Beyond the glass ceiling: Towards a multi-sensory definition of functional literacy

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Ph D Thesis, Department of Linguistics, University of the Western Cape

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Abstract

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The world is becoming increasingly visual (Kress, 2009:1).The visually literate viewer should be able to gather data, place it in context, and determine its validity. A huge visual world opened up for the users of new technology. It is therefore no surprise that definitions of literacy have placed a huge premium on the reader to be able to interpret visual cues. Even in its simplest definition, the ability to read and write, the understanding of the concept of literacy is based on the visual. Although new literacies and recent orthographies also emphasise the role of context and the interaction of different modalities and learning history, like the social practice approach, it also focus on literacy events in which the written word is still the fundamental focus. In other words, (visual) texts remain the point of departure rather than seeing the written word as one part of a larger 'material ecology' of signs and meanings. This means that the majority of studies in the field of literacy focus on the individual's ability to interpret the visual and neglects how other senses permute in literacy events.

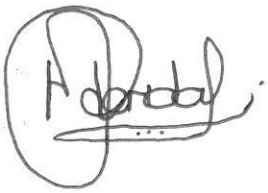
In this study, the focus falls on a group of people that cannot interpret the visual, the blind. The blind has adapted their literacy to function in an increasing visual world by making use of their other remaining senses: hearing, touch, taste and smell. By focussing on the 'remediated' literacy of the blind, a case is built that the way the concept of literacy is understood, should also take into account the use of the other senses, in other words, a multi-sensory understanding of literacy. The argument in this thesis is that looking at how the blind orientate and make meaning out of the everyday material and semiotic landscape necessitates an approach to literacy as one 'meaning-making affordance' among a number of 'repurposed' semiotic objects. The interdisciplinary field of linguistic (semiotic)

landscapes provides the conceptual and methodological tools with which to reposition literacy studies as one 'affectful' orientation to place, and to rethink how literacy is repurposed as 'material objects of organization' (new typology of semiotic objects). By focussing on the day to day functioning of blind people and the way that they utilise their other senses when dealing with normal activities at home, the research aim to go beyond the glass ceiling that focuses so much on the visual, by demonstrating how other senses are also contributing to an individual's literacy. This is tentatively interpreted within a posthumanist framework. More precisely, such a vantage point provides insights on:

- how the blind provide a lens on an extended concept of literacy framed within a material semiotic landscapes approach;
- how taking a semiotic landscape perspective on (functional) literacy (and notion of 'fit'/'functionality' – parameters of social literacy, such as emotion, history etc) assist in rethinking the basis for studies of literacy.

Declaration

I declare that *Beyond the glass ceiling: towards a multi-sensory definition of literacy* is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted here have been indicated and acknowledged by complete references.



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Chapter 1
Introduction: background to the research problem, methodology and objectives

1.1. Background

The world is becoming increasingly visual (Kress, 2009:1). If you browse through a magazine, the advertisements are relying on the reader's visual senses with large images and very little writing. The visual element combined with only a few words provide the reader with a message. Gone are the days that your washing machine has a simple dial and an on and off switch; intricate onscreen displays, giving the user a variety of options, has taken its place. A box of cereal is no longer a container for its contents. The cereal box has become a vehicle to disseminate a wealth of information: ingredients, nutritional benefits, recipes, competitions and images of healthy athletes have become familiar on modern day cereal packaging.

And then there is the huge visual world that opened up for the users of new technology. By visiting a website, the user has a wealth of knowledge on the screen, with images, links to click on, videos and graphics. Screens of digital media are replacing pages and books as the dominant media (Kress in Gillen and Barton, 2009:6).

This thesis, however, attends to those who live in a different world, one where forms of communication that rely on the visual senses are ruled out. In this predominantly qualitative study, the focus falls on a group of people that cannot interpret the visual, the blind. To use our eyes and read is an ability that we mostly take for granted. But in South Africa, there are thousands of people who are not as fortunate – they cannot see. Blindness is classified (Flanegan 2011:7) as the lack of visual perception due to physiological or neurological factors and to be regarded as legally blind, vision needs to be less than 6/60. This means the eye sees at 6 metres with correction what normal vision can see at 60 meters.

According to the South African National Council for the Blind, 5% of the South African population has some form of disability. The prevalence of sight disabilities is the highest at 32%, although it is clear that there is a lack of reliable statistical information on disability in South Africa generally. In any case, this statistic tells us very little about what it means to be blind, that is, how it is interpreted (Emmett in Watermeyer et al. (2006:221). In particular, in 2001 the Taylor Committee points out that quantitative data cannot do justice to the experience of disability and a more nuanced reading of the data (in their report) is required. This study will hopefully offer some insights into the 'meaning' of being blind seen through the lens of literacy.

In a world where so much communication is visual what does this mean for how the blind cope on an everyday basis, not just in terms of communication and literacy, but also in making sense of, and interacting with, their environment? Even in its simplest definition, the ability to read and write, literacy is based on the visual. The visually literate viewer is able to gather data, place it in context, and determine whether or not it is valid. Although new literacies and recent orthographies also emphasise the role of context and the interaction of different modalities and learning history, it focus naturally on literacy events in which the written word is still the fundamental focus.

Given the importance of literacy as a prime form of semiosis, it is not surprising that in the context of the blind, visual literacy as the norm has given rise to practices and ideologies of stigma and deficit, as well as provided the templates for remediation and assistance. Not being able to read and write carries a host of negative connotations, many which single out the blind as different or 'deficit' in some way. My own story illustrates a number of dimensions shared by other blind people.

On a personal level, the motivation for this study stems from my own visual disability and the feeling of being different that this engendered. Wearing thick glasses I grew up always sensitive about my eyesight, and lack thereof. Being

ousted at school for not being able to play ball sports with the other children and always sitting in front in the classroom. Always feeling different.

Then, in 1983, an ophthalmic specialist advised my parents that I would do much better if they were to send me to a special school for children with eye disabilities. My parents, reluctant at first, registered me at the Pioneer School for the blind in Worcester in 1984. I was in Standard 4, 13 years old. Suddenly a new, different world was opened up to me – a world in which I wasn't so different. In fact, I was one of the fortunate ones because I could still see but there were many of my other school friends that weren't as fortunate. They were blind. My being able to visit this unfamiliar world of darkness with my friends, proved to always stick with me and I promised myself that one day I will give more people a glimpse into the world of people with sight disabilities. I matriculated from Pioneer School in 1989
– not feeling different at all, but empowered to conquer anything.

