both pupils were then asked where they would place the image for it to be seen – ‘in a magazine’ and ‘in a gallery’\textsuperscript{276}. This demonstrated a flexibility on behalf of both pupils who were able to ‘see’ beyond the image itself and consider the context of where the image might be situated which would anchor the meaning of the image. This meaning did not necessarily reside within the image that could be decoded. The meaning had to be brought to the image and established through this interaction. Of course, the images already have a context and that is the educational setting in which they are immersed, and which give rise to their shape. Considering the image in alternative contexts provides an opportunity to ‘look’ outside of the image. The activity raises questions as regards the relationship of the visual to the verbal and or/ written modalities. Indeed, whether the two can be considered as separate modes of communication, or whether they are so entangled (Barad, 2007) that any consideration of them as somehow separate entities is futile. I heed the comments of Stockl (2004) who reminds me that despite a proposition of entanglement, the dominance of language presides but in this process, something is lost.

‘The danger in contrasting two modes, however, is that we tend to look at one mode in terms of another. So mostly due to languages dominance, we seem to be asking which linguistic properties images have. Thus we run the risk of overlooking some important design features of images which are outside of the linguistic perspective’ (p.18)

\textsuperscript{276} Refer to appendix G, Major activities for further responses.
Nevertheless, I am sympathetic to both views but for now will consider that the two, rather than entangled, perhaps run alongside each other on separate ‘tracks’. In this manner, I can more productively consider the ways in which the verbal might enter or impact on the visual or how the visual might enter or impact on the verbal in a criss-cross effect where neither is subordinate to the other.

In line initially with a language dominant position, children were invited to produce a photographic representation of a written description. This written description was provided by the researcher. I wondered how close the photographic representations that the children would create, would reflect the written description. The description in the box below attempts to locate the child in a space of which they will be familiar. The description is based on what I had imagined the photograph to look like, including the contents that would be included within the frame. The description also attempts to locate the position of the photographer in relation to the angle of photograph dictated by, ‘you can only see the top of their head.’

This image I am thinking of is in the reception area. The image includes the main desk with someone sitting behind it. You can only see the top of their head. You can also see the window that is at the back of this image. You can also see part of the floor and the glass door which is at the left hand side of this image.

Pupil Responses

There are several clear visual differences in the compositional arrangement of the objects within the frame of the photographs represented in Figure 57. One evident difference is that all children with one exception, chose to photograph in landscape format. The specific instructions did not dictate the framing of the shot and such may have been chosen as a result of an attempt to frame all of the objects successfully. Despite specific written instructions, the visual content of the photographs within the frame remain very visually
different. In the instructions, there is an emphasis on the main desk and this does appear central in all of the photographs. The landscape photograph in the bottom right hand corner appears to reflect the written description more closely than others. The audiological data of this child, indicates that there may be a correlation between the level of hearing-impairment, language capability as
dictated through speech and language assessments and the visual accurateness of the image in relation to the written description. It also suggests that a hearing-impaired child with a profound loss might interpret the written content accurately in a photographic response. This could also be suggestive of a correlation between written descriptions and visual photographic representations when the written is privileged and the visual follows.

However, there is a flexibility within written language that is not acknowledged within such an activity and this is compounded, if it is assumed that the hearing-impaired child is language delayed. The notion of language that is deferred to in this context is again in its written form and not in relation to that which might be described as visual language. It would appear that there are several issues in relation to the hearing-impaired child and their ability to replicate written text accurately into visual based photographic material. However, the potential influences on this relationship are multiple and cannot be reduced to a singular effect such as a hearing-impairment. In any case the visual language impediment as evidenced in four of the images in figure 57, are seen as inconsequential to a system which continues to stress the importance of the dominant language modality, that which designates other potential communications modes to the periphery. Nevertheless, if I concur with those commentators (Kress, 2006) who have suggested that there is an increasing reliance on visual imagery as a form of communication, particularly as regards communicative acts between children, then hearing-impaired children in particular may be in a beneficial position. Indeed, the extent to which the visual could be seen to dominate communication between children who are hearing-impaired is less clear and demands further investigation. Nevertheless, there is much anecdotal and ‘visual’ evidence to suggest that this is the case.

Photographs from Words

To extend the previous activity, children were invited to describe an image that they had in their imagination in words and to pass this description on to another member of the group who would then take a photograph using the
description as a guide. This activity side-lined that of the researcher as pupils were working together to test each other’s assumptions and visual accuracy. I was particularly interested if this activity would result in images that more closely reflected the written description that was shared. If so, was this the result of the written communication or other aspects of communication between hearing-impaired individuals, such as body language, facial expressions and signed forms of communication that were not evidenced in this activity, but were perhaps present. There are several issues that impact on this activity. The detail and accuracy of written communication was dependent upon individual language capability; the supplementation of this written communication that may have been communicated outside of the barriers of the task; the interpretation of the written material by a respondent whose language capability may have directly impacted upon their engagement with the task.

The responses of two pupils (figure 58 and figure 59) are given below. There is a clear difference in the level of written detail provided in these responses. In figure 58, there are two paragraphs which appear to be directing the photographer to two different places in the school grounds. The first description focuses on a sign and this appears prominently in the photograph. There also appears a member of staff in this image which is not reflective of the written description. Indeed, there is no reference to people in the description. The photographer only had to wait a moment to illuminate this person from the image so it is curious as to why this action was not take. Of course, the member of staff is a figure of authority to the child and may have questioned the photographer as to what they were doing. The child may have seen their response as a way of engaging their agency and the photographic act as a means of communication and evidence that a kind of ‘work’ was taking place. The image, figure 59 is perhaps much more an accurate representation of the written description. Indeed, there is compositional evidence that the photographer has been schooled in photographic education. The composition is such that it leads the eye toward the building which is the main focus of that evidenced in the written description. Perhaps, the photographer has also placed the building on the left of the frame to reflect the use of the term ‘left’ in the
written description. Perhaps the image provides a greater amount of information that exceeds the written description. However, the greater detail provided in the written description in figure 59 appears on first ‘contact’ to provide greater visual accuracy in the photograph that is produced. Indeed, the directions given were used to locate the photographer within a space within the environment. It is a space with which the photographer would be familiar. It appears that the written elements have been accommodated in the resulting photograph. However, the particular details of the ‘picture’ stated in the last paragraph has not been captured beyond that stated as the Eiffel Tower. Other elements such as ‘boats and natural things like trees’ do not appear. There may have been a change in the image that is hanging from the wall in the intervening time between when the description was written and when the photograph was taken. Perhaps that which was imagined by the child who wrote the description was as a result of the memory that the child had of the photograph. Perhaps the description is a reflection of what the child remembered of the event and of the photograph. Perhaps the memory of the actual event and the memory of the resulting photograph collide in the memory. The child is looking away from the photograph in the sense that it is not in front of the child when the child was writing the description. Looking away from images in this context seems to ignite something that is beyond what the photograph can provide. The image that is hanging from the wall tells little about the experience of photographing as is evidenced in the description. The child appears to own the photograph as evidenced in ‘my picture’ but the ‘picture’ within the photograph does not directly reflect the child’s written description. Therefore, any ownership could be directed toward a memory rather than toward the photograph. The photograph hanging from the wall cannot fully replicate the memory which cannot be contained by the frame. Perhaps a hearing-impairment impacts greatly upon the imagination and enhances visual memory rather than simply vision per se.277

277 The reader may wish to jump to the section of this plateau entitled ‘Memory and Photography’ for a further discussion and activity related to this area.
Where you park your car next to the car park there is a building that has a big sign outside school.

When you finish the picture walk down to the all weather pitch on your left there is a building where the six form sleep.
My picture

First you start by going to the French rooms and stand with your back backing to Madame carr's room so you will face the window, the photo is on the wall by the windows.

My photo is in a frame and you would know where it's from and what it is straight away (just by looking at it)

My picture is a famous landmark in Paris; the picture itself is really dark and looks like it was taken a long time ago.

In the picture the sky is dark and you can see man-made things like boats and natural things like trees. In the picture you can see the whole landmark.
Communicating through images

What is the ultimate purpose of that which is created by pupils in photography. In the first instance, the purpose is clearly to provide evidence against which they can be assessed in line with specifications guidelines. They are schooled to know what is expected and how to provide material that will enable them to achieve against these standards. However, it might be suggested that the another purpose is to communicate and whilst this may be to an examiner, it could also be a teacher, a friend or indeed, to themselves. In problematising this straightforward notion of communication, I refer to the work of Kress and Van Lewen (2000) who have suggested that the nature of communication is changing and that it is apparently becoming more visual. If I am to accept the research that frames the hearing-impaired child as someone who engages with their surroundings more visually, then it could be surmised that the current climate that promotes the visual as central to communication, would be embraced by the cohort of children upon which this thesis rests. Indeed, Mark Pensky (2001) coined the phrase, ‘Digital Natives’ (p.1) to describe a generation whose engagement with digital forms of communication has overshadowed their engagement with traditional forms of communication - traditional based language systems. Whilst such has not been stated explicitly in relation to the hearing-impaired child, it is pertinent to ask how this cohort might benefit from such a proposition. However, the question arises as to whether such an assertion might merely solidify attitudes toward the associated sensory modality and thereby reinforce the role that it is has come to monopolise - in ‘knowing’, and in coming to know. This notion therefore has to be negotiated with care. On the one hand, it is a notion that is reinforced through what some commentators have described as an immersion in a visual environment. However, rather than reiterate already trodden ground in this area, perhaps it is more pertinent to ask, what is meant by the term communication in this context and if it is supposedly changing, then what

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278 Advertising, perhaps would be a prime example, explicitly demanding the attention through directly addressing an audience.
exactly is it changing from and what is it changing to? These are complicated questions that require a measured approach, but it is important to address for there are clear implications for an educational system that is predicated on the written and verbal forms of communication. If I consider the purpose of language to be able to ‘communicate’ effectively with others, then it is worth briefly engaging with the notion of communication that is possibly under threat if the comments of Kress and Van Lewen are to be heeded. According to the Oxford English dictionary, communication is defined as:

‘the imparting or exchanging of information by speaking, writing, or using some other medium.’ (Oxford University Press, 1884)

Whist this appears to be an all-encompassing definition with a reference to ‘some other medium’, it clearly privileges and is in line with the dominant language modalities of speaking and writing. In broadening out this concept slightly, but in keeping with the medicalisation of deafness as an impairment, I refer to that proposed by some within this profession:

‘Any process in which a message containing information is transferred, especially from one person to another, via any of a number of media. Communication may be verbal or non-verbal; it may occur directly, such as in face to face conversation or with the observation of a gesture; or it may occur remotely, spanning space and time such as in writing.’ (Mosby’s dictionary of medicine, nursing & health professions, 2006, p.409)

The communicative act of gesturing could be aligned to signing, a formal mode of communication between D/deaf children. Whilst this mode of communication\textsuperscript{279} is not embraced within a school that promotes oralism, it is nevertheless engaged between children outside of the classroom. In what ways can this form of communication be instructive in the way that written language was used in the previous exercise. In order to assess this, it is necessary to

\textsuperscript{279} In her book, ‘Through Vegetal Being: two philosophical perspectives’, Luce Irigaray Irigaray, L. (2016) Through vegetal being : two philosophical perspectives. ed. Marder, M., highlights the significance of another forgotten or perhaps marginalised aspect of such communicative acts and that is the air that we breathe that carries sensory messages. The importance of air to our survival is in Irigaray’s words. ‘an indication that humanity as such is not yet born, not yet living on the earth.’ (p.32)
address the similarities and differences between these two modes of communication and how the senses are engaged across these modalities. In the first instance, there is a permanency that seems to be built within written language which is not present in signed or indeed, oral communication. Written words exist in some material form and whilst they exist across time as they are read, they can be read again and re-read. The permanency of the written word when in a material form is perhaps undeniable. Alternatively, signed communication shares some attributes with aural communication. In the latter, sounds in the form of spoken words seem to disappear into the ether and therefore have little permanency. They cannot be seen or grasped and seemingly have no materiality to them. In this respect, spoken words rely on memory and recall from the listener. This implies that the sounds themselves, the ones that seem to carry the words have no intrinsic meaning and require a listener to give meaning. The beginning of a sentence which is spoken and the beginning of a communicative act that is signed has to be remembered in a linear manner as the communication event takes place. However, there is always potential for information to be missed in this scenario, misinterpreted and lost as the process involved seems to exist across time, disappearing as it progresses. Both of these modalities therefore rely on memory and recall to some extent but whilst it might be plausible to suggest that access to meaning in written material is engaged through vision, signed communication is performed by the body, is written by the body and interpreted by the body of the receiver.\footnote{Vision is engaged in such communicative acts but is not privileged. In order to broaden a concept of language out to signed communication, the following activity was undertaken with the research group. The purpose was to ascertain whether the three-dimensional communicative act of signing could be interpreted visually in the production of a two-dimensional photograph.}
Signed instructions (fig.60) were communicated to the research group by another pupil. The pupil is considered to be proficient in BSL by her peers. The pupil described an image that she held within her imagination and one that she would like the research group to produce a photographic image that’s is reflective of this communication. The signed communication was interpreted as: ‘At the front of the school, there is a window on the corner which is next to the outside near a wooden hut’. All those in the research group received the same communication at the same time and then proceeded to take the photograph that they thought had been communicated to them. This practical aspect of the activity was undertaken individually so that there was little possibility that one pupil would be influenced by another pupil when constructing the photographic image. The signed communication had to be repeated several times and was constantly interrupted by individual members of the research group who sought

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281 I resist the temptation to fall in line with those that might consider this image to reside within the mind of the creator.
further clarification. It seemed that the communicative act was not received clearly and as there was no permanency in the signs - they had to be repeated. This was also a communicative act that I could not access, as my ability to interpret the signs was not sufficient to understand an intended meaning. The results of the five respondents from the research group are presented below.

Figure 61: Research group: Responses to signed communication

There are evident visual similarities in that produced as well as differences. How can I account for these similarities and differences given that
all pupils received the same signed communication? Whilst the signer was considered to be proficient, the receivers had not self-assessed in terms of their ability to interpret the signed communication correctly. Perhaps there is a complexity in signed communication that is not acknowledged in a system that privileges the spoken and written word. Where is the demarcation between a formal system of sign language and less formal gesturing? Perhaps those that might consider themselves to be less proficient at reading signed communication, will focus on such as gestures and therefore miss many of the nuances of the signed language. If considered as a visual language however, then this position may well influence the value that is assigned to this communication modality and any complexities might be side-lined. The architectural element of each image is different. However, there is an evident similarity in the main element of the photographs – the window. This appeared in all of the photographs which could indicate that all students remembered this main element of the communication and that this overrides all other peripheral information. That which was not remembered was simply discarded as inconsequential. Reference to a ‘wooden hut’ in the signed communication, is one example of such information which was discarded.