In 1990 I enrolled at the University of the Free State for a Bachelor Degree in Social Sciences. Suddenly I was different again and very aware of my own disability. I needed to ask my class mates for their class notes because I could not see on the black board or screen in front of the lecture halls. Today I realise that my class mates acted as my literacy sponsors! I was very aware of the fact that my academic progress relied heavily on the charity of my class mates and the quality, or lack thereof, of their class notes. I pulled through and managed to complete my Masters in Communication Science at the same university in 1996.

Meanwhile, my class mates at school took different paths in life. Some also studied like me, while others completed some vocational training thought more appropriate for people with sight disabilities, like switch board operators. Some were lost, ending up depending on government grants. Others started working and stayed in a protected labour environment, weaving baskets or making mattresses. The question in the back of my mind always remained about how the blind cope in a world that does not cater to their communication needs.

As I noted above, it is not just being singled out as 'different' that is engendered by the lack of visual literacy. Particular meanings are attached to not being able to read and write. Because literacy is such a prestigious capacity, one in which governments and individuals invest heavily, the very foundation – according to some – of "enlightened civilization" (e.g. Goody, 1986), it comes packaged with a host of connotations of almost a religious nature. This gives not knowing how to read and write an enormous importance. To the extent that literacy is associated with particular capacities and skills (social, or cognitive), then *not* having access to literacy – or having only partial access –implies the corresponding lack of these skills in the illiterate. For example, the deeply held view that sometimes distinguishes between the oral versus the literate, as demonstrated by Olson (1988:175), *that speech makes us human and literacy makes us civilized*, does not include people for whom written texts are sometimes a barrier, like the blind.

Scribner (1984:2), wanting to dispel the many myths around the concept attempted to unpack literacy by using the metaphors of *adaptation*, *power* and *state of grace* to refer to different stages of literacy. If an individual meets the level of proficiency necessary for effective performance in a range of settings and customary activities, they are in the *adaptive mode*. If an individual, however, performs below the expected level, they will have *fallen from grace*, but if they are above that level, they attain *power* or status, the rewards for speaking the dominant discourse. The question, of course, is what does it mean for the blind to be labelled as 'having fallen from grace'?

Of course, besides experiencing stigma and being the object of derivative discourses about disability following from how literacy is conceptualized, there is also the fact that blind people suffer unfair socioeconomic and other disadvantage. Literacy takes pride of place as an important indicator of economic prosperity or life-quality. The level of literacy of a blind person has a direct effect on both his/her physical and psychological well-being. It affects his/her ability to take care of his/her family by enabling them to do simple tasks that sighted people take for granted, like reading directions on a cleaning product, following a recipe or even

holding down a job. It affects emotional well-being by enabling independence and confidence (Ryles, 1996).

Many policy analysts consider literacy rates a crucial measure of a region's human capital. This claim is made on the grounds that literate people can be trained less expensively than illiterate people (Literacy Encyclopaedia, 2013:2). Approximately 86,4% of the South African population can read and write (Statistics South Africa) and are therefore considered literate. But, only between 5 and 10% of blind people in the country are braille literate (South African National Council for the Blind). This paints a grave picture if one takes into account that braille is the predominant medium of communication and literacy for blind people (Blake, 2011:1). Braille literacy is also important in enabling blind people to take their place as part of the employed public in South Africa. The lack of braille literacy, however, means that only 3% of visually impaired people in the country are employed (South African National Council for the Blind). It is these sorts of consideration that makes literacy so important for the blind and that motivated this research, in particular concerns about the *functional literacy* of blind individuals, understood as those literacy experiences that form part of daily life.

Finally, the importance conceded to visual literacy means that it is also used as a template for systems or tactics of remediation. Literacy as a particular technology builds on the systematic patterning of language with orthography. The development of braille is an attempt to mimic this technology through the tactile senses. For many, the answer to literacy for the blind lies in the acquisition of the braille-medium (Ianuzzi, 1999; Johnson, 1996; Spungin, 1989). Braille, named for the founder Louis Braille, is the system used by the blind to read and write. According to a study by Schroeder (1996), braille represents competence, independence and equality for many blind people.

1.1.1. A short history of blind literacy

Until Louis Braille developed his six-point system for reading and writing, literacy for the blind meant oral literacy. Prior to this, a few attempts had been made to teach the blind to read, but the systems were not practical, some using nails or pine pounded into board in the shapes of letters of the alphabet (Lorimer, 2000:2). There were few people that believed the blind could be taught to read and write. But, in 1781 Valentine Hauy, after witnessing how blind people were humiliated and alienated, established the first school for the blind in Paris. Hauy believed that the blind could learn to read and write and with these skills, would be able to find opportunities for employment and self-sufficiency. In the Paris school for the blind, and others that started in Europe, embossed letters were used for reading. Blind students found this system to be impractical, as trying to feel raised letters was slow and cumbersome.

In 1819, the Paris school for the blind was visited by Captain Charles Bartier of the French army. At this time Louis Braille was one of the students at the school. The captain designed a 12-point code based on letters and phonetics that could be used by the army for night writing and reading. Louis Braille thought this system was too complicated, and in 1824, he perfected a code based on a six-point system, with a total of sixty-three characters – one for every letter of the alphabet and others for punctuation and abbreviations (National Federation for the Blind, 2009:6).

The basic braille symbol is called the *braille cell* and consists of six dots, arranged in the form of a rectangle, three dots high and two across. The different cells are used to represent different letters and punctuation marks.

In braille, contractions are used to reduce the length of the word: for instance the word *receive* is represented by the letters *rcv*. This accelerates the speed of reading and writing.

To produce braille, special devices are needed. The simplest one is the slate and stylus and it is also the cheapest and most portable method. The stylus, which is used to emboss the dots on the paper, is used on a slate which goes over the paper with prepared gaps for the possible holes.

The device most commonly used to produce braille is the Perkins Brailler, a mechanical writer with nine keys, six of which are used to produce the six dots of the braille cell. The other three keys are the space bar, the line spacing key and the backspace key.

Lastly, there are computer based braille embossers which are used mostly by producers of braille material, like braille books and magazines.

Braille is not a language. There are braille codes for different languages in the world. In South Africa, braille instruction was initially only conducted in the English braille code, but today there are braille codes for each of the South Africa's eleven official languages. There are also separate braille codes for mathematics, music and computers.

While Louis Braille was perfecting his system for reading and writing for the blind in France, in the United States asylums were constructed to house *the blind, the deaf and the feeble-minded*. Many people in the United States believed that the blind should be institutionalised to *keep the blind off the streets and in a safe environment* (Best, 1919:37).

In 1832, the Perkin's School for the Blind, then known as the New England Asylum for the Blind, was opened with Valentine Hauy as the first director. In the 19th Century, education for the blind was based on religious doctrine (De Castell and Luke,1988; Resnick and Resnick,1977). The belief was that the blind should be educated for religious purposes (Best,1919:38). Hauy, however, believed that the blind needed more than religion. This is evident in a letter he wrote to Charles

Dickens, who visited the school in 1842, in which he made the following request (Ferrell, 1956:109):

> The blind want something to gladden their hearts … they want happier views of life. They want books that will give pleasure and joy in their dark chambers … your books do this and I want the blind to have one of them at their fingers end.

Although Hauy supported schools for the blind, he also rejected students and accepted only elite students. His initial romantic optimism towards the plight of the blind changed to a biological determinism (Freeberg, 2001:6). Many schools ceased to exist due to a lack of funds. Schools that were functioning believed that it was more important to teach a trade to the blind than to teach reading and writing. This meant that when students graduated from these schools, they spent the rest of their lives making baskets and brooms in sheltered workshops, which were considered charitable institutions under welfare authority and its dependency-creating practices were ever-present. Many of these jobs became obsolete with the introduction of mass production, resulting in increased unemployment for blind people. Educational and social policies created by professionals restricted and separated the blind from mainstream society (Ferguson 2001:23).

In the 1940s and 1950s, improvements in the field of medicine, an increasing number of experts started viewing blindness as a medical condition. This led to the so-called *sight-saving* schools in the United States. In sight-saving schools the use of vision was discouraged for those with low-vision, assuming that vision could be overused and cause more harm than good (McKinley, 2006: 22).

Changes in the political climate in the United States in 1960s and 1970s (McKinley, 2006: 23) led to the blind getting a voice in decisions regarding their circumstances and schooling. These changes led to what is now referred to as *mainstreaming*. Mainstreaming referred to the practice of educating blind pupils

in public schools rather than special schools for the blind. But this led directly to the decline of the braille literacy rate in the United States, a fact that was only realised in the late 1980s. The number of people who read braille dropped from 52% in 1963 to only 18% in 1978 (Rex, Koenig, Wormsley and Baker, 1994).The blind community started talking about a braille literacy crisis, much like the general public talked about a literacy crisis for sighted children (Gee, 1986:719). At that time the unemployment rate for the blind stood at 70% (Johnson, 1996:277) and the number of employed blind who used braille, at 85 to 90% (Spungin, 1989:6).

This led to the blind starting to fight for their right to learn braille. Today, this fight is still continuing. Blind people believe that braille is one of the many tools that they need to succeed in life. For many of the blind, braille leads to jobs. Apart from the necessity of braille as a literacy tool, many blind people believe that the real cause of the lack of literacy in the lives of the blind is rooted in societal stereotypes and misconceptions about blindness. Schroeder (1996:214) sums this up in his argument that *the attitude persists that to be blind is to be dependent and inferior, whereas to be sighted is normal*. Mainstreaming aimed to normalise blind people. Gore (1998:237) defines normalisation as *invoking, requiring, setting or conforming to a standard fitting the normal.* Thomson (1997:13) remarked:

> If disabled people pursue normalisation too much, they risk denying limitations and pain for the comfort of others and may edge into the self-betrayal associated with 'passing'.

1.1.2. Blind literacy in South Africa

Although the history of blind literacy as outlined here, focuses heavily on subject literature available in the United States. Many of the same trends can be found in the history of blind literacy in South Africa.

The history of blind literacy in South Africa can be traced back to the late19th Century when the *Doofstommen en Blinden Instituut* was founded in 1881 by the Cape Dutch Reformed Church in Worcester. In 1891 a special section was developed just for the blind. The first principal of this section was Dr BJG de la Bat. During 1905 the two sections, one for the deaf and the one for the blind, were separated and two schools were established. The first principal of the Worcester School for the Blind was a Dutchman, Mr MJ Besselaar (Institute for the Blind, 2012).

In 1933 a need for employment for the blind was identified when three blind matriculants struggled to find gainful employment. This led to the establishment of industries providing jobs for blind people, such as weaving, cane and metal work, and making mattresses. Tried and tested training for the blind, like telephony and piano tuning, has today expanded to include computer training, management training and call centre training (Institute for the Blind, 2012).

Statistics indicate that in 1968 there were a total of 274 white blind pupils accommodated at two schools – 264 in Worcester and 10 at Prinshof School for the Partially Sighted in Pretoria. Four schools for the blind catered for black pupils and accommodated 357 pupils. Only one school each catered for the needs of so-called coloured and Indian pupils and housed 139 and 39 pupils respectively. This was during the height of *apartheid*, the government's policy of separate development. All schools for the blind were at that stage supported by the government. Departmental control, the powers and responsibilities of the managing bodies, as well as the formulas for financial aid were, at the time, determined by the four education laws governing the various racial groups.

Since achieving democracy in 1994, South Africa no longer draws a distinction in terms of the racial division of schools (Institute for the Blind, 2012).The new Constitution promotes equity among all South Africans by recognising the need to implement specific measures that would address the disadvantages that particular groups of people experienced. This was an important milestone in the struggle of

disabled people in South Africa. The Constitution recognizes that disabled people have been and continue to be, discriminated against because of their disability, making it an important consideration in new legislation and in policy documents (Howell, Chalklen & Alberts in Watermeyer et al., 2006:46).

In 1998, the then Deputy President of South Africa, Thabo Mbeki, delivered the opening address at the Perkins Brailler Project (Office of the Deputy President, 1998:1). In his speech, he re-iterated the importance of literacy, particularly for the blind:

> The rights to literacy must be considered one of the most unquestionable rights of all people. Literacy is crucial to all aspects of life, public and private. We recognise that literacy is necessary to reach personal goals, to adapt to a changing environment and to achieve a meaningful existence. Literacy among blind people is recognised as a basic human need that opens the door to a better quality of life.

He then also added his voice to the voices of many from over the world talking about the importance of braille literacy for blind people:

> The quality of life of many thousands of blind South Africans is affected because they cannot read or write in braille. People who are marginalised or displaced are further disadvantaged by their inability to participate in the dominant forms of literacy. They are disadvantaged in job-seeking, they are unable to participate effectively in training or development programmes and, they are often unable to support themselves and their families. Poverty, illiteracy and disability constitute an explosive combination.

> For blind people, literacy hinges on being able to effectively read and write in braille. Braille, for blind people, is the channel through which they gain access to the world around them. Braille is a universal form of communication for many languages and any culture.

The importance of braille literacy can also be seen in employment figures with 85% of blind people formally employed in South Africa being braille literate (LOFOB, 2012).