If as suggested earlier that memory and recall might be central to this communication process, then one might surmise that the information that was encoded in sign was not accessible when undertaking such an activity. If the performance of signs could not be carried with the child, as in written communication, then there is a possibility that meaning might diminish as time passes between the signed event and the photograph being taken. If the ability to memorise diminishes as time passes and as all children who conducted this activity, did so individually and in a particular order, then the signed communication had to be remembered for greater lengths of time. The photographs were re-ordered below (fig. 62) to reflect the order in which they were taken. I was interested to know if as time passed from the initial signed communication, the accuracy of the photograph produced would diminish. All photographs include the window but none represent the front of the school. No. 1 and No.2 seem to combine this with the corner of the building which was also
an aspect of the instructions but as time passed and the final three pupils address the task, then there seems to be less information within the photographs that reflect the instructions. The window remains but other elements such as the corner of the building and the wooden hut have not been represented. It seems as the amount of time increases between the instructions given, and the taking of the photograph, there is an impact on what was produced.

Figure 62: Photographs displayed in the order they were taken
To investigate a potential relationship between the written text and the visual text further, the aforementioned activities that privileged written expression and signed communication was conducted in reverse. An entry point from a visual standpoint was suggested and pupils were invited to describe a photograph that was taken by the school technician. The technician had not been told the purpose of the photograph and how it might be used in the research. Had the technician known the purpose of the photograph then this may have influenced his choice of setting, framing. The resulting photograph was distributed within the research group and each child wrote a description of the photograph in turn. These written descriptions were compared against each other and against the photographic image which was the descriptions referent. Given that the photograph given to each child was the same, one might assume that their written descriptions would have a similar structure, focusing on what might be considered to be the main and peripheral aspects of the photograph. The photograph used for this stimulus is below (fig. 63) followed by two written descriptions from members of the research group.

Figure 63: Photograph used as stimulus for written descriptions. Reproduced with permission of the author.
Pupil ‘M’

‘There is a pole with a light. The sixth form houses is in the background. There are no people cus the children are in school. Lots of rails to hold on. The windows are on the right and these are bedrooms. I can see the boys house at the bottom, at the back. One table for sitting on. Nobody uses them anyway.’

Pupil ‘I’

‘Bricks, pipes, windows, lights, tables. Sixth form to sleep at night and no one around. The metal walk goes to other building.’

The written descriptions, one might assume would follow a particular pattern in reading the content of this photograph but closer inspection reveals that this is not the case. The level of detail in their written descriptions and what children choose to privilege in this writing is different. Of course, the TOD will be quick to point out that this is inevitable, given the various levels of hearing impairment and the impact on language production for this cohort. Whilst this is an accepted stance, it is one that does not address wider issues that might impact on the child’s ability to interpret, to understand the image that is in front of them. The impact of experience that is brought to the image is evident in the way that different elements are privileged by different children. Nevertheless, Eubanks (2011) believes that using a visual image can foster the development of written language because it provides an opportunity to rehearse, develop, and organize ideas prior to writing. Some have considered this as a form of freefall writing (Turner-Vesselago, 2013) which may be in line with Laurel Richardson’s approach to developing written material but this may prove to be a difficult challenge for the hearing-impaired child. Nevertheless, the freedom implied in this metaphor is not strictly the case if taken literally. Freefalling, if done so without the constraints of a harness will have drastic and very real consequences so whilst such an approach may provide a metaphorical base through which to provide a writer with a sense of freedom to structure their writing, this is inevitably and institutionally constrained. The development of writing in this context is constrained by the very metaphor which seeks to emancipate it. Similarly, the use of visual material as a stimulant to writing will
at once provide a provocation but at the same time limit or frame a response in a manner that is dictated by the educational system and institution more broadly. The relationship between word and image therefore, is complex but the former continues to dominate as demonstrated in the examinations that are undertaken by pupils of photography\textsuperscript{282} This will be explored further in subsequent activities.

**The Photographic Act**

Photography – the making, interpreting photographic material is one that is tamed by a curriculum that demands children engage with it so that they produce outcomes that are in line with educational expectations. Several of these expectations are dictated in published specifications and in the detail evident within exam-based units. If there is an identifiable sequence to such a free fall approach to photographic based activities, it begins with a stimulus which is either dictated by the teacher or is dictated by examination boards in the form of controlled examinations. Figure 64 is one example from a 2015 GCSE Examination paper\textsuperscript{283} of which the theme was, ‘Apart/ Together’.

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\textsuperscript{283} The full Exam paper can be found in Appendix J
In the first instance, it is somewhat bewildering that the initial information provided to candidates who are undertaking an exam in photography is not in visual form as those outside of the education system might expect. Of course, as has been addressed elsewhere, written text is itself visual, but what kind of framework is being set up in this approach and how does foregrounding this language modality possibly constrain perceptual and creative possibilities for the hearing-impaired child. The language or the words used in this example defines what is possible and whilst the purpose of such is to provide a ‘jumping off’ point for students as they begin their research into the theme, my suggestion is that such actually constrains rather than emancipates an engagement. It does so through an initial assumption that such words will be understood by the reader in a way that reflects the intentions of those that constructed the question. Furthermore, there is an assumption that these words will initiate a creative response that goes somewhat beyond the literal meaning implied. To explore these issues further, the research group were initially asked to respond to the theme in what has become a standard pedagogical approach – through a written spider diagram format. This will be compared with an approach that foregrounds a visual response, rather than one that leads to a visual response via the written modality.

**Minding the Map – through words**

The mind map (Buzan, 2003) demonstrated in Figure 60 is usually the starting point in what has become the tradition for using the photographic to explore concepts/ themes. This is perceived to work within the framework that is set up by an initial prompt. (Figure 64) Children engage with the theme, in this case ‘Apart and/or Together’ as a central point from which they expand out to other words that they perceive to be related to the prompt. There is a discernable structure to the response which is not in line with the traditional way that one is accustomed to use and read words. As written text dictates that it is read in a particular order which is linear, taming the reader to a particular convention. That represented in Figure 65 however, does not conform to such a
convention. The centrality of the title however, might dictate a starting point for the reader but there is no further hierarchy or linearity implied. In this sense, Figure 65 could be considered as an image rather than text. If the creator is working with text as image, then their relationship with what is produced may differ from that which might be produced in text alone. Likewise, as a viewer of the material, I am invited to have a different relationship with the content if I consider it as image and this promotes a kind of reading that is somehow different from reading text. Rather than having to decipher the words, my attention is drawn to patterns of information. Is this pattern telling me something that the words, if I were to scrutinise them, simply cannot communicate?

Figure 65: Initial sketchbook response to exam question (Pupil outside of research group)
I am reminded of the work by Paul Klee (1938) entitled ‘The Beginning of a Poem’. (fig 66) On the one hand, I attempt to decipher the letters and attempt to make some sense of their placement on the canvas. In doing so however, I am engaging with the compositional aspects of that in front of me. A tension is introduced between that described as text and that which evidently pertains to the visual aspects of the text. Unless these are separated, then I have little in the way of ‘entering’ the work. Perhaps that described as text and that described as visual exist on separate tracks or paths and do so in a manner that enables communication to take place. When they are amalgamated in the work by Paul Klee, then any sense of clear communication is obscured. When the work was shown to the research group, and they were invited to respond as to whether this was a written piece of work or an image, all respondents fell in line with the latter. Of course, the term ‘shown’ that I used in this request was indicative of
my own position within the discourse. Perhaps my position which dictates my choice of words, might then dictate a particular response.

Whilst the words evident in the mind map\textsuperscript{284} in Figure 65 attempt to dictate a particular type of reading, the structure is one that is more akin to way that I might read a photograph, an image as opposed to reading text. The latter dictating a linear response, westernised from left to right, where the meaning implied unfolds through time. This method of reading requires the reader to hold within their short-term memory, the beginning of the sentence so that when I get to the end, I am able to reach an understanding of the sentence. Of course, if such is in written form, then I can always look back to the beginning of the sentence in order to confirm my interpretation.\textsuperscript{285} In reading a photograph however, it is unlikely that I will adopt a similar manner of reading unless there is some kind of recognisable system that attempts to dictate a particular route through the various elements. A photograph without visual instruction does not necessarily dictate a particular process of reading however and does not necessarily have a definitive beginning and a definitive end. The reader may suggest that the end of such reading might be dictated by the frame of the photograph but as photographs are rarely seen in isolation then their frame always impacts on some other aspect of the environment. It is possibly difficult to separate the photograph from the surrounding.

It is not uncommon to hear children verbalise their mind maps when explaining their work to their teachers. Their choice of words and the order in which they are expressed might be indicative of the relative importance that the child has given to each piece of text. The reading appears to oscillate between a reading that is more akin to reading in the traditional sense, from left to right to that which appears more randomised, where there is little order apparent. Children in the research group report that their eyes are drawn to the centre of the mind map on first contact, and that the eyes then move randomly around the image/ text. Of course, this is in part dictated by the size of text. That in the

\textsuperscript{284} I would prefer to use a term that challenges ‘Mind Map’ such as ‘Body Map’.

\textsuperscript{285} It is well documented that a hearing-impairment will have a detrimental affect on traditional reading strategies.
centre is clearly larger in font size than the rest of the text and the clarity, given that it is written in upper case is clear to the eye. The convention of using lines to communicate a link between various parts of the text in the mind map is a given and a well-rehearsed educational strategy to develop out from that which is dictated as central. If as the science dictates that hearing-impaired children have a heightened sense of vision at the periphery, then the placement of such material might effect the construction and interpretation of such work. The edges of the paper interact with the surroundings and whilst the information within the image is held by the frame of the paper, vision does not necessarily conform to what the edges of the paper dictate. Vision, therefore can easily slip from the edges of the paper to that which surrounds it. To what extent might that which is beyond the frame of the paper, impact upon an interpretation. If knowledge is within the image, it seems that this cannot be contained by a frame that is in touch with the environment. Whist the frame is a somewhat artificial divide, it is able to compartmentalise knowledge – within and outside of the frame.

Minding the Map – Mapping the Mind through Images

What if this process of mapping knowledge is turned on its head and rather than privileging the written form in such constructions, the visual in a traditional sense is given greater priority. This is a difficult task to administer however, as the initial prompts are always given in the written form. Nevertheless, in an attempt to move away from the written exploration of the theme, students were invited to explore how they might respond in visual terms to the theme, ‘Apart/ Together. This activity bypassed the usual convention of beginning with a written based mind map and encouraged a ‘thinking through photography’ (Burgin, 1982) rather than thinking with words. The reader might be quick to point out that such an activity is still premised on

\[\text{286 This is still a form of a mind map however but simply conducted in the visual rather than the written modality.}\]
the written word given that students are still given the prompt and this is indeed in words. However, the responses in this activity were to be visual rather than that evidenced in the previous activity which was developed in the traditional mind-map through words. An example of such a response is below.

Figure 67: Visual response to 'Apart/ Together
This activity requires a form of thinking visually rather than with words. Is thinking visually different to thinking with words? Both perhaps require the manipulation of symbols and in this sense, both could be considered as a form of language. Lewis Hines assertion that something can be told through images that simply is not possible through words. Is there really something about visual images that simply cannot be communicated in words, is beyond words\textsuperscript{287} and if so how can this be formulated in a manner that furthers understanding of the communicative effect that visual images may have for the hearing-impaired child. Perhaps such a venture is itself ‘beyond words’ for attempting to reduce and explain how the visual acts as a mode of communication is simply to reduce the qualities that images present, to the written mode of communication. This is a frustrating cycle of events which always seems to be reducible to the written text. Through restricting thought to the verbal, to the written however, possibilities of creative exploration are restricted.

If I consider images to be outside of the linguistic perspective, somewhere beyond language, then I might ask what purpose words actually serve and if they are effective in communicating certain information. If the hearing-impaired child’s use of language is deemed to be literal, then perhaps the use of visual based symbols would enable greater expression. This is obviously problematic within a system of education which is bound by words. The system cannot consider ways in which to assess visual material without resorting to words. It would seem that words structure responses. It is almost as if a response is already coded in the words that structure a task and unless, a response is reflective of these words then it is deemed to either fail or be beyond explanation, giving the work an aura that seems to demand respect.

\textsuperscript{287} Beyond Words: Beyond Words Conference. 14\textsuperscript{th} & 15\textsuperscript{th} March 2017. University of Plymouth.
In what ways can I account for a process that begins with a written mind-map and results in an image such as that in Figure 68? Is the image representing a process of escape from that which is confined by the words presented in the mind-map? Presenting words in the mind-map might perhaps mean that there is less reliance on having to be competent in the dominant language. This practice tends to be approached with some hesitancy by children as they explore their ideas in words but as there is less of an expectation that such has to appear in full sentences, then this becomes an achievable task.

The potential of mapping of the mind reminds me again of the overriding sense that such thoughts somehow originate in the mind and that the body is immaterial in its capacity to produce a different kind of knowledge. However, in constructing a mind-map, the whole of the body is engaged - the obvious being the hands as the child writes their comments spanning out from a centralised title to words that they associate with this title. The hands, through touch are
further implicated as the pages upon which children write, are touched. The words on the paper, the text on the paper further breaks down barriers between what might be considered as text and what might be considered as image. Ultimately, is this a limiting rather than emancipatory factor for creative explorations? Rather than this be termed a mind-map, perhaps it should be referred to as a body map! If accepted terminology is to be challenged, then perhaps it can only be done so through the same language modality.

Furthermore, such work is created in an educational environment where speech and listening is ever present. However, to suggest that they are ever present is to ascribe a sort of visibility to their existence. Children may be required to speak what they have written in their mind-maps, providing a further conundrum. In written text I can hold the words in my memory and then return at any point. If the information is spoken however, then that requires a different way in which I am capture the words in my memory. The words spoken seem to have no permanence. They seem to disappear into the ether. Furthermore, my use of the word ‘disappear’ in this context assumes that the words do have some sort of visibility, some sort of materiality and perhaps feel-ability.

**Feeling the School Photograph**

Figure 69: School Photograph 2016 (School Archives) Anonymised in line with GDPR

The school photograph might provide a typical example that would promote a kind of reading in the traditional sense but also another kind of engagement. When presented with a school photograph and invited to track
their reading of the image, all of the children in the research group stated that their initial desire was to try and locate themselves within the photograph. Their desire was once again dictated by their experience. This engaged a more random scanning of the image but one that was inevitably tamed by their experience – if, of course they could remember their place within the structure of the image. Once they had located themselves within the photograph, they further scanned the remaining contents from left to right, in the hope of finding someone else – their friends that they might recognise. This process of recognition is more complicated than it initially may seem. The school photograph is recognisable as a representation of an event that took place at a particular point in history but any relation to the reality that it represents is less secure. The two-dimensional flat object does not resemble the three dimensions of which it has come to represent and whilst the photograph in common sense terminology, may have frozen a particular time period in a static manner, it does not remain static itself as it is passed from child to child. Whilst people in the school community might walk past these images where they are on display, the images also pass them by. The implication is that there is a movement in photographs that challenges the concept of the photograph as a still image. This notion of movement within the photograph is also reflected in my engagement with the image. When I read the contents of the school photograph, I do so over time, across a photograph rather than at a photograph, not focusing on any one particular place within the photograph. Indeed, the process of looking at a photograph may well be involuntary and seems to happen so quickly that it is difficult to know where I look first and where as a result, my looking proceeds. I cannot see all the contents of a photograph at any one moment in time. I am compelled to look across the various parts. This process initiated further memories of the event that went beyond that which I could read from the surface of the image. It would seem that the photograph can hold a

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288 I am negating for now, what happens to my understanding when I look away from the image or indeed with the image that I might carry with me as a memory. To think that understanding only takes place when I am looking at the image is to negate the potential of learning when I am no longer in the educational environment where ‘thinking’ is a legitimised practice.
multitude of information but that the image only has agency in an affective way when it is in contact with a viewer.