However, braille literacy is declining. According to the League of Friends of the blind (LOFOB) less than 10% of blind persons in South Africa is braille literate. The decline of braille literacy is not unique to South Africa, however, and has become a cause for concern all over the world. One can only conjecture about the reason behind the decline. Can this decline in braille literacy be indicative of a larger focus on the multi-sensorial by blind people? Perhaps. Statistics show that the declining numbers of the braille literate indicate a move away from this system to an employment of the other senses by blind people, not only touch. Braille, although giving the blind a good grounding for reading and writing, has become less prominent in the adult lives of the blind and becomes a more personal tool, replaced with a multi-sensory process supported by new technology. Many braille readers today feel that this increased use of computer applications could revive the *code of bumps*, but this technology is still extremely costly and not yet widely used (Aviv 2010:3). Furthermore, in today's society, which is increasingly visual, the development of new literacies (computer aided literacies) – while having the potential to improve the situation for many visually impaired remain invested in those with sight.

It is perhaps in this direction that we should be looking for avenues to ameliorate the literacy conundrum of the blind – that is, finding ways to semiotically engage other senses than the visual as new literate modes. This involves investigating how the blind cope with literacy in the everyday. More generally, it involves

exploring how the blind cope with the everyday, in all its complexities, and, importantly, asking whether there are features in how the blind manage the everyday that could inform 'remedial' tactics of literacy.

1.1.3. Getting on in the everyday

How do the blind cope with the everyday in the lack of visual 'literacy'? The reading and writing practices of the blind can be diverse and specifically individual. Normally the literacies of blind people are categorised into visual (print for people with very little sight and classified as blind), braille and auditory modes. A blind person may use one or more modality as a primary or secondary mode, according to individual use, in other words a multi-modal approach. The blind have adapted their literacy to function in an increasing visual world.

It is undeniably the case that the written word is part of a more comprehensive circulation of meaning, Texts are sometimes mediated by literacy sponsors; print messages move across different modalities. Blind readers today, for example, make use of the oral-aural mode in several ways, including listening to a live reader who is present at the time of the reading, listening to a live recording, and listening to the voice synthesis of a computer-based written text. However, listening to the spoken word with talking books or voice synthesisers is not considered to constitute reading for many of the blind (Rex et al. 1994, Schroeder 1996), and whether the act of *listening* ought to be considered as literacy is an aspect that is often debated. The traditional definition of literacy, to be able to read and write, does not make provision for this. And, although there are authors who feel strongly that listening is not literacy, there are those that feel that it is. It therefore seems a multimodal, multi-sensorial approach to literacy for blind people is, at best, a matter of contention. For many blind people, the oral-aural reading mode is a primary literacy practice and rapidly evolving communication technologies that

use digital audio recording and voice input/output for computers, will continue to expand technical capabilities for oral-aural literacy (Willis 1994b:12).

Thus, literacy functions can be achieved through print, braille or through listening or in combination as expressed by Hatlen (2009:2):

> For persons capable of using braille effectively, the ability to read and write braille is fundamental to being literate. On the other hand, braille readers who are not also effective consumers of recorded material may not be as literate as possible.

Hatlen, blind himself and the superintendent of the Texas School for the Blind, goes on to suggest that maybe it would be better, when defining literacy, to rather use print literacy, braille literacy, tactile literacy, auditory literacy or media literacy when describing the various paths that lead to a system to receive and give information (Hatlen, 2004:4).

What, then, might the implications be for an alternative understanding of blind literacy if one were to attend more to the wider ecology and circulation of meaning (in which the written word may play a part)?I will attempt to build the case in this thesis that understanding the concept of literacy of the blind should also take into account the use of the other senses, in other words, a multi-sensory understanding of literacy. More specifically, by taking as a point of departure that text is part of an ecology of communication/messages, and by focussing on the day to day functioning of blind people and the way that they utilise their other senses when dealing with normal activities at home, this research aims to take away the tunnel vision that focuses so much on the visual, by bringing in a focus on all the senses. Thus, looking at how the blind structure their meaningful engagement with text as well as how they engage with the environment at large on an everyday basis could provide insights into an ecology of semiosis built on a range of senses and readings. This in turn could afford a more comprehensive approach to blind literacy.

1.2. Research questions

Given the above, the following research question:

> Can understanding how blind adults use literacy (functionally, embedded in their everyday lives) together with other means of coping with everyday life inform more appropriate forms of remedial literacies.

The rationale for this problem statement is that a first step in rethinking blind literacy is to gain an understanding of how blind adults themselves perceive and practice their literacies. This will establish the point of departure with which to investigate the functional literacy practices of blind people. Functional literacy focuses on the specific literacy tasks that are of practical significance in a person's daily life – it implies the ability to function well at real world tasks as opposed to school-based, standardised reading assignments.

Given what we have said above with regard to how blind adults use a variety of senses to 'read off' and act on their immediate environment, one approach to this problem statement is to interrogate what particular modalities and modes blind adults use in their everyday. Can these modes and modalities be understood semiotically, that is, as codes? And, furthermore, is there any way in which the structure of multi-sensorial 'reading' could be accommodated remedially in, say, a new literacies framework? If so, what processes, tactics or strategies need to be in place for this to happen?

The problem statement can be broken down into five sub-questions:

a. What does being literate mean to blind people?
b. How do blind individuals cope in their everyday lives without the ability to access visual messages? How to understand this semiotically?

c. What role do new literacies play in the lives of the blind?
d. What implications do the literacy experience of blind individuals have on the general understanding of literacy?
e. What remedial literacy processes does this research suggest – if any?

There are three main conceptual and methodological frameworks that I employ in this thesis to approach these questions. Firstly, the Social Literacies approach to literacy where literacy is described as a social practice, a contextually embedded and a situationally variable skill that attends to the ecology of messaging. Secondly, a related 'New Literacies framework' that focuses on understanding the contribution that technological advances carry for reading and writing. And thirdly, the field of Linguistic or Semiotic Landscapes that deals with the structure and content of signs in place and how the literacy practices of the everyday include a dynamic relationship between semiotic resources, activities, artefacts and space. Each of these frameworks will be developed in more detail in the following chapters. Here, I will give a brief overview of their relevance to the research questions.

1.2.1. Social Literacies

A Social Literacies approach that covers the wider ecology of text and interaction with individual readers and writers offers a promising paradigm for analysing how (visual) literacy conceptually frames the blind as disabled. Schneider in Watermeyer et al. (2006:8) mentions that until the late 1900's disability was understood as a problem of the individual but that this view has changed with the rise of the disability rights movement. Disability is an experience that arises out of the interaction between a person with a health condition and the context in which they live. This context includes both factors external to the person (environmental factors) and those internal to the person (age, gender, education, skill level, coping style, personality). Nevertheless, when considering the literacy issues related to being blind, the individual is seen in terms of a linguistic-decoding-sensual

technology of print literacy, disregarding the larger semiotic context in which meaning construction and functional 'fit' to the local and wider context occurs.

A socially based definition of literacy for the disabled would cover all the things that impose restrictions on disabled people; ranging from individual prejudice to institutional discrimination, from inaccessible buildings to unusable transport systems, from segregated education to excluding work arrangements, etc. The consequences of this failure do not simply and randomly fall on individuals but systematically upon disabled people as a group who experience this failure as discrimination institutionalised throughout society (Oliver, 1996:33).

A social literacies framing encompasses a wide range of social, interactional, individual, attitudinal and situational parameters involved in the practice of literacy events, and thus can accommodate a variety of stances on disability as an interaction between individual and environment.

An important notion for this study is functional literacy. This is an understanding of functional literacy that has been heavily criticized in social literacy studies. I attempt to reconcile this notion with the social literacies perspective.

Barton, Hamilton and Ivanic (in Street and Lefstein, 2007:144) made six propositions about the nature of literacy. These propositions will be elaborated on in the second chapter. They are:

- Literacy is best understood as a set of social practices; these can be inferred from events which are mediated by written texts;
- There are different literacies associated with different domains of life;
- Literacy practices are patterned by social institutions and power relationships, and some literacies are more dominantly visible and influential than others;
- Literacy practices are purposeful and embedded in broader social goals and cultural practices;
- Literacy is historically situated; and

- Literacy practices change and new ones are frequently acquired through processes of informed learning and sense making.

1.2.2. New Literacies

New reading and writing practices have resulted from the use of computers and the Internet. These are called 'New Literacies'. New Literacies are seen to integrate written, oral and audio-visual modalities of interactive human communication within screen-based and networked electronic systems. This is in contrast to the print, paper and language-based reading and writing associated with older literacies (Prinsloo, 2005: 186).

Special attention should be paid to the use of 'New Literacies' to support people with special needs, such as the blind. As Leu et al. (2004:26) states:

> It is quite possible that the gap between proficient readers and less-proficient readers will increase within the world of rich, complexly structured information networks as the effects of differences in reading rate and accuracy become magnified. If we do not wish to leave a single child behind, we must focus on the issue of how best to support students with special needs with the powerful new technologies that are available to us.

With respect to teaching and learning abilities in the context of rapidly changing communication needs, research by Cope and Kalantzis (2000) made a substantial contribution to the area of literacy teaching and learning in the context of rapidly changing communication media and practices. Although their study focussed on visually abled learners, the research shed light on how teaching and learning has changed in a new communication era.

Other research, including Abbot (2000), Jewitt (2006), as well as Leander and Sheehy (2004), has studied New Literacies in the context of education. Wagner and Kozma (2005) conducted research to support adult literacy and adult or basic education, specifically information and communication technology (ICT), as

institutional tools for attaining traditional literacy and literacy as a broader set of text and technological skills.

Thanks to technological developments, blind people also have more access to other 'New Literacies' that are introduced through computers, cellphones, audio equipment and the Internet. There is no documented proof of the use of these 'new literacies' by blind people in South Africa and in this study is was necessary to identify some of these 'New Literacies' that are being used. The potential for new literacies to work with senses other than the 'visual' and the need for blind users to access non-visual technologies make the exploration of New Literacies an exciting path to explore.

1.2.3. Semiotic Landscapes

The third conceptual framework that will be introduced in the study is Semiotic (linguistic) Landscapes. I introduced this in order to sketch a wider framwwork for social literacies on the one hand but also to anticipate the use the blind participants make use of objects and materiality of place in order to construct meaning. This area of research looks at how signs, in particular design features such as their materiality, placement and semiotic characteristics (choice of language, orthographies, general layout) interact with 'place'/locality. Among other things, studies have looked at the socioeconomic, ethnic and power relationships, historically and in contemporary time, of the populations residing there. Traditional linguistic landscape studies has 'expanded its scenery' (Shohamy and Gorter, 2009) to incorporate other forms of semiosis besides language (such as graffiti and other visuals) and to take cognisance of the wider context of the sign in determining its meanings (e.g. geosemiotics). One of the most recent trends in research looks at how readers/writers engage with the semiotic landscape – or how the semiotic landscape engages with human actors and non-human artefacts (objects) for purposes of identity construction etc. Notions such as repurposing/resemiotization, when objects and their materiality are brought into interaction with other semiotic forms opens up some promising perspective for this study: Given that blind individuals use multiple senses for gaining information from and interacting with their environment, in what do these modes of coping reside and how can we understand

them semiotically?

Framing everyday literacy in a semiotic framework requires developing an understanding of text-reading/writing as part of an ecology of objects and processes that make up/constitute a landscape (and significance, and chains of affordances).This, I argue, goes beyond even a social literacies mandate, or at least the bulk of studies that are conducted in this framework, although such an approach to an extended account of literacy would be compatible with a social literacies paradigm.

Thus, given all this, the thrust of this study is on developing a focus on 'literacy' as part of an ever-evolving semiotic landscape. Looking closely at semiotic landscapes, allows us to rethink literacy and its emphasis on visual text. The tool for looking at semiotic landscapes (and the rethinking of literacy) is 'the voices and workings of the blind'.

1.3. Methodology

This research employed qualitative methods of data gathering. It was necessary to go into the daily worlds of the blind – in a society in which they are a minority, a society that does not meet them halfway, but where the blind needs to make all the compromises to cope.

In the first phase of the study explorative questionnaires were sent out to blind adults to inform the study on general literacy related information and themes for further investigation. Building on this information to answer sub-question *a, What does being literate mean to the blind*, the next phase of enquiry employed narrative methodology to explore the life histories of each of the participants.

To answer sub-questions b, *How do blind individuals cope in their everyday lives without the ability to access visual messages?* and c, *What role do new literacies play in the lives of the blind?* Observations and open-ended interviews were employed, again making use of narrative methodology. A day was spent with each of the participants in the study to determine how blind individuals cope without the ability to access visual messages. During the observations and open-ended interviews phase as described above, the researcher collected examples that account for the use of New Literacies employed by blind people in their daily lives to mediate for the shortcoming of not being able to access the visual.

The final two sub-research questions, that is d, *What implications do the literacy experience of blind individuals have on the general understanding of literacy?* and e, *What remedial literacy processes does this research suggest – if any?* forms part of the final summary chapter 6 of this thesis.

Data analysis ran sequentially. The first phase informed the second phase. The data was consolidated to fall into descriptive themes of the social practice approach to literacy.

1.4. Objective and aim of the study

The aim of this study is to investigate the understanding of literacy of blind people, their functional day-to-day literacy, the way in which they orientate and use the wider Semiotic Landscapes. In focus are also the New Literacies strategies and the new literacy strategies blind people have to utilise in a modern South African society. The aim is to explore in what ways literacy can be understood in terms of Semiotic Landscapes and, if so, to what extent a focus on the material aspects of semiotics could in equal degree inform the understanding of the notion of literacy.