Having read the school photograph in a traditional sense, in line with it as a text, children were invited to consider the following school photograph from a broader sensory standpoint.

In this school photograph the children in the research group were not present at the time this photograph was created, which was quickly pointed out by all once they were presented with the image. They were asked to imagine what it would feel like if they were standing/ sitting as part of the group depicted. They were asked what they might be able to see, hear, smell, taste and touch. What could they feel, if they imagined they had entered and were part of this event. Pupil R wrote,

‘I never sat there, I always stand up. It is hot on that day but I have to wear tie and I sweat. Everybody is not noisy and I can smell friends. I don’t taste anything. Glad when it’s done. (Pupil R)

Another pupil commented,

‘I would not feel comfortable because you have to be close to other students. I would feel my arm against their arm but it’s not for long. The grass smells like grass. It’s good to be able to see all your friends in one place some are noisy but they have to quiet when the photograph takes’. (Pupil T)
The sensory shift displaces the dominant semiotic analysis but there is danger of suggesting that one system of interpretation can simply be replaced by another. Rather, I propose that the semiotic and the sensorial can be complementary in such engagements. However, the written text still comes to represent this wider sensory experience. Introducing a type of thinking that relates to the body being within a particular space however, seems to produce a different kind of knowledge from that, when the photograph is viewed as a text to be read. Placing oneself inside an image metaphorically and experiencing the event from within, encourages a looking back at an imagined viewer and challenges their dominant positioning of the body as an object to be looked at.

The sensory or haptic understandings was explored further when pupils were invited to describe a cat. To describe a cat through looking at a cat and then to describe the feel of a cat as if you were holding it.
In furthering a discussion of these two types of engagement – through the written/verbal and the wider sensory, pupils in the research group were invited to describe both the look of a cat and the feel of a cat.

I had expected there to be a clear distinction between these two approaches. However, in the examples given, such a distinction is less than clear. In the top half of each written example, the pupils have described a cat and used terms such as ‘little’ (pupil T) and ‘black’ and ‘long tail’ (pupil R). Other
terms used tend to defer from the look of a cat. Pupil R clearly made reference to some of the connotations of a cat beyond what is represented visually in the image. However, pupil R uses the word ‘black’ in relation to the cat represented and yet this is clearly not a black cat! Vision therefore cannot always be reliable even on a very basic level such as this. For this pupil, the image merely ignites the idea of a cat and what a cat means in relation to the experience that the child brings to the image. Perhaps the child had a black cat in their family and this simply overrides their interpretation of this image. The haptic descriptions in the bottom half of each response more clearly embraces the concept of touch which is reflective of a tactile experience of contact with the cat. The latter seems to defy the representational quality of the photograph of a cat which implies a distance between subject and object which in turn, frames a particular way of understanding, ‘cat’. The haptic descriptions imply that the viewer becomes a different kind of participant where entering the image produces a different kind of knowledge. I had wondered if pupils would describe the sound of a cat as they might have heard this but none did. However, this may simply have been in line with what was demanded in the task – the look and feel of a cat – not the sound of a cat or indeed, the sound associated with the word ‘cat’.

The Sound of Text

Do words in their written form have a sound that is discernable to the hearing-impaired child? Of course, common-sense would dictate that they do not. Is it possible for the hearing-impaired child to take photographs that represent the concepts of ‘Quiet’ and ‘Loud’. The words were presented as text to the research group and each member of the group was invited to take a photograph that represented each word. Several responses are represented in figures 73 and 74.

QUIET
LOUD
The text is of course visual but how can letters on a page that represent a concept rather than a physical object in the environment be understood and represented in photographic terms? If you are deemed to be hearing impaired, it might be assumed that this would be a difficult task but only if immersed within a discourse of visuality that does not permit such a possibility.

The reader may wish to jump back to the previous plateau where the experience of sound in relation to visual based activities is explored. The research indicated that access to sounds aided the completion of visual based tasks. However, common sense suggests that the hearing-impaired child may have had limited auditory experience and this would negatively impact on any engagement with such activities. Whilst this would clearly be dependent upon specific etiology, age of onset of deafness and the social, psychological and educational background of the child, such is dependent upon an ability to link sounds, images and language. Digital Hearing aids and cochlea implants of course have provided access to sounds but what is heard through this technology will differ in quality from the sounds that reach the cochlea and
interpreted by the brain ‘naturally’. Furthermore, these sounds will be interpreted differently by different hearing-impaired individuals, raising questions as regards assumptions that there exists an homogenous group of hearing-impaired individuals. A position that so much scientific research is premised upon. If there is an effect on vision resulting from an auditory deficit that has been addressed through hearing aids and cochlea implants, we must not assume that the restoration of access to sound through technology will affect the sense of vision for all hearing-impaired individuals in the same manner. Indeed, recent research (Pressnitzer et al., 2018) suggests that different people really do hear the same sounds in entirely different ways.\(^{289}\) Perhaps, if there are sounds attached to the shape of words rather than the words themselves, then this sound might also be heard differently by different people.

The possibility of a link between written language and certain sounds cannot be ignored. In the first instance and according to some academics, language is a representational system that uses sounds or manual/bodily signs in order to express concepts. It is the infinite number of combinations of these sounds/ signs that create expressions. (Jackendoff, 2002). The expressions that are the result of language use symbolic references in addition to the indexical and the iconic. (Clark, 1997; Willats, 2005) Traditional reading strategies for the hearing-impaired child, it is proposed rely on linking the sound of a word to that visually represented in text. This iconic representation enables hearing-impaired children to steadily build up a vocabulary in iconic form – this in an attempt to broaden the child’s vocabulary. Broadening a vocabulary however does not necessarily mean a broadening of intellect. Perhaps we should heed the advice of Rousseau (1911) in the book *Emile*, where Rousseau advises the reader to “Restrict the child’s vocabulary as much as possible,” continuing that “It is a very great disadvantage for him to have more words than ideas” (p.74)

\(^{289}\) Even the smallest differences in our individual skull structure or bone density can change the way our brain receives and processes sound waves, changing the frequency that our bones vibrate as we hear sounds.
Because the “child who reads does not think, he only reads; he is not informing himself, he learns words,” (p.168)

Nevertheless, learning words and developing a comprehensive vocabulary is very important if a child is to engage fully with the written texts that they will encounter during their educational journey and beyond formal education. However, this is to deny the complexities of language beyond what the words have come to represent. The words that children learn, their vocabulary, can perhaps be reflected in the images that can be produced. The somewhat literal based image production may seem less of a challenge but when children are required to expand upon this, then the challenges of an engagement with language and images that goes beyond the literal may be more problematic. Of course, such is dependent upon how one frames the concept of language itself and in the context of this thesis, it is one that continually defaults to English in its written and spoken form. However, given the current changes in philosophical and social conditions that make traditional based communication less tenable, then it becomes possible to suggest alternative forms of communication, that do not slavishly defer to the status quo?

Memory and Photography

If memory and experience are central to developing knowledge and understanding and that hearing-impaired children are assumed to be visual learners, then perhaps these two elements – the visual and memory – might be entangled to a degree that they cannot be separated. Nevertheless, this was investigated as pupils in the research group were each shown a photograph and were asked to study it for 30 seconds. The Photographs represented a particular part of the school. Each photograph was taken by the school technician who was not given any information as to how the photographs would be used. This was to ensure a degree of research integrity. Students were asked to study the photographs for 30 seconds but they were not told why they were undertaking this task until the viewing time had elapsed. The individual students were then
asked to replicate the photograph that they had just viewed as accurately as possible. They were not permitted to re visit the photograph for purposes to recall what they had seen. Figure 75 shows two columns of photographs. In the left-hand column are the photographs that were taken by the school technician. These photographs were presented to the children. Their responses can be viewed in the column on the right. In the first instance, there is a clear similarity in the photographs across the cohort. The children are obviously familiar with the surroundings and this may have aided their recognition. Nevertheless, the replication across all photographs seems to have been completed with precision and particularly at the edges, the periphery of the images. This could support the theory that suggests that hearing-impaired children have heightened visual sensitivity at the periphery. It could also merely reflect that this cohort of children are increasingly becoming more visually aware as they progress through their course. As their education in photography has progressed, they have become more adept in the technical and creative aspects of photography and this has enhanced their schooled vision. This has perhaps resulted in a degree of accuracy, present in the photographs by students (on the right) in relation to the source photographs (on the left). It is a degree of visual accuracy that was not present when the source given was in the written modality. Once again, this may support the theory that hearing-impaired children are more visually aware but if this is the case, it is one that is directed to the surface quality/ compositional layout of imagery.
Figure 75: Memory and Photography: Source Photographs on the left, and Pupil responses on the right.
Time Passing

Do hearing-impaired children have a sense of time passing in the way that someone deemed to have their hearing intact might sense time passing? Does time pass by individuals or do individuals pass by time? How are photographs able to indicate that time has passed and is this recognisable to a child who is deemed to be hearing-impaired? When asked to create a photographic response following the viewing of a series of historical photographs (Fig 76) taken of the school when it was a family home, Figure 77 was the result from one pupil. Whilst this was not intended to be an activity through which students sought to replicate what they had seen, the student undoubtedly used that found in the historical images to do so. The responses in Figure 77 differs in their content to the historical photographs in Figure 76 - of course. In the first instance, the contents are perceived as different because time has passed and the building has a different purpose now to what it had previously. The child who created the photographs in Figure 77 was not able to access certain parts of the school as these were deemed to be out of bounds. This is evident in a number of photographs that have been taken outside of the buildings (Figure 77) as opposed to the historical photographs which are mainly taken from the inside of buildings. That which has shaped this type of seeing is invisible but bears down on the shape of that produced. In what ways do these images (Figure 77) indicate that the child who created them is hearing-impaired? In what ways might a hearing-impairment actually impact on the way these images are created? In the first instance, it might be helpful to ascertain the similarities in the images that were created. All the images in Figure 77 are in landscape format. This appears to be a standard; indeed, it appears to be one of only two choices that is dictated by pedagogy, the technology and the institution - that of portrait or landscape. It appears to be an embedded generic convention evident in the historical photographs. The photographs (Figure 77) appear to show buildings at a distance from the photographer and these show

See Appendix L to view a range of the historical photographs of the school.
places that are of significance for this year 11 student. The pupil has placed a filter on the images, adding digital manipulation techniques which have the effect of making the images look as though they are all part of the same project. The text ‘Retro’\textsuperscript{291} appears at the bottom right of each image. In what ways does this filter and the text ‘Retro’ permit a kind of access to the past? It is clear that the text anchors the historical context and the filter further establishes the connotative meanings but how this occurs is unclear. It is in part a question of how language in the traditional sense enters photography so that the viewer, the reader of the images is able to recognise the historical positioning. How can these images come to mean something and is the hearing-impaired child able to embrace such meaning if they are deemed to be language delayed?

The images produced in Figure 77 could be considered to be creative. If the term creative is to imply going beyond the expected norm in some manner, then I could surmise that the photographs presented here go beyond that which the camera recorded originally. The pupil has manipulated the content through overlays and the addition of text so in this sense there has been an intentional change to the original content. Whilst that implied by the term ‘creative’ may have many connotations, it is understood within an institutional educational context to have a particular meaning and this meaning is shared and understood by the community. In what ways might this shared meaning actually restrict what is to be considered as creative? The work produced would have to fall in line with pre-conceived expectations of what is deemed to be creative or otherwise. These restrictions may seem inconsequential, but they influence the shape of what is produced, what is permissible and what is legitimised as creative. In addition to the discourse that shapes what can be produced and how it can be legitimised, the technology of photography further dictates to some extent what is possible.\textsuperscript{292}


\textsuperscript{292} In July 2014, Kessel’s analogue tragedy found its digital farce. The Telegraph and Independent newspapers reported that the popularity of image-based social media is now so great that more than 70 per cent of unwanted cats are black – as they do not ‘share’ well on Instagram.
Figure 76: The Manor. School Archive. Circa 1910.
Figure 77: Student Photographs of various locations at school. Reproduced with the permission of the student.
The technology, the cameras that are used are usually an incentive to the children to create and a reason why many have chosen to study the subject.\textsuperscript{293} Whilst offering a sense of creative freedom, I will also pursue a theory that suggests that what can be produced with a camera is quite limiting. In this respect, the camera could be seen as an instrument that codes the user into thinking that they can produce something that is creative and novel. However, in agreeing with Vilem Flusser (1984) that the camera is a pre-coded\textsuperscript{294} piece of technology which cannot be overcome by the user, then such limitations are inscribed into the technology. According to Flusser, ‘photographers are functionaries of the photographic apparatus’ (p.27). In this scenario, what the camera therefore produces, is already pre-determined. Is it possible to work against the technology which according to Flusser is only able to produce what he terms ‘cliché’ images because the conventions of what is acceptable is built into the technology itself. According to Flusser, (1984) there is a redundancy in such imagery – a redundancy that might be reflected in what children choose to keep in their photographic work and what they choose to discard. In what ways might digital photography circumvent this notion of images and the apparatus through which the fonctionnaire creates. It might seem that the digital can offer a different relationship with cameras and the technologies that produce images more generally but there are also similarities.