Society today has to cope with a complex mix of visual, oral and interactive media, apart from the traditional text. Working within the theoretical parameters of the Social Practice Approach and using qualitative methods, the research seek to understand what literacy means to blind people, in their own words. Life histories

as narrated by the blind participants themselves, an investigation into the ecology of blind literacy and the intrinsic value of being functionally literate or illiterate are combined to give a holistic representation of the real world experiences of blind people, with special emphasis on their home environments. In their home environments the blind demonstrate that there are more modalities than the visual at play to orientate themselves and for information gathering.

1.5. Scope and limitations

The first phase of the study was restricted to blind people who had computer access as questionnaires were published on the website of Blind SA, as well as copies sent out by the executive members to blind people on their email contact lists. English was used as the language of communication.

The choice to post questionnaires on-line and to use English places some obvious constraints on the representativity of the study. However, as the questionnaires were primarily intended to provide themes for further investigation, the consequences were considered as not being negative.

There were various ethical considerations to take into account with this study, as is the case with any research involving people. When conducting research, there are some general agreements that prevail about what can be considered proper and improper conduct (Babbie, 1989:472):

1.5.1. Voluntary participation

With the questionnaires that respondents received via e-mail, they also received a cover letter explaining that their valuable participation in the study was totally voluntary. It was explained that their participation in this research might shed some new light onto the field of blind literacy and might help those in the process of still acquiring these skills. Because the participants belonged to an already vulnerable group, special care was taken not to reveal information that might be embarrassing or harmful.

1.5.2. Anonymity and confidentiality

The survey was conducted by e-mail and participants had the option to remain anonymous. For the narrative and open-interview phase of research, participants were again given the option to remain anonymous, and were assured that information provided will be treated with confidentiality.

1.5.3. Misleading subjects

In the cover letter the researcher identified himself and the reasons for conducting this research. A sample of the same participants that took part in the first phase of the study, was selected to take part in the second phase – by this time participants were informed about the reasons for the study and were familiar with the researcher.

1.5.4. Analysis and reporting

Throughout the research project the researcher reported honestly and openly about all findings, including problems encountered.

1.6. Significance of the research

While we may know about and focus a lot on the literacy of normal, seeing people, not a lot is known about how literacy is 'exercised' in the context of the blind. As indicated in the study by Hawisher and Selfe (2000) in which they offer a dynamic and socially grounded account of global literacies and demonstrate, among others, that practices that may appear uniform may in fact have different meanings in different contexts, this research also focuses on a specific context of the literacy of blind adults, their home environments.

With this study, investigating the functional literacy of blind people in Africa, I hope that new ground might be broken to open up new avenues for the understanding of literacy that incorporates a multitude of senses theorized against a wider concept of Semiotic Landscapes. Not only will this study contribute to the body of knowledge of literacy research done within the South African context but also provide insight into a world not explored often: the world of the blind. Following the functional literacy experiences of blind adults, the researcher will motivate for the broadening of the understanding of literacy, beyond the visual, and to motivate a movement beyond the glass ceiling of the current understanding of literacy to incorporate the use of other modalities like speech, touch, hearing and smell.

A question that this thesis hopes to answer is what the implications are for a revised or complementary understanding of literacy from this type of research. According to Kress (2009:11) we cannot hope to understand written text by only looking at the resources of writing alone. It should be investigated in the context of the choice of modes made, the modes that appear with writing, and even the context of which modes that were not opted for. To this, we might add the *repurposed* modes (such as arrangements of knives and forks in a drawer). The research in this thesis allows us to ask what the meaning-making abilities of the blind tell us about literacy? Asking questions on 'literacy' from the perspective of the blind may (via the field of linguistic landscapes) assist in rethinking the very paradigm of literacy and its primacy that defines and categorises the blind as vulnerable and deficient. There is the possibility that it might contribute to a rethinking of literacy through the idea of embodied semiotic landscapes as repositioning of the role of text and its technology.

1.7. Organisation of the thesis

The research thesis is organised according to the following chapters:

Chapter 1: **Background and introduction:** In this chapter a background is provided to the study, with specific reference to introducing the motivation behind the study and information, historic and current, about the literacy of the blind. The three main conceptual and methodological frameworks, the Social Practice Approach, New Literacies and Semiotic Landscapes, are introduced. The research problem and the specific research questions as dealt with in this study is provided and finally introductory information on how the study was conducted, including the research methodology, ethics and how the thesis is organised.

Chapter 2: **Literature review:** In this chapter the concept of literacy is unpacked according to the Social Practice Approach to literacy. Theory on the concept of literacy for the blind is also explored. The field of 'New Literacies', specifically technological devices (computers, cellphones), is also discussed against this framework. Emphasis is also put on reconciling the notion of 'functional literacy' with a Social Practices Approach. I introduce Semiotic Landscapes to extend the Social Literacies approach by taking consideration of space and place. The concepts and frameworks presented here are deployed in Chapters 4 and 5 that comprise the data analyses.

Chapter 3: **Research methodology:** This chapter deals with the methods of data gathering and analysis. Special attention is given to the use of narrative methodology which I argue is particularly suitable for gaining a 'holistic' understanding of how lack of visual access to literacy constructs, in a capillary sort of way, a functional handicap, that is for doing research with vulnerable people. Observation as a methodology for working with the blind, and

especially for exploring what the blind do in the absence of text to function on an everyday basis, is also discussed. The ethical issue of how theory (of literacy) can contribute to issues of the everyday is touched on (that is, the *raison detre* of the researcher). The validity, reliability and credibility of the research are motivated and the ethical considerations taken with the study, are explained.

Chapter 4: **Literacy in the construction of vulnerability**: In this chapter sub-question *a, What does being literate mean to blind people?,* is answered. Referring to the theory in chapter two, an account is provided on what literacy means to blind people, demonstrating that literacy is a life event that conjures up many emotions. In the narratives provided by the blind participants about their life histories, literacy as a lifelong event could not be separated from what feelings it bring to the forefront for the blind. This is the first results chapter that explores the use of a social literacies framework for understanding the capillary production through an emphasis on visual literacy of vulnerability. This illustrates how a humanist emphasis on visual literacy creates a particular subject position of the blind as 'vulnerable'.