The photographs produced in digital format are usually initially seen on a screen on the back of the camera and then on a computer screen. The mode of looking at digital and analogue photographic material is similar, in that children come into contact with both of these photographic modalities in close proximity. In this sense, the technology of the screen is promoting a particular kind of looking, a particular kind of engagement. I ‘know’ that what I am looking at in a digital image is an organised set of pixels, combined to reflect a reality of which it has little in common. Nevertheless, such does not interrupt the viewing

\textsuperscript{293} The reader may wish to jump back to the minor activities where pupil choice is discussed. 
\textsuperscript{294} I was tempted to employ a piece of software known as NVIVO as part of this research but the limitations became apparent as the software seemed to be coding me in the way that it was attempting to shape my ideas for me and perform them in a data set.
process of the image being looked at. It might well be suggested that an image at this stage has little materiality given that it is viewed on a computer screen and that this dictates that it is somehow separate from the viewer. However, the image is already part of a technological system that itself has a material quality and is part of, rather than separate from the material architectural surroundings already discussed. The user could interact through making changes to the image, through manipulating the content of an image by hand - through the movement of a mouse, changes can be made to an image. In this respect, ‘touch’ is implicated in this perceptual and physical experience. This is perhaps an obvious but overlooked way in which touch occurs in a process of learning that takes place in the photographic classroom. Of course, other aspects of the photographic technology also engage with touch. Cameras are handled, shutters are released - the skin is in continuous contact with the technology of seeing. There are also ways in which this contact takes place in much subtler ways as the eye itself is in contact with the screen through the air that is in contact with both. It appears that seeing through touch has both a physical, metaphorical and psychological quality but is an overlooked engagement with the materiality of the image on the screen and of photography more generally. Thirdly, if these images are printed, they have an evident materiality that they all share in common - printed on paper, sometimes photographic paper. Such a consideration - how the feel of the paper itself might contribute to a meaning of the image, simply gets lost in the desire to produce output as demanded by the curriculum. Fourthly, there is some choice in the colour of the images produced. The output can be altered to black and white or a multitude of various colours. Once filters are engaged, the possibilities appear to be endless but are always within the constraints of what the technology and the discourse that surrounds the production of these images will permit.²⁹⁵ The size of the prints that can be produced are further constrained by the technology within the school that places a limit to that of A2. This limitation imposed by the

²⁹⁵ I am reminded of my use of NVIVO - a software programme that can search and collate pre-defined areas of research. It is a programme that begins to code the user.
apparatus is much broader than simply something that is imposed by the educational system. Whilst this limit places an obvious constraint, it also permits some variety in size that indicates an initial difference in the output. One might think that there is almost an infinite number of sizes that could be used as part of this process but the creative and technical fraternity dictates that it is A2, A3, A4, A5. Photographic paper can be readily bought in these sizes and of course this could be altered through an intervention but the default sizes seem to be the preference of the institution and hence the children. Finally, the presentation of these images is periodically presented in A4 or A3 sketchbooks. Whilst a background constraint, it nevertheless, reduces the possibilities rather than expanding what could be achieved. The sketchbook itself dictates a particular kind of reading that is reflective of a process of reading that is evident within western culture – from left to right progressing through the pages of the sketchbook itself in a linear manner. The default format for such sketchbooks seems to have been in landscape but it is not clear what underpins such a decision.\textsuperscript{296}

I have stated some of the technical and pedagogical constraints that surround the production of images in this educational context. This narrative of photographic production is replicated through educational pedagogy that dictates a kind of image production that conforms to pre-set norms. Of course, such instruction is guided by a curriculum that dictates what should be taught and how this should be presented. It is my opinion that the content of examination board curriculum is underpinned by an occularcentric discourse which sustains a type of repetition that is economically viable in producing particular outcomes. It is also one that is at the expense of producing a kind of difference – repetition with little difference.

The educational context further dictates where children can roam and where is out of bounds and of course, and at what time they can do this. This will have ramifications for what can be created through the camera. This takes

\textsuperscript{296} When asked what their preference for sketchbook shape would be, 15 out of 17 photography students at this institution chose landscape.
place of course under a discourse that espouses creative freedom but one that is framed by an educational system that ‘thinks’ otherwise.

**Bodily visions**

The educational context also dictates where and how children look. Their vision has one direction, the child may choose to look and that look will be directed at something or someone. This act of perception is away from the body doing the perceiving.\(^{297}\) It is an act which the body does not seem to be aware of perceiving – of seeing, seeing.\(^{298}\) The objects of their vision have a sort of permanency and this permanency is able to be captured visually in photographs. Through photographs, objects are appropriated at a distance from the body, that’s what visual perception seems to dictate. Sound on the other hand, has no permanency, at least that’s what conventional wisdom suggests. It could be considered as omni-directional, all-encompassing around and through the body but is invisible in conventional terms. In this sense, hearing may be less a form of objective contemplation and rather, an experience that is derived from objects.

‘Vision and hearing, unlike taste and smell, may sometimes be forms of objective contemplation. In tasting and smelling I contemplate not the object but the experience derived from it.’ (Scruton, 2013, p.105)

This experience or lack of experience need not be impeded by a lack of hearing in the traditional sense. The ears provide a canal that collects sounds but the body also receives sounds and is in ‘touch’ with such sounds, not at any one point of the body but across the skin. Aural perception is something quite different from visual perception but is nevertheless directed by it. Whereas the objects of vision are always present, sounds seem to disappear into thin air, occurring over time. When hearing-impaired children are listening, they are

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doing so perhaps through their vision, engaging with the seeming permanency of visual objects of which they are denied access through the sensory modality of hearing – again in the traditional sense. Nevertheless, perhaps this is the basis of what underpins a notion of being able to listen through vision that many D/deaf people proclaim. In proposing that I might listen to a photograph is not suggesting that there are sounds emanating from the photograph itself but that the viewing experience is one that is, if ever undertaken in total silence. Merely the sound generated through picking up a piece of photographic paper that holds an image, or the sound of the computer humming in the background when viewing an image on a computer screen. Whilst such sounds may be barely audible to those deemed to have ‘normal’ hearing, they are there, present and the body is in touch with them. The question that arises is how such sounds might impact on how photographs are viewed and the meanings that are created. The notion of a hearing deficit, is framed in relation to a normalcy of hearing as dictated by science and further legitimised by the medical profession. In proposing alternative ways to understand the concept of hearing, of listening, I suggest there to be alternative ways of viewing, engaging with photography.

An Object in Front

How do children choose to position themselves in relation to that which they choose to photograph? If the process of photographing is to apprehend the other, children may feel that there has to be something in front of the camera - something that is separate from them - something that exists independent of them and perhaps is tangible to them. This way of apprehending the world is reflective of a documentary approach to photography and is easily and perhaps ‘naturally’ assimilated by children, surrounded as they are by an endless array of images with potential for them to create. These images tend to have visual clarity and objectivity that further shapes their vision and the images they wish to create. If there was to be a marked difference in the photographs that were
produced by different children, then that which forms the subject of their photographs would be an obvious area where it would manifest itself. However, this production of images takes place within a boarding school from which children are not permitted to leave other than at designated times. This places further constraints on what objects, places, people that they choose to photograph but not of course how they choose to photograph and the post-production techniques that are further engaged when digital photographic techniques are engaged. These constraints that children are working within perhaps impact on how their vision is shaped. Despite such constraints, my familiarity of the school surroundings is still challenged on occasion when I am presented with images that have been created around the school buildings of places/objects that I do not recognise. (Figure 78) This would be indicative of a kind of seeing that has escaped that dictated by my institutional seeing or a kind of seeing that is unknowingly dictated by the teacher. Does this kind of vision occur in layers in a Foucauldian sense? Perhaps there are layers of visibility and some of these layers are not visible to me because my level of hearing, deemed to be within a normal range, diminishes my vision and that the sounds that impact on my body, determine what and how I see. The children’s lack of hearing in differing degrees enables a different kind of seeing – perhaps, but it is one that is dictated by my seeing and that seeing will be evident in their seeing.

Figure 78: An image that is unrecognisable to my seeing.
How is my seeing as a teacher of the deaf and photographer, present in the seeing of hearing-impaired children? In deaf and hearing-impaired education, there appears to be a plethora of research that focuses on the impact that adults have on a child’s ability to engage with the dominant language. There are many interventions that seek to support this development so that what is seen to be age appropriate milestones are reached. (Piaget, 2002)

However, there seems to be little research as regards how my seeing, as an adult, a teacher might be present in the seeing of hearing-impaired children and how perhaps that their seeing is present in my own seeing. If the hearing-impaired child’s vision and their perception, their acquired identity as a visual learner is constructed in line with a western privileging of the sense of sight, then it is reasonable to ask how this seeing is guided and influenced by an institutional seeing of which I am part. My own vision has already been schooled and goes before the children in ways that are possibly indiscernible, enshrined in a photographic curriculum and present in other adults and of course by the children themselves. As a teacher, I am compelled to accept that my vision, that based on my optical interaction with my environment, is shaped by the very same discourse that continues to shape hearing-impaired children as visual learners. This manifests in subtle ways but on occasion is made explicit and brought to my attention. The notion that there is a process of seeing which is passed on in a linear manner, from adult to children as if it is tangible is problematised if one considers vision to present itself as multi layered and far from operating in one direction. However, I wonder where the dominant look is present and if one is subordinate to the other. It seems that the power of the look resides with the teacher, with the adults. If this is the case and despite my

299 Conversely, there appears little research as regards how hearing-impaired children might impact on the language of adults/teachers.

300 When I was receiving my inoculation for a photographic trip to Hong Kong, the nurse began her routine conversation to put me at ease. I answered her questions enthusiastically but when I revealed what I did for a living, ‘ah’, she said, ‘that why you are looking at my lips’. My visual attention, the choice to look is diminished somewhat. On this perhaps superficial basis at least, my looking is no longer my own but is guided by the discourse within which I would suggest, it has been created.
rhetoric of an equality of vision, the photographs that the children produce are
dictated by my vision. My looking is further dictated by the kind of looking that
is promoted in photographic specifications and accepted pedagogical
approaches to teaching photography. If I pursue this line of thought however, I
soon realise that I come to an analytical dead end. If I suggest that looking is
somehow guided, that it goes before me and before the children, it might follow
that the photographs that children produce will all look very similar in response
to a given stimulus. In practice however, this is not the case. Undoubtedly, my
own sense of hearing has been affected by being in the presence of hearing-
impaired children for 27 years. If this is the case, then what and how I see, will
be affected in some manner. It may be that I will not be alert to sounds that
often go before anything that I see. Sometimes these sounds direct my visual
attention and if sounds comprise different frequencies, some of which I am
unable to hear, then what, where and how I look will be affected. Furthermore,
if there is a correlation between my level of hearing and my language capability
and that my language capability further dictates the kind of imagery that I am
able to read, then indeed my capability to produce visual-based material may
well be restricted. These ruminations however, defer to a common
understanding of language but broadening the concept dictates a different kind
of knowing. It is one however, that cannot currently be accommodated by an
educational system that is entangled with English in its written and spoken form.
This is not to suggest that photographic work cannot exist outside of this
discourse - in lines of flight (Deleuze & Guattari, 1988) it can, but the institution
tries to tame the responses so that they are brought back, folded back into
a realm that can be understood, described and exist in terms that are bound by
a visuality.
Plateau: *Time* for change?

‘Performance approaches to knowing insist on immediacy and involvement. They consist of partial, plural, incomplete, and contingent understandings, not analytic distance or detachment, the hallmarks of the textual and positivistic paradigms’. (Denzin, 2003, p.8)
Every night I go to sleep and thankfully, I see. What and how I see is no less constrained by that which has held my vision in place when I was awake. Nevertheless, what and how I see as I sleep, is also impacted by what I have heard, what I have smelt, tasted and touched and what has touched me when I was awake. The ‘impact’ of these broader sensory experiences to my vision or indeed, the impact of my vision to these broader sensory experiences is peripheral to an established dichotomy that underpins debate regarding the hearing-impaired child and their relations with visual-based activities such as photography. This dichotomy is expressed thus: is a hearing-impairment that is deemed to result in a particular kind of seeing for the hearing-impaired child, determined by the social, historical and educational circumstances within which it is immersed or is it shaped by biological changes that have taken place in the body, in the biological mechanisms of hearing that have directly affected that modality? The former is sociological and reflects the impact of changes in environmental factors in differing historical contexts to the discourse of vision. The latter is shrouded in scientific ‘fact’ that is testament to the credibility of this position and has legitimised a particular pedagogical approach in an oral/aural educational context. It is a position that further legitimises a particular ‘view’ of photography that is anchored in relation to vision and which is evident throughout specification documents that frame photography as an educational discipline. It is questionable whether such a demarcation is possible however, other than to serve the needs of particular research paradigms. Furthermore, the impact of sensory experience brought to bear upon visual-based activities
neglects the interwoven and entangled complexities of these areas, further highlighting the impossibility of such an artificial divide. It is within these complexities, that the following three broad areas of interest have been situated.

(-) the positive impact that an assumed heightened sense of vision in hearing-impaired children has on an engagement with a visual-based practice of photography.

(-) the impact that a perceived language delay in hearing-impaired children has on an engagement with a visual-based practice of photography and contrary to the direction of impact in the aforementioned,

(-) the impact that the mobilization of the visual, through historical and contemporary educational photographic practice has had on shaping the hearing-impaired child as a visual learner.

The notion of impact underpins the assumption that the hearing-impaired child is a visual learner. It is a position that is reinforced through professional development, commercially produced teacher resources and that disseminated in specification documents. The framing of the child in this manner has an historical basis and photography has been deeply implicated. In order to uncover this shaping of the child in an ‘image’ of the dominant voice, I have pursued the photograph as a producer of knowledge about children and as a container of the bodies that it has framed. In this respect, I have engaged with the school photograph in particular, as a performance of a well-rehearsed procedure that governs the way that a collective group of individuals behave. Furthermore, the discussion has been extended to the individual school photograph through which the individual child has acquired a particular identity – an identity that is placed upon them, and from which it is difficult to escape. However, these visual representations tend to mask the nuances of individuality and therefore, such should not imply that the child that is represented lacks agency. The analysis of the work of Lewis Hine in the plateau, ‘Hear What I’m seeing’ is conducted from a position that assumes a power differential between

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the photographer and the children that were the subjects. However, this visual representation merely comes to mask the possible complexities of engagement and agency on behalf of the child. The photographs can ‘show’ but they cannot always ‘tell’. In this vein, the school photograph ‘shows’ stability within the institution, within individuals and beyond, but it cannot ‘tell’ the viewer anything about that institution, about the individuals or indeed, beyond. The reliance on vision for knowledge seems insufficient and the hearing-impaired child, constructed as a visual learner, may well be disadvantaged by this scenario. In an attempt to displace the dominance and privileging of vision in photographic engagements, I undertook a literature review from a broader sensory standpoint. Whilst the notion of ‘looking’ formed the basis of this plateau, it was used as a spur or tuber, to other sensory modalities and their possible impact on photographic reception and construction. The concept of hearing as a biological function and as something that deemed to have little impact on photographic engagements was embraced, analysed but ultimately sidelined in a move toward broader and somewhat entangled sensory engagements. It is the view of the author that if the hearing-impaired child is positioned in relation to photography from a unitary sensory standpoint, such as from vision, then this can surely limit the possibilities that may promote other ways of knowing.

The entangled complexities of these seemingly distinct areas of concern is why this thesis has not been conclusive in a manner that might be expected from more traditional research methodologies. The purpose has been to engage with and through these complexities in a manner that provokes rather than informs the reader. As a provocation, a rhizomatic methodology, embedded within a Grounded Theory approach resulting in participatory activities with children, has been engaged which has enabled a consideration of the thesis as a kind of performance. Indeed, a notion of ‘performance’ has permeated this thesis in a number of ways. In the first instance, children have been considered to perform in a manner that is expected of the educational institution. They perform being visual learners and they perform being hearing-impaired. Their repetitive performance is what constitutes their identity. (Butler, 1988)
notion of childhood itself has been considered as a performance which at certain times in the school calendar, manifests itself in the school photograph. The School Photograph reflects the body performing for the camera, not simply as the shutter is released but as a performance that represents bodies organizing themselves – it is a performance that is inscribed in the bodies of those involved. Everyone seems to know what to do, when to do it and how to do it! Children perform through their engagement with photography as they interpret, research, make, present, talk and sign about photographic imagery, shifting identities as they perform being photographers. They slip in and out of this performance as they weave their way across various subject disciplines that demand the acquisition of various ‘bodies’ of knowledge. The architectural surroundings perform to control the bodies performance as these bodies travel through the fabric of their surroundings – dictating where it is permissible to travel and where is deemed out of bounds. Of course, teachers perform in their day to day teaching, constructing lessons that engage the interests of their students. There is another, perhaps more pertinent, but in several ways the antithesis to the somewhat rigid ways in which the notion of performance permeates the aforementioned. The process of writing that I have engaged in this thesis is one that itself has performed at times, in advance of my thinking. This differs from the aforementioned which seems to dictate how the body performs in the educational space it occupies. My writing however has sometimes been conducted ahead of my thinking. It is a process that is in line with that advocated by Laurel Richardson (2005) and in opposition to a pedagogical approach where children are encouraged to organise their thoughts before committing to writing. Writing before organising thoughts in advance, allows the modality of writing to perform itself, sometimes in what seems to be with a degree of independence, provoking thought as it unfolds on the paper/computer. The approach has been adopted during the activities undertaken with the research group, unfolding as the research progressed. These activities have not been pre-determined, other than the initial activity that sought to

301 I use the term ‘writing’ here to include ‘typing’.
establish some of the reasons why pupils chose photography as a subject to study formally. Pupils were interested to know my reasons for studying photography which they were keen to remind me, was a very long time ago. I added my own thoughts to this, thinking back to when I started studying photography as an ‘A’ Level subject. This basis provided a point at which all research participants could dive into the research. In doing so, I have attempted to forefront the voice of the children, alongside my own, in many of these activities. The pupils decide what they want to research and this is pursued by the group. This has not been without difficulty, both conceptually and practically. Nevertheless, to fully circumvent the voice of the author in this performance with the aim of empowering children in these activities is an aim that is embedded within the broader focus of the thesis. In disrupting comfortable notions of the hearing-impaired child and their relation to visual photographic activities, the voice of the author is a crucial aspect of this participatory research. It is a participation that involves the author on an equal basis to the students. Indeed, this is why at times I have used the first-person voice so that my sensory engagement can be used as a comparison to the sensory engagements with photography that the pupils in the research group experience. The issues are multiple of course, but a balance between the voice of the author and the voice of the children in the plateau, ‘Touch What I’m Feeling’ has been achieved to some extent, though I acknowledge that the authorial voice is still most prominent.

The desire to create a democratic research environment in which all voices are valued has been underpinned by a grounded theory methodology. This has facilitated an open-ended research process, fueled by my initial curiosity. This differs from a more traditional research approach of using information to verify existing theory, and resists the temptation to consider the research participants as subjects of research rather than individuals who grow with the research. That said, I have found that going against the grain of

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302 The reader may want to jump back to the minor activities in the plateau, ‘Touch What I’m Feeling’
established research paradigms within an educational context that privileges a humanistic understanding of the body in relation to learning, has been met by colleagues with some suspicion. This suspicion arises from a concern that such an approach may not provide measurable ‘results’ that will directly and positively impact the attainment of children. This imperative is relentlessly pursued with a sense of urgency and is therefore reflective of the way that a sense of time is embraced. Some academics (Klien, 2004) have described this as an industrial sense of time, where time itself becomes a commodity that can be controlled. It is a concept of time that if applied to a research process then it will be deemed productive with ‘visible’ effects. Despite these concerns, I have pursued a line of flight that as outlined, is performative and resists the type of conclusions that pervade research that is done ‘on’ hearing-impaired children.

The concept of performance that I engage may need further explaining. The reader may be more familiar with a traditional meaning of performance where there is a relationship between a spectator and a performer, the latter actively involved in performing, while the former being more inactive in their response. In many ways this scenario resembles the traditional classroom, where the teacher performs to the children, who respond in an expected manner. The situation tames their response to bring it in line with that demanded by a curriculum. Rather, I have always thought of performance, at least the ones that I enjoy experiencing, as something that provokes my thought and provokes a response that might well be unexpected. This provocation is something that stays with me long after the performance that I have experienced. Performances, therefore, don’t provide me with definitive answers, rather they raise my curiosity and this curiosity is what has underpinned my approach in this research. Curiosity is seen by some as the desire to know (Kashdan & Silvia, 2009) but to know can never be conclusive. Rather, ‘knowing’ is processual and is evident when an exploratory investigation attempts to develop a sense of knowing for the children and for myself. Our

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303 This notion of time has been explored here in relation to transport and therefore not directly relevant. However, the concept of Slow Travel could be employed for slow research.
curiosity is ever present but whilst investigations might satisfy this curiosity to some extent, it can never fully satisfy knowing. The desire to know is a continuous journey and it is one that never concludes – it simply raises further areas of provocations, furthering a desire for knowing. The activities undertaken in the final plateau, may seem to end prematurely but this is consistent with the proposition that this such is an evolving methodology that resists to be defined conclusively. The process that I have engaged however, somewhat jars with an education system that is underpinned by a knowledge-based economy (Powell & Snellman, 2004) that is geared toward individuals demonstrating what they know. What they know is ultimately represented and assessed in what they write. This attainment is further represented by the institution in forms of data, often visual data but as others have suggested, there is no intrinsic meaning in such data, rather the data performs when it is read, when it is contextualised. This tendency solidifies a link between what is seen and what is known and in the context of this thesis, most evident in the formal curriculum of photography. As a curriculum subject, photography is deemed to be dependent upon vision. Vision dictates a particular type of engagement that positions photographs as ‘texts’, as a kind of language that can be accessed through this sensory modality. It is an approach that falls in line with the language modality adopted by this educational institution. Indeed, the focus on literacy and language issues for D/deaf children has been of interest to researchers and educators for over two centuries (Chamberlain & Mayberry, 2000; Moores, 2001) and continues to endure today. Perhaps such concerns are even more pressing in the current context. The pedagogic strategies and the somewhat narrow definitions of language that are embraced seem somewhat outdated, particularly when considered within a postmodern context that emphasises equipping students

304 Indeed, it was a concern that was echoed by Mary Hare herself in 1934 (Appendix N), questioning the effectiveness of the strategies employed to improve the language and speech of hearing-impaired children.

305 I don’t underestimate the pitfalls of not being literate in a society that is dependent on its citizens to be so, within the dominant language modality. ‘As a child they won’t be able to succeed at school, as a young adult they will be locked out of the job market and that, Low levels of literacy undermine the UK’s economic competitiveness, costing the taxpayer £2.5 billion every year’ Trust, N. L. (2019) ‘What is Literacy’. [Online]. Available at: https://literacytrust.org.uk/information/what-is-literacy/.
with the skills and capabilities required for informed and critical participation in contemporary societies. These societies perhaps can no longer be considered to be solely linguistic based. The school photograph for example, clearly performs as a piece of data that can be ‘read’, reflecting traditional engagements. In reading the contents of these photographs, vision is privileged but if considered as a material object that can be ‘entered’ metaphorically, then this initiates a different kind of knowing. It is a position that perhaps should be embraced in photographic education, particularly in photographic based art exams that lavishly defer to the visual and the written.

The concerns raised by individuals and pursued in this research confirm that issues of language acquisition for the hearing-impaired continue to pervade. However, such is only framed as a problem in relation to the dominant language modality. Hearing-impaired children continue to be defined as visual learners but taking the vision out of ‘visual’ may well serve the emerging needs of hearing-impaired children in emerging language contexts, more appropriately.

I might ask of the research community involved in D/deaf education – perhaps it is time for a change?
‘The limits of my language are’ not ‘the limits of my mind. All I know is’ not constrained by ‘what I have words for.’ (Wittgenstein, 1922)
Sense & Sensing

A critical enquiry into relations between hearing-impaired children, vision and photography
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Appendix A - Bibliography


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Appendix B - Glossary

**Analogue Hearing Aids:** Analogue hearing aids have a microphone that picks up sound and converts the sound into small electrical signals. These electrical signals are then amplified (made louder) and fed into an earphone on the hearing aid so you can hear them. They have largely been replaced by digital hearing aids.

**Analogue Photography:** A chemical and physical recording medium where light is captured by sensitive silver particles on film which is then printed on photographic paper.

**Audiogram:** An audiogram is a chart that represents a person's hearing ability, determined by a hearing test. Audiologists use audiograms to help judge whether a person has a hearing loss and what type of help they need.

**Auditory Nerve:** The auditory nerve (also known as the cochlear or acoustic nerve) carries signals from the cochlea to the brain.

**Bi Lingual:** The ability to communicate using two languages.

**Cochlea:** The cochlea is the hearing ‘organ’ of the inner ear. It is a fluid filled chamber. When sound waves enter the cochlea from the middle ear, the fluid vibrates causing tiny sensory hair cells to pick up the movement and trigger an electrical signal in the auditory nerve. This passes signals to the brain where they are heard as sound.

**Cochlea Implants:** Cochlear implants provide a sensation of hearing to people who are severely to profoundly deaf. The implant consists of a microphone and a transmitter outside the head, which send signals to an implanted receiver under the skin. This in turn sends signals to electrodes implanted in the cochlea.
When the electrodes receive a signal, tiny electric currents stimulate the auditory nerve, which carries sound from the cochlea to the brain.

**Conductive hearing loss** happens when sounds cannot pass from your outer ear to your inner ear, often because of a blockage such as ear wax. Sounds become quieter and sometimes sound muffled. This hearing loss can be temporary or permanent.

**Deaf**: People who are born deaf or became deaf at an early age (before language acquisition) use the term Deaf (with a capital “D”). Deaf people identify themselves as part of a Deaf Culture and Community and are likely to use BSL (British Sign Language) as a first or preferred language.

**deaf**: The term deaf (with lower case letter “d”) is used more generally when referring to people with a condition that has led to them acquiring a hearing loss to whatever degree regardless whether signing or oral methods of communication are used.

**Deafness**: The condition of lacking the power of hearing or having impaired hearing.

**Deaf Community**: Many deaf people whose first or preferred language is British Sign Language (BSL) consider themselves part of the Deaf community. They may describe themselves as Deaf with a capital D to emphasise their Deaf identity.

**Deafblind**: The term deaf blindness is used here to refer to people who have some hearing and vision as well people who are totally deaf and totally blind.

**English**: “English” is used here generically to refer to the vocal language of any society in which the deaf individual is immersed. Knowing English means mastering that particular language so that its structure and ordinary vocabulary are implicitly understood and employed by a person.
**Hard of Hearing:** Generally, this term refers to people who have hearing loss and use speech as a primary means of communication. Children who are born with hearing loss or people who experience deterioration of hearing at a later stage in life having always used speech to communicate would be referred to as “hard of hearing”.

**Hearing-impairment:** There are debates about the use of this term that was often used to place anyone who was Deaf or hard of hearing into one category, not recognising the cultural differences. Using this term would cause offence if used with people who are culturally Deaf. The term is however, often used to describe people who have experienced varying degrees of hearing loss after the acquisition of speech.

**Image:** A representation through any medium including photography.

**Key Stage:** The UK Key Stages are targets to be achieved in various subject areas as set out in the UK National Curriculum. The UK Key Stages were first defined in 1988 Education Reform Act to accompany the first introduction of the National Curriculum.

**Oralism:** an ideology and practice that pushes for communication that is based only on speech.

**Photograph (Analogue Based):** an image made using a camera, in which an image is focused on to light-sensitive material and then made visible and permanent by chemical treatment, or stored digitally.

**Photograph (Digital Based):** uses cameras containing arrays of electronic photodetectors to capture images focused by a lens, as opposed to an exposure on photographic film. The captured images are digitized and stored as a computer file ready for further digital processing, viewing, electronic publishing, or digital printing.
**Prelingual Deafness:** Prelingual deafness refers to deafness that occurs prior to the individuals of a first language and includes deafness at birth through to three years of age.

**Presbycusis:** Most people find their hearing gets worse as they get older – this is called age-related hearing loss or presbycusis. If you have noise-induced hearing loss and you develop presbycusis too, the combination will mean that your hearing loss is worse that presbycusis alone.

**Senses:** refers to the western conception of the five senses – vision, hearing, smell, taste and touch.

**Sensorineural hearing loss:** is the result of damage to the hair cells inside the inner ear or damage to the hearing nerve (or both). It changes your ability to hear quiet sounds and reduces the quality of the sound that you hear. It is a permanent loss.

**Vertigo:** A condition which gives the sensation of losing balance, or a moving environment. Vertigo can cause nausea or difficulty standing. Vertigo is most commonly caused by an imbalance in the inner ear. Other causes include Meniere’s Disease or inflammation of the vestibular nerve which runs into the inner ear and sends messages to the brain.

**Visual-Impairment:** is a term experts use to describe any kind of vision loss, whether it's someone who cannot see at all or someone who has partial vision loss.
Appendix C - Educational Context

The school in which this thesis resides is a residential school for hearing-impaired children. The school has been in its present location since 1948 and caters for the education of hearing-impaired children aged 5 – 18. The hearing losses of children range from moderate to profound.306

The school follows the national curriculum, providing what is deemed to be a broad and balanced education which is in line with that available in the state education system. This implies the demarcation of subjects into faculties that reflect more traditional separations of arts from sciences. Whilst the subject of photography has been perceived by some to cross these boundaries, it is currently taught under the broader umbrella of Art & Design - as are the disciplines of Fine Art, Sculpture and Textiles. The photography curriculum is taught at GCSE (KS4) and at ‘AS’ and ‘A’ level (KS5). Pupils can opt to study the subject as a GCSE in year 10, continuing through to ‘A’ level in year 12 if they so wish. It is not deemed necessary to have studied GCSE Photography in order to progress to studying the subject at advanced level so it is not uncommon for students to embark on this subject in post 16 education without any prior educational knowledge of the subject.

This particular school307 for hearing-impaired children follows an oral /aural philosophy, promoting the use of listening and speech in an effort to align the language capability of those with a hearing-impairment with that perceived as ‘normal’ within the hearing community.308 I recognize that the use of such terms as ‘language capability’ and ‘normal hearing’ are used with such frequency and without question that they appear value neutral. Nevertheless, it

307 The CRIDE report (2017) states that there are currently
308 As reported in the recent CRIDE (2017) report, there are around 53,000 hearing-impaired children across the UK served by 294 provisions. The language modality offered by these schools and various provisions differ. Several use an oral/aural approach whilst others predominantly use sign language (Signed Support English SSE and British Sign Language BSL footnote) There are others that advocate a Total Communication (TC) approach. This study focuses on one particular institution which advocates the oral /aural approach to the education of hearing-impaired children.
is the view of the author that their use reflects an ideologically formulated assumption that there is a dominant mode of communication, evident within the society in which the school and this study resides and that this is the English language in its written and spoken form. Ultimately, it is an educational framework that purports to segregate the hearing-impaired child from society in order that they may be integrated seamlessly within that society upon leaving formal education. The children come from a variety of socio-economic backgrounds and from a variety of national and sometimes international geographic settings. Their route through to securing a place at this School is not always without problems, particularly when set against a national framework of education where local authorities are increasingly required to monitor their own budgets which have seen a significant reduction from government of late. This has encouraged local authorities to seek ways in which they can keep SEN pupils within their authority because ultimately, it is in their economic interests to do so.

The children at this school will be referred to as hearing-impaired throughout this thesis. The use of this terminology is in line with the pathological explanations of the loss of hearing that underpin the educational strategies employed in this institution. The term ‘deaf’ with a lower case ‘d’ may also be used depending on the context and may be used interchangeably with hearing-impairment as both defer to pathological explanations of a loss of hearing. This will be differentiated from the term ‘Deaf’ with a capital ‘D’ which has come to represent a number of people who in addition to having a hearing loss, use sign language as their preferred means of communication. Terms such as ‘Deaf community’ and ‘Deaf culture’ will be used to denote this cultural classification and whilst such terms will not pervade this thesis, they will be used as appropriate.