Chapter 5: **Coping without sight:** Results are reported with the aim to answer research sub-questions b, and c*: How do blind individuals cope in their everyday lives without the ability to access visual messages?; What role do New Literacies play in the lives of the blind?* Attention is given to specific examples of New Literacies (objects) employed by the blind in their daily lives to mediate for the shortcoming of not being able to access the visual, by providing it in an accessible new literacy format. I also suggest an integrated posthumanist framing of literacy. The concept of literacy as seen as part of a landscape, in other words people in place, is explored. In the literacy landscape of the blind with the inabilityto access the visual, messages are repurposed or adapted into another accessible format for one of their remaining senses

Chapter 6: **An integrated posthumanist framing of literacy:** This chapter, the final one in the thesis, discusses question d, *What implications do the literacy of blind individuals have on the general understanding of literacy,* I suggest an integrated posthumanist framing of literacy. The concept of literacy is seen as part of a Semiotic Landscape that in turn is viewed through the lens of how 'words' orientate people in space. In the literacy landscape of the blind with the inability to access the visual, messages are repurposed or adapted into another accessible format for one of their remaining senses, providing insight into the dynamic relationship between semiotic resources, activities, artefacts and space. The final research question, e, *What remedial literacy processes does this research suggest – if any?,* is also answered in this concluding chapter. At the end suggestions for further research are provided.

Chapter 2

Literacies

2.1 Introduction

In this chapter, three theoretical frameworks for the research are presented, that of Social Literacies and New Literacies and Semiotic Landscapes..

Firstly, the subject of literacy in general will be unpacked, starting with an exploration of how literacy has been defined. The concept of literacy is explored in the South African context. The exploration then moves on to the literacy of the blind. Literacy, as discussed here, is a broader social concept and includes how the blind makes use of their other remaining senses to function in modern society, which include New Literacies.

As this research explores literacy as being socially embedded and within the theoretical parameters of the social practice approach, the exploration of literature moves on to the theory of this approach. Attention is also given to New Literacies that in terms of conceptual framing fit well with a Social Literacies approach. An introductory conceptual framing of semiotic landscapes is provided and the notions of social and New Literacies are discussed in relation to it. The chapter is concluded with an exploration of functional literacy. This is a notion that has been criticized in social literacies research. I suggest that this notion can be rehabilitated and amended to provide an important lens to approach the literacy of the visual impaired.

2.2 Literacy

South African journalist, author and broadcaster, Jennifer Crwys-Williams (1994:130) compiled a dictionary of South African quotations, in which the following quote, a kind of double-edged sword, from a South African domestic worker, Mina Macu, is included: “An illiterate person is like a blind person, you have to do what somebody tells you to do”. Although this might be perceived as ableism, it emphasizes the importance of the freedom that comes with literacy.

According to Street and Lefstein (2007:7) there are three main reasons why literacy should be studied:

a. Literacy is critical for the well-being of individuals and society;
b. Literacy is currently high on the agenda in public debates; and
c. The study of literacy leads to inquiry into a broad range of social, political and ideological issues.

2.2.1. Defining literacy

Although literacy would seem to be a term that everyone understands, it isin fact a concept that has proved to be complex, dynamic and contested. This is clear in the wealth of interpretations and definitions to be found in literature.

Traditionally, literacy is defined as the ability to read and write (Heath, 1991; Lankshear & Knobel, 2003). But, as Chu (1999:1) points out, if people are to thrive in contemporary society that is multicultural, multilingual, global and technological, reconsidering the traditional definition of literacy is fundamental.

UNESCO (2012) also acknowledges the evolution of the concept of literacy beyond a set of technical skills of reading, writing and calculating to a plural notion encompassing the manifold meanings and dimensions of these undeniably viral competencies.

> Such a view, responding to recent economic, political and social transformation, including globalization, and the advancement of information and communication technologies, recognizes that there are many practices of literacy embedded in different cultural processes, personal circumstances and collective structures.

While literacy can mean different things to different people at different times (Luke & Freebody, 1997:186), many people have been denied literacy based on race, class and gender (Moll, 1994; Diaz& Flores, 2001; Brandt, 2001; Street, 1995). In her research Brandt (2001a:4) suggests that reading and writing are not

superior to other forms of communication, like listening, but she does point out the unequal practices for those who do not possess these literacy skills. As with many other groups, access to literacy has been denied to people with disabilities, including the blind in South Africa.

Stuckney (in Fiedrich: 1996:10) points out that literacy can also be described as *violent* when referring to the segregation often undertaken with the help of literacy standards: Those who are literate are seen as capable, intelligent and modern, while those who are not, make up the rest of the world's population – to be pitied at best.

Today, the forces that shape the forms and functions of literacy, and, concomitantly, what it means to be 'illiterate' are according to Leu et al (2004:10):

a. Global economic competition within economies based increasingly on the effective use of information and communication;
b. The rapid emergence of the Internet as a powerful new technology for information and communication; and
c. Public policy initiatives by governments around the world to ensure higher levels of literacy achievement, including the use of the Internet and other ICTs (information and communications technologies).

2.2.2. Literacy in South Africa

The history of South Africa is tainted with inequality. People from different races, backgrounds and abilities did not have equal access to literacy. As noted above (1.1.2), literacy notions come embedded in a value framework that reflect directly on those who are, or oftentimes, are not literate. Prinsloo (in Wagner, Street and Venezksy, 1999:418) quotes Barton, when he says: *the words you use to talk about literacy are directly productive of your view on illiteracy as a social problem, and what you do about it*. In this study, Prinsloo goes on to describe the colonial history of literacy in South Africa as closely bound to the dynamics of colonial conquest and missionary work in the 17th through to the 20th century. One practice described in the colonial literacy past, was that schools were established by the

Dutch East India Company in the Cape for the main purpose of teaching the Dutch language and the Christian religion. To increase their motivation, the student slaves were given a tot of brandy and two inches of chewing tobacco each. Later in the history in South Africa, literacy took the road laid by the government of the time, leaning towards separatism, also known as *apartheid*.It is in the early days of this political determination in South Africa that the Superintendent of the Lemana Institute of the Swiss missionaries wrote:

> The head of the native is not able to sustain the stain of mental study so well as the heads of whites' and advocated 'industrial education' and 'manual training'.

Similarly, blind people at the time were also motivated to take up jobs more suited to their capabilities, like weaving and other hand crafts.

Today, South Africa is slowly trying to rectify this, particularly for the young people who have entered the schooling system. Despite this, illiteracy remains a big reality. Aitchison and Harley (2006:5) took the statistical results of the 1995 household survey, the 1996 general population census and the 2001 general population census conducted in South Africa, to conclude that some 32% of the adult population can be regarded as functionally illiterate and that the functional literacy rate amongst the adult population can therefore be estimated at 68%.

This means that, on average, one in three of the estimated 44 million people in South Africa is functionally illiterate. That is, they have some basic reading and writing skills, but cannot function effectively in a job that requires the ability to read and write fluently.