Appendix D - Audiological Information of Research Group 1

Group 1

**VISUALIZING HEARING LOSS AS A SCALE**

Hearing loss is measured on a scale of decibels (dB) as shown on the y axis. The x axis indicates ability to hear various frequencies at certain levels of hearing loss, like the sound of a bird chirping at ~6000 Hz. A person fitted with hearing aids for the first time will often immediately notice their ability to hear birds chirping.

![Audiogram showing hearing loss levels](https://hearinghealthfoundation.org/degrees-of-hearing-loss)
Appendix E - Audiological Information for Groups 2 and 3

Group 2

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<th>Better Ear</th>
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<td>Left Ear Average</td>
<td>Right Ear Average</td>
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<td>5</td>
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Group 3

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<th>Better Ear</th>
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Appendix F - Minor Activities

The following is a series of activities undertaken with the research group. The responses are submitted in their entirety, though some elements have been redacted in line with GDPR. These activities should be viewed in conjunction with the relevant aspects of the thesis. There are some examples conducted outside of the main research group indicated by {}
MINOR ACTIVITIES

Task

Pupils decide if they would like to study Photography as a formal qualification at GCSE level. They have no experience of the subject formally but do have lots of experience of using camera phones to create and communicate with imagery.

Provocation

Why did you choose Photography and what do you hope to learn?

Pupil Responses

Why have I chosen photography?
I find interesting to learn and I never try this so this is opportunity for me to try out and to enjoy it and have fun to learn. Photography sound interesting subject.

What is photography?
I think photography about express your feeling, show people what you are feeling.

What do you think we are going to learn this subject?
To learn how to use dark room and how to use computer with photography. How to use Camera and etc...

What would you like to learn?
I would like to learn how to use dark room and use camera to express my feeling into photography and just to enjoy learn and fun.
Why I have chosen Photography?

The reason why I chosen photography because I like to take pictures. I also pick photography because I would like to learn how they make the camera and how they invented photography. Furthermore I like the effect on the pictures. This why I chosen photography

What is Photography?

Photography is when you take photos and make effects on the picture u have taken. Photography is also known for finding out how it all started.

What do I think we are going to learn in this subject?

In this subject I think we are going to learn.....

- How to use a camera
- What effect can we use
- How was photography invented and by who
- Look at all the cameras and what’s the differences
- What I would like to learn

I would like to find out who invented photography and see what effects we have for each pictures that we take. I would also like to see how we make effects and other stuff that links to that.
Why have I chosen photography?
Because it is interesting to learn.

What is Photography?
photography is like pictures of something, like they take a photo of model people or wedding.

What do you think we are going to learn in this subject?
we will learn about the dark room and how to use camera.

What would you like to learn?
I would like to learn how to use camera, the dark room and else something doing with camera.

Why have I chosen photography?
I find interesting to learn and I never try this so this is opportunity for me to try out and to enjoy it and have fun to learn. Photography sound interesting subject.

What is photography?
I think photography about express your feeling, show people what you are feeling.

What do you think we are going to learn this subject?
To learn how to use dark room and how to use computer with photography. How to use Camera and etc...

What would you like to learn?
I would like to learn how to use dark room and use camera to express my feeling into photography and just to enjoy learn and fun.
1. Why I have chosen photography?
   - I have chosen photography because I like how photos have these beautiful macro pictures and micro pictures. Also the way the colours are in pictures.

2. What is photography?
   - Photography is when people take pictures of different objects, plants and stationary objects also people are included. You can adjust small details and put filters on them. It also captures moments they can be special moments or random ones.

3. What do I think we are going to learn in this subject?
   - I think we are going to learn about the different angles to take pictures, lighting, the grid and how to change some details on the picture.

4. What I would like to learn.
   - I would like to learn how to make each picture have great quality and how to know what angle and lighting makes the picture better.

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**Why I have chosen photography.**

Because I like travelling around the world taking photos of different things, I also like learning new names of the camera and the bits about it.

**What is photography.**

Photography is a art practice taking photographs. Its also trying to focus on the subject your taking a picture of.

**What do I think we are going to learn in this subject.**

I think we are going to learn how to take pictures and learning different parts of the camera.

**What would I like to learn.**

I would love to learn a lot, I would like to try to make pictures blurred focusing on the photograph. I would also like to edit the picture I took of with different colours.
Why I chose photography?
Because I like to take picture and how to take picture.

What is photography?
It is a subject that you take picture and write about them.

What do I think we are going to learn in this subject?
I think we are going to learn is take very interesting nature and people.

What I would like to learn?
I like to learn is how to take a good picture,

1. I have chosen to study photography because I found it interesting when I did a class with a professional deaf photographer who showed me different ways to take pictures and I found it interesting and wanted to do more with it.
2. Photography is expressing things in a different way. Through pictures.
3. I think we will be learning different things like:
   - How to use a camera.
   - Different ways to take pictures.
   - How to produce images.
   - The background of photography.
   - Parts of the camera.
   - Editing photos we take.
   - Different types of cameras and the difference between them.
   - Lighting.
   - Different effects.
4. I would like to learn how to use a camera. I would also like to learn how lighting and angles affect pictures and if different camera’s also affect the picture.
Mr Robinson

I remember studying Art and Design, Photography and English for my ‘A’ levels. I enjoyed Art, but it was too slow for me. It sometimes took a long time to complete a piece of work by which time, I had moved on with my ideas. Photography was the perfect answer and whilst analogue photography wasn’t exactly immediate, it was a much faster process than Art and Design. I remember it being very expensive however and the college would only give me a few films and when I had used them, I had to buy our own.
In an educational process of becoming a photographer, pupils engage with notions of identity. Their identity as a hearing-impaired child is explored through photographic imagery.

**Provocation**

Pupils decided to explore their reaction to their school photograph. The work of Cindy Sherman was further provided as a provocation.

**Pupil Responses (Research Group)**
Redacted in line with GDPR.

Redacted in line with GDPR.
Pupil Responses

Redacted in line with GDPR.

Redacted in line with GDPR.
Removed in line with GDPR.
All photographs in this section have been reproduced with the permission of the student. Some elements redacted in line with GDPR
Shifting identities – becoming a teacher. Pupils elected to run a lesson for other members in the research group. There were no restrictions placed upon the lesson other that for it be related to photography.

**Provocation**

Can we shift identity to become the teacher?

**Pupil Responses**

During the last session it was decided to hand the 30 minute sessions over to each of the pupils who would be given total freedom on how to use this time – the only stipulation was that it was around the subject of photography. The children organized a rota and it was decided that T would take the first session. The session began at 1.40 and finished at 2.10.

T was clearly apprehensive as regards what he was going to do for this session and was clearly challenged by the task. He emailed me during the week with expressions of not knowing what to do. Other ideas were put forward by other members of the group and it was interesting to note that these ideas were often based around what T was going to ‘teach’ during this session. From conversations that were overheard, the emphasis and expectation appeared to centre around the technical acquisition of photographic skills.

**The Session by T (Thur 17/09/2015)**

The group arrived promptly at 1.40. T was immediately challenged by the others in the group as regards the planning that he had created for the session. The first thing that T did was to play music from a computer. Given that the children in the group are all profoundly deaf, then this was a move that may surprise some. This however, is simply reflective of the educational context in that places emphasis on listening. The others were beginning to get a little impatient however asking questions such as:

‘What are you teaching us?”
“No Writing”

“its not hard”

The group positioned themselves as expected, each taking on a role as they would do in any other ‘lessons’. T assumed the role of the teacher and sat at the teachers desk. The children sat at their desks – all assumed a traditional teaching situation. The children steadily voiced opinions about what they could do in this session and T steadily became more confident. T chose some images from the internet and presented them to the other children and asked them to describe what they had seen.
All provided a short spoken narrative about what the image implied suggesting that they had been ‘trained’ in some level of critical analysis. Only one child, ‘R’ responded with ‘No Comment’. This was interesting as R is usually the less vocal within the group but he may have felt that the image had been exhausted by the others in the narratives that they had provided. The pattern of discussion was one that went back and forth from T and individual children and there was little communication between the children themselves. T continued to search for images and found one of R. He then asked the group to explain what might be happening in this image. R responded first and situated the image, explaining
where the image was taken. The others gave more elaborated responses as regards what might have happened around the image demonstrating a level of creative engagement and narrative storytelling. T progressed to search the names of other people in the group and others that were familiar to him. There was a sense that the group were trying to uncover something through their explorations. They turned their attention to me, bringing up several images from the internet before moving on to the head teacher. At this point, the work had steadily moved from analysis of random images to the identification of people that they knew through finding photographs of them on the internet. Facebook was central to this and underpinned the searches that were undertaken.

It was interesting to observe that what appeared to be happening here was contrary to what might be expected from a ‘traditional’ teaching session. In the latter, knowledge is scaffolded, suggesting that the starting point is the simplified and that this becomes more complicated as the session progresses. In this session however, it could be explained that the children began with the complicated in the sense of analyzing random images and the session then became more simplified as it progressed as children embraced the familiar.

At one point, another child M took charge of the computer at the front of the classroom displacing T. M entered her own Facebook page and then found imagery of the Teaching assistants at the school. They all found this very amusing.

The session began in a very hierarchical positioning of the children – the ‘leader’ at the front of the classroom and the children placed around the students desk in front of the ‘leader’. During the session there was a clear change in the way that children were positioned with T being replaced by others at the front of the class and although he was still involved the session became more collaborative. The interest of the others did seem to take over and the ‘voice’ of T was sometimes difficult to identify. At one point the children wanted to print something but there was a problem with the printer. This became something that was central to the group as a whole rather than being something that had to be sorted by one person. They tried to resolve the problem as a group and although they were not successful in this there was evidence of true collaboration.

Is it possible to identify what they had learned from this session?

They had learned to work together independently, to collaborate effectively. There was a clear linearity to this session and only at the very end did it breakdown.
The hierarchy of teacher and pupil was evident at the beginning of the session but was less evident as the session progressed. Children moved around the room more freely and were clearly being more productive reflecting their greater level of physical activity.

No photographic work was completed during this session.

**Session by I (Thur 24/09/2015)**

I took this session. She requested 5 cameras for the session. It was clear from the outset that I wanted to take on a role of a ‘teacher’. She wanted to be addressed as ‘Miss’ and clearly wanted to demarcate herself from the others who she had positioned as learners. Immediately, I wanted the learners to take 3 photographs that told a story. She asked them to write a plan and stressed that it did not have to be neat but that it had to tell a story. I wonder what I meant by story.

The children tended to be quite disruptive as regards what they were being asked to do. This may have been that they were actually an opportunity to be rebellious as Bella had set the session out as a traditional ‘lesson’.

There did not appear to be much time spent planning and soon the children were using the cameras. All addressed I as Miss Stone. It did appear that the children were not taking the session very seriously and there were many times when I heard Miss Stone shout ‘I cannot control this class’

To some extent, this session did follow a sequence that had been modeled in lessons general. The ‘teacher’ introduced a topic and then a task to complete. Equipment was provided to complete the task. Children then went off to complete the task. Some were engaged from the outset and these were the girls in the group but the boys became quickly disengaged.

Everyone returned with their cameras and began to download their images to a computer. I began attempting to analyse the images of one member of the group before the others had returned. Some began to question whether or not they had to tell a story with their images. E had clearly embraced the task and was able to vocalize the story that she was trying to convey. She began by using the others in the group as part of a story that she was trying to tell. This was immediately questioned by others in the group, some of whom had been unaware that she had taken photographs of them. There was a clear narrative being developed in her images whilst some of the others had struggled to embrace this.
Increasingly, the boys were becoming more and more disruptive and repeatedly left the room and then returned. One of the boys (T) pronounced that he was not going to take part even though he had begun the task quite well. He left the session without further explanation but did return toward the end.

It was interesting to note that at one point in the session there were some technical issues with the computers but between the group they managed to resolve these.

When the two boys returned to the class having refused to be part of the session, they were reprimanded by the teacher but simply challenged her authority and refused to do anything.

Generally, the girls remained on task throughout and the boys steadily became more and more disengaged, preferring to check their emails. I then began chatting to them about unrelated (possibly) talking about sport and a medical condition that she has which impedes her ability to engage with certain curriculum subjects.

The session faded away rather than having any formal ending.

Photographs by M
Session by R (Thur: 1.10.2015)

R had done some pre preparation for this session. He had requested that cameras were made available. These were on the table as children arrived. 3 children arrived first and saw the cameras, immediately picked them up and began taking photographs. R presented a range of images that were based on a theme of Abstract Photography. The images were as a result of an internet search using this as a parameter. R asked the others “Can you tell me about this?” The students seemed to respond in a serious manner. They clearly knew something about this genre of photography and were happy to share their thoughts.

The children continued to take photographs whilst R was talking.

T and others were asked to take 5 abstract images. He began taking images in the room but R had requested him to go outside and take images. There was some disruptive conversation between the two but T was adamant that he wanted to stay in the room and take images and not go outside.

One child arrived 15 minutes late and another did not arrive at all.

R continued to ask others if they had taken their photographs and addressed them from the front of the class. The students continued to take photographs of each other. R looked at Es images and said that she would have to take them again. This developed into an argument about what was and what was not an ‘abstract’ image. E was asked to take more images outside and did so. The other two students continued to take images within the room. R then instructed the group to take images of portraits and it appeared the there was steadily becoming less of a focus to the session. E asked the group if the images that she had taken could be considered as ‘abstract’.

It was interesting that two of three students never left the room to undertake the work that they had been instructed.
Session by M (Thur: 8.10.2015)

This session was planned and evaluated by the pupil.

Photographs by I

Redacted in line with GDPR.
Photographs by E

Emma took two photos, which are basically the same and as I didn't specify how many but I did expect more.

Although the point of the photo is clear, she has had her best memories on the playground with her friends.
took 13 photos, all of which have the same theme and he even let a couple of his friends take a photo of him

The theme that [redacted] used was friends and people he cares about.

Response by M

Redacted in line with GDPR.
At the end of the two-year formal GCSE course, students were invited to reflect on their experience. How did this compare with their initial thoughts when they started the course? Was it what they expected?

Pupil Responses

M

1. I think so, it’s difficult to remember what I expected before year 10 started but I think it went a bit similar, even though I never expected the dark room.
2. I learned how to use a camera more as I had previous experiences but this time, I know how to use shutter speed, brightness, rule of thirds, etc. I also learned how to use the dark room.
3. My favourite part is learning how to work a camera as it will have uses in the future. My worst part is going to the dark room as I didn’t like it and it always made me tired when I come out.
4. No, not really as I’m not pursuing a career in photography, as I wanted a career in media but it was unavailable in Mary Hare as only two people, including me, applied. Although knowing how to use a camera could be useful in the future.

R

1. I thought it was practical work like taking photos and editing the photos.
2. I have learned how to do focus, aperture, IOS and shutter speed.
3. Though it was some lots bit of writing work.
4. I will never know if I would like to be a photographer but I have enjoyed my final piece for my exam and also I have been doing it for two years.
1. What I thought it would be and how I planned it and I wrote it out on a A3 paper so its clear.

2. I have learnt lots of skills by blending colours together taking close ups on my water droplets so it can focus on the colour through th water drops.

3. The best part was to take photographs of the skittles and try different things with the skittles like I had a sheet of a glass and put water on the top to take photos of colourful droplets.

4. To be honest I would, because I know what I am doing now, it would be good to try and experience more on taking photographs that are really good.

---

1. Was the course what you expected? Yes it was what I expected, In what ways? I was thinking whole ways but not as perfect in the past
2. What skills have your learned? Technical, visual, contexture and what inside the camera
3. What was the best and worst part of the subject? The best is going out taking photo and develops but worst that I have to write on the book
4. Do you consider yourself to be a photographer now that you have completed the course? Yes I have been Can you explain? Because the whole time I know for new skills and I try something’s new and I like it.

---

1. Yes, I look up different photographer that interested me and did experiment as well
2. I learnt lots of techniques like convert black and white, invert, Photoshop etc.
3. The best is when I experiment of Barbara Kruger and jenny Holzer the message board with different experiment background like people or colour and the worst one is when I research the photographer, there isn’t enough experiment for me ad some of them is like hard experiment which I declined it
4. I think I consider myself better than last time I was
Appendix G - Major Activities

The following is a series of activities undertaken with the research group. The responses are submitted in their entirety, though some elements have been redacted in line with GDPR. These activities should be viewed in conjunction with the relevant aspects of the thesis. There are some examples conducted outside of the main research group indicated by {}
MAJOR ACTIVITIES

Task

This activity requires children to arrange photographs in an order that they think creates a narrative. Their responses are compared with the original work by Duane Michal’s. How might the children account for the similarities/differences in these narratives.

Provocation

Duane Michals Things Are Queer, 1973/1973 Nine gelatin silver prints with hand-applied text 3 3/8 x 5 1/8 inches (each image); 5 x 8 inches (each sheet)
Duane Michals Things Are Queer, 1973/1973 Nine gelatin silver prints with hand-applied text 3 3/8 x 5 1/8 inches (each image); 5 x 8 inches (each sheet) © Duane Michals. Courtesy of DC Moore Gallery, New York
Duane Michals Things Are Queer, 1973/1973 Nine gelatin silver prints with hand-applied text 3 3/8 x 5 1/8 inches (each image); 5 x 8 inches (each sheet) © Duane Michals. Courtesy of DC Moore Gallery, New York
Can I create my own narrative using this sequence as a provocation. Children were invited to create a narrative following a timed viewing of the sequence by Duane Michal’s.

Provocation

Duane Michals Things Are Queer, 1973/1973 Nine gelatin silver prints with hand-applied text 3 3/8 x 5 1/8 inches (each image); 5 x 8 inches (each sheet)
Pupil Responses
Creating Photograms: Children were invited to create a range of photograms and to reflect on how this process of creating imagery differed from their usual methods of creating photographs.

Pupil Responses
Retaining Photograms: Pupils decided to keep certain photograms and to discard others. A selection of what were retained is below. What contributed to these decisions and guided their choices?
Discarded Photograms: Pupils decided to discard certain photograms. A selection of what were discarded is below. What contributed to these decisions and guided their choices? What value was placed on certain images and why?
Provocation

Pupils were asked if they would retain or discard this photogram. They were asked if they could describe this image. They were asked where they could place this photogram to give it a specific meaning and if different contexts could give a different meaning to the same photogram.

Context and Photograms: The photogram below is an example of a discarded image. Were pupils able to re-contextualise the image and therefore give value to the image. Something that didn’t seem to exist based on the contents alone.
Pupil Responses

Pupil M: ‘The picture could be a space picture.’

Pupil E: ‘Is this a painting or something like that’

Pupil I: ‘It’s not a picture’

Pupil R: ‘It is Photogram’

Pupil T: ‘The photograph is not working’

All pupils were then asked where they would place the image for it to be seen:

Pupil M: ‘in a magazine’

Pupil E: ‘in a gallery’

Pupil I: ‘in the bin’

Pupil R: ‘in a newspaper’

Pupil T: ‘I don’t know’
In this activity, children were invited to create a photographic image that was guided by a written description. The children decided that this would be a competition between them in terms of visual accuracy.

**Provocation**

From being there.

This photograph is in the reception area. The image includes the main desk with someone sitting behind it. You can only see the top of their head. You can also see the window that is at the back of this image. You can also see part of the floor and the glass door which is at the left hand side of this image.

**Pupil Responses**
Pupils decided to write a description of a place in the school and ask another member of the research group to take a photograph to closely resemble their description.

Provocation

Where you park your car next to the car park there is a building that has a big sign outside school
When you finish the picture walk down to the all weather pitch on your left there is a building where the six form sleep.

Pupil Response
Provocation

My picture

First you start by going to the French rooms and stand with your back backing to Madame carr’s room so you will face the window, the photo is on the wall by the windows.

My photo is in a frame and you would know where it’s from and what it is straight away (just by looking at it)

My picture is a famous landmark in Paris; the picture itself is really dark and looks like it was taken a long time ago.

In the picture the sky is dark and you can see man-made things like boats and natural things like trees. In the picture you can see the whole landmark

Pupil Response

M
Provocation

In the picture there is a lot to see. In this picture the school tower is the centre subject of this photo. On the right stands a big dark green tree, below it is a line of cars at different sizes, shapes and colours. The art block and DT department windows are on the right on the photo facing the opposite direction and finally the front of the school is facing towards me.

Pupil Responses

Redacted in line with GDPR
Provocation

Higher spot facing towards to Murray House and swimming pool on your right. And....... That it! No...no that's not enough... Mansell’s care staff accommodation should be on your left down. in middle of it, is car park. So... off you go.

Pupil Responses
Provocation

When you get out of media walk down to assembly and take picture of the stages in front of you and zoom in the lectern and take picture of the frame in the assembly.
Pupils wanted to investigate if a written description could be represented in a photograph and then passed to another member of the research group who would then write a description of the photograph. How would the initial and latter descriptions compare? Three members of the research group engaged with this activity.

Provocation

I

‘There is a wall with windows in it. It is on the right. In the background there are some cars and a chain in front of them. There is some grass in front of the cars. There is a path that should be in front of you. The building is where you go when sick’

M

‘Two cars one blue and another blue. There are trees in the background and grass in front. There is a picket fence with a path that goes to it and a wall on the right. I think that is the health place. The photo is blurred in the front’
A member of the research group wanted to investigate if the spoken word could be transferred to a photographic representation more accurately than when such instructions are written.

Provocation

Spoken words transcribed by speaker - M

‘The photo of the manor Building from the green. Down by the trees when you look up to the Manor. You can see the conservatory on the side and its white. The chimneys should be seen.’
The research group decided to test their interpretation of signed instructions. They enlisted the help of another pupil who was known to be a proficient signer. The signed communication is represented below followed by a written description which was transcribed. The research group were not permitted to view the written description.

Provocation {}
The photographs were re-ordered to reflect the amount of time that was taken between the signed instructions, and when the shutter was released. The higher the number, then the greater amount of time between these two events.
One pupil wished to extend this to another example. Once again instructions were signed.

signed and I believe she told me to “I want you to take a picture of the reception area”.

I got it right :)

Redacted in line with GDPR
Pupils wanted to compare their own written description of a photograph. It was agreed by the group that this photograph should be one that was taken by the school technician so that they would have no control over the content.

Provocation

Pupil Responses

Pupil 1: ‘There is a pole with a light. The sixth form houses is in the background. There are no people cus the children are in school. Lots of rails to hold on. The windows are on the right and these are bedrooms. I can see the boys house at the bottom, at the back. One table for sitting on. Nobody uses them anyway.’
Pupil 2: ‘Bricks, pipes, windows, lights, tables. Sixth form to sleep at night and no one around. The metal walk goes to other building.’

Pupil 3: ‘There are lots of bricks in this picture and they are the same colour. There is green in the middle but most is red. There are lots of straight lines to make it composition’

Pupil 4: ‘The table is in the middle and the place where the sixth sleep is in the background. The girls do sleep in the building on the right where they sleep. The window is where the television is on the right. The photographer has not gone down the steps.’

Pupil 5: The walkway is in the picture that links the building to the other building where people want to walk but not is allowed. The photographer is at the same height of the walkway which is fun to be on the walkway but not allowed to
To explore the theme of the exam paper – ‘Apart Together’, pupils were asked to create a spider diagram in order to expand their knowledge of the topic. No other instructions were given to the research group.

Provocation

Exploring and Developing the Theme
The theme this year is:
Apart and/or Together
Discuss the theme with your teacher and make sure that you produce evidence to cover the four Assessment Objectives. Remember that each Assessment Objective is worth 25% of your final mark for this paper.

Pupil Responses
I am going to do apart and together, I am already showing ideas on this page for future reference.
Apart and/or together

- Separation
- Reunited
- Special person

Family, boyfriend / girlfriend
From a special person in their lives

Mum and dad could be together or split up

- Love each other to being composed
- Magnet, repel and attract
- Family together/separate
To explore the theme of the exam paper – ‘Apart Together’, pupils were invited to respond in visual terms rather than through using words as in the previous activity.

Provocation

Exploring and Developing the Theme

The theme this year is:

Apart and/or Together


Discuss the theme with your teacher and make sure that you produce evidence to cover the four Assessment Objectives. Remember that each Assessment Objective is worth 25% of your final mark for this paper.

Pupil Responses

Redacted in line with GDPR
The school Photograph: Pupils were invited to consider what it would have been like if they were ‘in’ the school Photograph rather than just looking at the school photograph.

Provocation

Mary Hare School Photograph 1997 (MHS Archives) Distorted for data protection

Pupil Responses

‘I never sat there, I always stand up. It is hot on that day but I have to wear tie and I sweat. Everybody is not noisy and I can smell friends. I don’t taste anything. Glad when it’s done. (Pupil R)

‘I would not feel comfortable because you have to be close to other students. I would feel my arm against their arm but it’s not for long. The grass smells like grass. It’s good to be able to see all your friends in one place some are noisy but they have to quiet when the photograph takes’. (Pupil T)
The school Photograph: Pupils were invited to consider what it would have been like if they were in the school Photograph rather than just looking at the school photograph.

Provocation

Pupil Responses

Cat:
- Look
- Little
- Cute
- Furry
- Soft
- Smooth fur
- Small
- Fluffy
- Looks cuddly

Feel:
- Furry
- Soft
- Smooth fur
- Small
- Fluffy
- Looks cuddly

Blah
Bad luck
On a Friday
13th
Yellow creepy eyes
Long tail

Furry
Tuffy
Smooth
It's very long and soft, chubbly belly. It's a black with white patches by the on the ears, The tail movesswiftly from side to side.

It's soft and I can feel the heat coming out as I stroke its fur. I can hear it purring softly as I stroke its ear.

They have shape of head but with point edge ear only two on top head. The size body is your feet.

I feel this, the fur like a short fur bear and there wire tail and four legs stick I feel stickly on face.
Bouba and KIKI: Research has shown that when presented with the shapes below, respondents would align the angular shape on the left to Kiki and the rounded shape on the right to Bouba. Photographers across the cohort and the research group were invited to respond to this in the visual and spoken forms.

Provocation

Pupil Responses

<table>
<thead>
<tr>
<th>Bouba/ Kiki Experiment (spoken)</th>
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</thead>
<tbody>
<tr>
<td><strong>Bouba</strong></td>
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<tr>
<td>Correct</td>
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<tr>
<td>16</td>
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</table>

Bouba/ Kiki Experiment (spoken)

<table>
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<th>Total correct</th>
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<tr>
<td>Total incorrect</td>
<td>2</td>
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## Bouba/Kiki Experiment (Visual)

<table>
<thead>
<tr>
<th>Bouba Correct</th>
<th>Bouba Incorrect</th>
<th>Kiki Correct</th>
<th>Kiki Incorrect</th>
<th>No Response</th>
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## Bouba/Kiki Experiment (Visual)

<table>
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<tr>
<td>Total incorrect</td>
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</table>
Loud and Quiet. Do photographs have sounds? Can some photographs be considered as loud and others quiet. Pupils posed this question to themselves and created a series of photographs to reflect these words.

Pupil Responses

<table>
<thead>
<tr>
<th>LOUD</th>
<th>QUIET</th>
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<tbody>
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<td><img src="image5.jpg" alt="Image" /></td>
<td><img src="image6.jpg" alt="Image" /></td>
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</table>
Memory and Photographs: One pupil wanted to know if other students would remember a photograph that they were shown and be able to rephotograph the scene accurately. Pupils were not told what they had to do until the photographs were removed.
Colour and Synaesthesia: Do hearing-impaired children have synaesthesia as suggested by aspects of the literature. Pupils tested each other across a time period of 4 months. Pupils were asked what colour they associated with a particular number and their responses are detailed in each chart below.

<table>
<thead>
<tr>
<th>PUPIL: 1</th>
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One pupil expressed a desire to record their journey across a school day using a Go Pro camera attached to their body. The camera was set to record an image every minute.

Pupil Response

Redacted in line with GDPR
Pupils wanted to see if they could take photographs around the school that others would not be able to recognise.
Appendix H - Research Poster

MAKING SENSE
PHOTOGRAPHY AND THE HEARING IMPAIRED CHILD

A Research Project

09/10/2014  MEDIA STUDIES  1.40 PM

All photography students in years 10 at Mary Hare school are invited to a meeting about a photography research project. The research project will be explained to you in detail at the meeting and you will be invited to take part!

456
Dear Children

Thank you for attending the meeting a few days ago in which I explained this project. You are now being formally invited to be involved in this photographic research project. This project is attempting to gain a better understanding of the ways in which you use photography in a creative context and the difficulties that are posed to hearing impaired students by a subject that is primarily visual based.

When and where will the project take place?

This research will be based on your responses to the controlled test examination paper in Photography only. You will not be required to produce any additional work beyond that which you would normally produce. The research will take place in your normal photography lessons. I am interested in your thoughts about the work that you produce however, so there may be some questions that I will ask you along the way. The focus of these questions will not necessarily be any different to those that I would ask of you in our ‘normal’ photography lessons.

What will happen during these sessions?

You should not notice any difference during your normal photography lessons. I may make some notes during these sessions but these will be available for you to see if this is what you would like. I am not looking for right or wrong answers in any of these sessions.

Who will be involved in the project?

Only those already studying photography for a GCSE or ‘A’ level will be invited to participate in this research. That means that you will already know everyone
in your group. You were chosen to participate in this project because you chose to study the subject at either one of these levels.

**When will the project begin?**
The project will start when we return from the half term break and you begin work on your controlled test.

**Could there be problems for you if you take part?**
I don’t think so as you will not be required to do any additional work as part of this project. However, if you do have any problems with the project, please tell me or you could talk to either [redacted] or another member of staff.

**Will my Photography work be kept by the researcher?**
No. The work will be returned to you if you would like it once the normal examination board requirements for the retention of work have been met. I will however, photocopy the work and use some of it in my research.

**Will doing the research help you?**
I hope that you will gain some benefit from being part of a research project. The research will certainly enable me to better understand the ways in which deaf children engage with the world using Photography as a means of expression. This could help other deaf children in the future because the findings will enable me to become a more effective teacher of photography for deaf children.

**Do you have to take part?**
No. You decide if you want to take part and, even if you say ‘yes’, you can drop out at any time or say that you don’t want to answer some or all of the questions or do some or all of the activities.

You can tell me that you are happy to take part in this project by signing the consent form at the end of this letter.

**Can I have the contact details of the main researcher and his supervisors?**
Yes, here is that information.

**Main Researcher**
Mr Robinson

---

Information removed in line with GDPR
Project Supervisors

Professor Liz Wells.
Professor in Photographic Culture
School of Art and Media (Faculty of Arts & Humanities)
University of Plymouth
T: +441752505208
E: e.wells@plymouth.ac.uk

Dr Ken Gale
Lecturer in Post-16 Education
Institute of Education (Faculty of Arts & Humanities)
University of Plymouth
T: +441752585474
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Dr Carole Baker
Schhol of Art and Media
Room 116
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How do I let you know that I would like to take part in this project. Complete Section A of the consent form which is at the end of this letter.

How do I let you know that I don’t want to take part in this project. Complete Section B of the consent form which is at the end of this letter.

Thank you
Mr Robinson
Pupil Consent Form

I have attended the initial meeting regarding the proposed research project. I am familiar with the purpose of this research project. YES/NO* (delete as appropriate)

Please complete Section A

Section A
I agree to participate in this study that I understand will be submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Plymouth University.
• I understand that my participation in this project is voluntary.
• I understand that all photographic work collected will be limited to use in this project.
• I understand that I will not be identified by name in the final product.
• I am aware that all records will be kept confidential in the secure possession of the researcher.
• I acknowledge that the contact information of the researcher and his supervisors have been made available to me.
• I understand that the work that I complete in this project will not be used to evaluate my performance as a photographer in any way.
• I understand that I may withdraw from the study at any time and that this decision will not affect my attainment on my formal photography course.
• I understand that I can talk about the work that I have completed during the research sessions outside of these sessions but that I should not discuss the work completed by any other member.

• I am happy that you contact my parents/ guardians so that they can be provided with detailed information regarding this project.

Student’s Signature _____________________ Date_______________

Please note: Original responses have not been included for purposes of data protection.
Making Sense: Photography and The Hearing Impaired Child
(Working title)

A Research Project
October 2014 – June 2016

Information for parental consent.
Please will you help with my research?

Dear Parents/Guardians
My name is Kevin Robinson and I am Head of Media Arts at ********** School. I am currently undertaking Doctoral Research in the areas of Photography and Education in conjunction with University of Plymouth. Your child has already attended an ‘information giving’ meeting where the nature of this research project has been explained. Your child has expressed an interest to be part of this research.

The intention of this leaflet is to inform you about the nature of this research and seek your consent to undertake research activities with your children. I hope the information in this leaflet is clear but please don’t hesitate to contact me if further clarification is required. I would be pleased to answer any questions that you may have.

It would be most helpful if you could complete the acceptance letter at the end of this information and return it in the enclosed SAE at your earliest convenience.

What is the Research and why is it being done?

My core aim is to investigate the impact that a hearing impairment has on the interpretation and on the making of photographic imagery.

The impact of a hearing impairment on the development of written/-spoken language is well documented but less critical attention has been given to the development of visual-based languages. Common sense dictates that any deficit to hearing may have a positive impact upon the sense of vision, and that this in turn may have positive ramifications for the development of visual based learning. However, it is my hypothesis that such ‘common sense’ assumptions tend to mask the possible complexities of the inter-relatedness of the senses to each other and to learning and their impact on the acquisition of ‘bodies’ of knowledge. If hearing impaired children appear to have a propensity toward visual based activities, then this study intends to better understand the processes of interaction that underpin their achievements so that a particular grounded approach may be utilised for teaching and learning.
Who will be involved in the research?
Only those already studying photography for a GCSE or ‘A’ level will be invited to participate in this research. That means that your children will already know everyone in their group. The only adult present during these sessions will be Mr Kevin Robinson. No other teacher or member of staff will be involved so that the integrity of the research will not be diluted from the outset.

What will happen during the research?
The research will be qualitative and collaborative in nature. The children will be involved actively in the research and will be defined as research participants rather than as subjects of research. In this context, they will be able to shape and influence research activities to some extent as the research progresses. The research sessions will take place once a week during lunchtime or after school during prep time. A session will last for 30 minutes. There may be occasions when some sessions take place within our normal photography lessons. These sessions will be practical, exploring both your child’s use of photography as a creative visual language and how it relates to written and verbal representations. The work that is completed in these sessions will be recorded in sketchbooks and will be kept locked away between these sessions.

What activities will be undertaken?
The work that will be completed will be done so in a relaxed atmosphere. Your children will be given a variety of activities to undertake but there is no right or wrong answer - all responses will be judged as worthwhile. Your children will also be given the opportunity to develop some of the ideas independently so that they can make an active contribution to the research. The following is a general outline of some of the initial activities we will undertake. They may be developed in complexity but the intentional open-ended nature of this research makes it difficult to define precisely nature of further activities.

- Children will be encouraged to discuss the ways in which they use photography in their social and school based life. How do they use Photography and for what purposes?
- Children will be asked to create a photographic representation of their school in a given number of photographs. How does this representation compare with others in the group and how might we account for differences / similarities?
- Children will be asked to select a photograph from a range of photographs and write a description of that within the frame. Can someone else in the group identify the photograph from the written description?
- Children will be asked to ‘write’ a photograph that you want someone else in the group to take. They may be asked to take the photograph
themselves first. Were they able to direct someone to take a photograph by describing that photograph in words/ text?

- Children may be asked to photograph sounds. How might they respond to this task? Children will be given a number of sounds and encouraged to explore their representation using photography before exploring sounds of their own choice.
- Explore narratives (story telling) in photography. How can using Photography help your children to tell stories/ develop narratives?
- Children may be asked to respond to some simple questions that will test their level of creativity on standardised tests.

**What will be the duration of the research project?**
The research project will be in two stages. The first stage will run from October 2014 (after the October school break) until June 2015. The second stage will run from September 2015 until June 2016. Children can opt out at any time during the research project – their involvement is entirely voluntary.

**Could there be any problems as a result of your child’s participation in this research project?**
I hope that your children will enjoy doing some extra activities in Photography. Some children might however, find some of the activities difficult but if they do, we will simply slow down so that everyone fully understands what is being asked of them. Remember, your children can withdraw from the research at any time.
If your children experience any problems with the project, they can tell me or they could talk to either Mr Gale or another member of staff.

**Who will know that your child has been involved in this research?**
The staff and other students at ********** School will know that your child has taken part in this research. The research will also be shared with two of the academic staff at Plymouth University. Their names are Professor Liz Wells, Dr Ken Gale and Dr Carole Baker. (contact details are given below) Your child’s work will not be shared with anyone else without your and his or her permission.
I will keep any notes that I make during this research in a safe place, and will change all the names in my reports and in the final thesis. The name of the setting will also be changed/ omitted to minimize the possibility of anyone knowing where the research took place or who was involved. Nevertheless, even with these efforts to anonymise, it may still be possible to identify individuals.

**Do your children have to take part in this research?**
Your children decide if they want to take part in this research and, even if they say ‘yes’, they can drop out at any time or say that they don’t want to answer some of, or all of the questions or do some of, or all of the activities. They can tell me that they are happy to take part by signing the consent form, which will be given to them once your consent has been granted. Your children can still opt out of the project even though your consent has been given.

**What about Confidentiality?**
Any information obtained about your child from this research including audiological/ educational information; answers to questionnaires, the photographic work they create in sketchbooks and in print and any video recordings will be kept strictly confidential. Any digital work created from this research will be stored on a separate hard drive that will not be connected to the school network. This hard drive will be stored in a lockable cupboard between sessions but will be available to the senior management team for viewing upon request. Your child’s work will not be shared with anyone outside of the school with their name attached. Although the work derived from this study may be used in reports, presentations, publications and exhibitions, your child will not be individually identified.

**Who is funding the research?**
This research is part funded by ********** School and part funded by the Researcher – Kevin Robinson.

The project has been reviewed by the Faculty Research Ethics Committee at Plymouth University and by the Research Ethics committee at ********** School.

Thank you for taking the time to read this letter.

Yours sincerely,
Kevin Robinson
Researchers’ Contact Details.
Kevin Robinson

Information removed in line with GDPR

Project Supervisors
Professor Liz Wells.
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Parental Rights and Assurances

I have received a copy of the proposed research project. Having read the leaflet, I am familiar with the purpose, methods, scope, and intent of the research project.

I understand that my child may discontinue his/her participation in this project at any time or refuse to respond to any questions to which s/he chooses not to answer. My child is a voluntary participant and has no liability or responsibility for the implementation, methodology, claims, substance, or outcomes resulting from this research project. I am also aware that my child’s decision not to participate will not result in any adverse consequences or disparate treatment due to that decision.

I fully understand that this research is being conducted for constructive educational purposes and that my signature gives consent for my child to voluntarily participate in this project.

Please note: For reasons of economy, I have adopted an ‘opt out’ system. If you do not wish your child to participate in this research, then please return the slip below.

Name of Child ____________________________________________
Parent/ Guardian Signature__________________________________
Name _____________________
Date _____________________
I/we do not want our child to take part in this research □

Kevin Robinson

Information removed in line with GDPR
Edexcel GCSE Art & Design Unit 2 Externally Set assignment 2015. Redacted for Copyright restrictions.
Exploring and Developing the Theme

The theme this year is:

Apart and/or Together

Exploring and Developing the Theme

The theme this year is:

Past, Present and/or Future

destined – in the moment – emerging – forthcoming

Discuss the theme with your teacher and make sure that you produce evidence to cover
the four Assessment Objectives. Remember that each Assessment Objective is worth 25%
of your final mark for this paper.
Appendix L - Historical Photographs Prior to School
Since the beginning of the systematic teaching of the deaf there has always been controversy regarding the best method of developing language. We have had advocates of the grammatical, the intuitive, the word, the sentence methods, of the use of the past tense first, the progressive and so on; but there never yet has been evolved an infallible method, calculated to produce that easy use of language so soon which the young hearing child acquires, while our children apparently go stumbling on, year after year, endeavouring to catch them up; and succeeding after a long and difficult struggle, no doubt, given favourable conditions, but these include so much.

We know that we can never make it as easy, nor do I think we can evolve one way to develop language in our deaf children, for we and they vary too much, in some respects there are as many lines of procedure as there are teachers with originality, initiative and resource, and I should add perhaps, of varied experience. Could I use the method of any one of you in its entirety if I knew it; could you use mine? I doubt it; I do not think that one stereotyped pattern would succeed; on the broad principles we must agree but we can arrive at the desired end by different methods, improving them by adding what appeals to us from another's experience. I am sure we gain tremendously by pooling our knowledge.

In one number of the "Teacher" some time ago was this statement: "People do not tell us enough of their classroom experiences"—probably because we are diffident about speaking of our own doings, or appearing to claim special knowledge—but since I am asked to speak on the teaching of Language, I assume that my own methods and experiences are amongst the points required, since my theories alone cannot tell what has been done.

As a key, then, to what follows, may I give you an idea of my "creed" if it can be so called. I believe absolutely in the oral system without any assistance from sign or finger language. I do not exclude the gestures we use amongst ourselves, nor of course facial expressions that are natural to us all, but I draw the line at grimacing and mouthing.

I have great faith in the ability of the average deaf to learn to speak sufficiently well to be generally understood (in many cases to do this extraordinarily well) to lip-read easily and to get on in their daily life happily and successfully by these means.

I do not see the necessity for the well-taught deaf to have a "kind friend" fastened to them, ready to interpret by finger-talk what someone else may be saying that they may be unable to catch. Why not an ordinary friend with an ordinary mouth who will speak to them naturally; this is done for my pupils in church, at lectures, at plays.

Many do not agree with me, but I don’t care, for years of close association with the deaf and their families has taught me thus, and we must each go our own way.

## Appendix O - Attainment in relation to HI

### GCSE Attainment in relation to hearing loss: Group 2

<table>
<thead>
<tr>
<th>Name</th>
<th>Level of Deafness</th>
<th>Better Ear</th>
<th>Post Aural / Cochlea</th>
<th>Attainment in GCSE Photography Unit 2 - exam.</th>
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<td>Right Ear Average</td>
<td>Left Ear</td>
<td>Right Ear</td>
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<td>130db</td>
<td>130db profound</td>
<td>A*</td>
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<td>C</td>
</tr>
<tr>
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<td>101db</td>
<td>116db</td>
<td>101db Profound</td>
<td>C</td>
</tr>
<tr>
<td>5</td>
<td>117db</td>
<td>119db</td>
<td>117db</td>
<td>D</td>
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### ‘A’ level Attainment in relation to hearing loss: Group 3

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<th>Better Ear</th>
<th>Post Aural / Cochlea</th>
<th>Attainment in A2 Photography Unit 4 exam.</th>
</tr>
</thead>
<tbody>
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<td>Right Ear Average</td>
<td>Left Ear</td>
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</tr>
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<td>121db</td>
<td>121db Profound</td>
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<td>91db</td>
<td>91db Severe</td>
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<td>120db</td>
<td>118db profound</td>
<td>61/80</td>
</tr>
<tr>
<td>4</td>
<td>130db</td>
<td>119db</td>
<td>119db profound</td>
<td>61/80</td>
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<td>58/80</td>
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Appendix P - Ethical Approval

25 September 2014

CONFIDENTIAL
Mr K Robinson

Dear Kevin

Application for Approval by Education Research Ethics Sub-committee

Reference Number: 13/14-61
Application Title: Making Sense: Photography and the Hearing Impaired Child

I am pleased to inform you that the Education Research Ethics Sub-committee has granted approval to you to conduct this research.

Please note that this approval is for three years, after which you will be required to seek extension of existing approval.

Please note that should any MAJOR changes to your research design occur which effect the ethics of procedures involved you must inform the Committee. Please contact Claire Butcher on (01752) 565337 or by email claire.butcher@plymouth.ac.uk

Yours sincerely

Professor Linda la Velle
Chair, Education Research Ethics Sub-committee - Plymouth Institute of Education
Faculty of Arts and Humanities
Appendix Q - Hearing Loss

This indicates a profound bilateral loss and according to the British Association for Teachers of the Deaf, will impact on learning in the following ways:

- not hear important elements of the class discussion including key context and content without visual cues
- have a smaller or more limited vocabulary than their same age peers
- not hear all the sounds in a word, commonly leaving off 's', 'ing' and 'ed' in their speech and their writing
- have problems pronouncing some speech sounds, particularly those in the high frequency such as ‘s’ or ‘p’
- become very tired towards the end of sessions that have required intense concentration or were conducted in noisy environments
- misinterpret what is said
- have difficulty with some reading materials
- have a limited understanding of colloquial language, such as 'pull up your socks'
- have difficulty understanding complex sentences
- use a limited range of sentence structures and therefore use the same sentence structure repetitively (e.g. subject, verb, object)
- have trouble explaining their ideas to other people
- have limited background knowledge and experiences in a range of areas which can affect learning and social skills
- have poor vocal quality and rely on signed communication. (Ref)
Appendix R - School Photographs

Anonymised in line with GDPR