Even among those that are functionally literate, a high percentage drop out of school before receiving a basic educational grounding which would equip them to function effectively in the labour market (Harley, Aitchison, Lyster and Land, 1996:22).

Literacy is a basic human right. According to the Bill of Rights of the Constitution of South Africa, the State has an obligation to provide and make education accessible to all.

In 2010, South Africa's public education expenditure as a proportion of government spending, amounted to approximately 19,2% (UNESCO, 2012). This means that literacy is high on the government agenda but South African education programmes do not always deliver equal results, as a press release from the South African Institute for race relations (2012) points out:

> Despite spending more on education, South Africa is not yielding the same results as other emerging markets. The way forward relies on strengthening the quality of teaching at school level and focusing on the commitment of teachers and principals.

Some of the most problematic aspects of South African literacy are the relative dearth of literacy materials for different domains of use in South African languages. With 11 official languages a huge burden is place on resources of government education. This burden overshadows the provision literacy materials in different codes, for instance braille and audio.

In what follows, I explore three conceptual pillars for the further discussion of literacy, the social practices approach to literacy, the new technological affordances for new practices of literacy provided by the so-called new (computerized) literacies and the notion of semiotic landscapes which can be seen as a further extension of both these developments in expanding context and affordances for literacy practices. Later in this chapter I will process one step further by expanding the idea of semiotic landscapes by exploring the role of objects in the mediation of meaning. The rationale for this is the role of material inscriptions (such as signage) plain in orienting people in place. Objects for the blind provide such a function, thus suggesting that they have a place in the conception of what comprises a semiotic landscape. I thus move from the book, to the screen, to the object, towards a poshumanist view of applied linguistics in which the multimodal, multisensory

semiotic practices of the everyday include the dynamic relations between semiotic resources, activities, artefacts and space (Pennycook, 2016: 2).

2.2.3. Social Practice Approach to literacy

Much contemporary research defines literacy as a social practice (Heath, 1983; Barton & Hamilton, 1998; Brandt, 2001a; Street, 1995) and a means of power (Luke, 1994; Street, 1995). In the social practice approach, as used in this study, emphasis is placed on what people do, not what they learn, as Barton (1994:24) points out:

> Literacy is not simply knowing how to read and write a particular script, but applying this knowledge for specific purposes in specific contexts of use. In other words, literacy is about what people do with reading and writing.

Literacy is always part of a wider set of communication practices, including oral, written and visual modes, and its purpose is always lying outside of itself and is contextualised (Department of International Development, 1999:16).

The original formulation of the Social Literacies approach was made by Street (1984) who distinguished between an autonomous and ideological model of literacy. According to the autonomous model, literacy in itself, autonomously, will have an effect on other cognitive and social practices. Text, according to this model, has autonomous meaning which does not change over time and space.

In contrast to the autonomous model, the ideological model claims that the autonomous model simply imposes a Western concept of literacy on other cultures (Street and Lefstein, 2007:42), and that the 'meaning' or significance of *literacies* depend upon the social institutions in which they are embedded. This means that it is more appropriate to see literacy as social practice and not simply as a technical and neutral skill. As Street (in Street and Lefstein, 2007:42) points out, literacy is always a social act Cf. (Street, 1995; Barton & Hamilton,1998; Gee, 1990). Reading, writing and the use of written texts are embedded in social

processes. Some of these practices can be observed in specific events, but they also function on a socio-cognitive level, thus making it a contextually embedded and situationally variable, rather than an autonomous skill (Street, 1995:85). According to Jones (1999:39), the values, understanding, and intentions people have, both individually and collectively, about what they and others do with text, forms the literacy of an individual.

The social practice approach to the understanding of literacy has been particularly influenced by those who advocate an ethnographic perspective on literacy, versus the experimental and often individualistic nature of cognitive approaches to autonomous literacy. These social developments are referred to as new literacy studies (Street and Lefstein, 2007:41). This approach is concerned with the study of literacy as situated practices embedded within relationships of culture and power in specific contexts. Research in this area has shown that literacy-related skills and practices are often distributed among co-participants, and that literacy in use is closely linked with other communicative modalities, most obviously speech, but also image and gesture (Prinsloo and Baynham, 2008:3).

Barton, Hamilton and Ivanic (in Street and Lefstein, 2007:144) make six propositions about the nature of literacy (and one could also say about 'illiteracy') They are:

- Literacy is best understood as a set of social practices; these can be inferred from events which are mediated by written texts;
- There are different literacies associated with different domains of life;
- Literacy practices are patterned by social institutions and power relationships, and some literacies are more dominantly visible and influential than others;
- Literacy practices are purposeful and embedded in broader social goals and cultural practices;
- Literacy is historically situated; and
- Literacy practices change and new ones are frequently acquired through processes of informed learning and sense making.

Each one of these propositions is explored and unpacked as follows:

2.2.3.1. Literacy is best understood as a set of social practices; these can be inferred from events which are mediated by written texts

Two key concepts that fall within the study of literacy as social practice, are literacy *events* and literacy *practices*.

A literacy event is any occasion in which a piece of writing is integral to the nature of the participant's interactions and interpretative processes and strategies (Heath, 1983:50). According to Heath, a literacy event includes those moments when text is being scripted or decoded in some way. Literacy events suggest that we approach such events as configurations of action, talk and text, in multiple and socially variable ways (Prinsloo and Baynham, 2008:4). Literacy events can include acts such as writing letters, reading newspapers, writing public messages on walls, labeling boxes or making use of numeracy skills. Seeing situations as literacy events, instead of focusing solely on autonomous literacy skills, dramatically broadens and humanises the perception of literacy.

In this study, I critically explore the notion of literacy event with respect to its application to a range of meaning-making activities that only "indirectly" involve the printed word. Here I suggest broadening the notion of literacy to even include other forms of meaningful codes that recognizes the idea of materiality. In effect this can be seen a posthumanist view (Pennycook 2016:1). The argument builds on the observation that haptic or sensorial practices in events of meaning making for the blind are a useful compliment to the written word. Building on the notion of functionality and what is functional for the blind I suggest that these non-logocentric modes of meaning-making can help us review the idea of literacy. This means that not only the reading and writing as traditionally seen as literacy, was explored, but also the way that the blind employs their other senses, like touch and listening, to help them to function independently. By focusing on meaningful encoding and decoding for making sense of the environment by blind adults where text is *less* central to their functional literacy, the other ways employed by the blind to make

sense of their world, are explored.

Literacy practices are social practices and it is the concepts of reading and writing that participants bring to a literacy event and that gives it meaning (Street, 1984:3). It is the more general socio-cultural framing that gives significance to particular acts, the understanding of and orientation towards literacy that people bring to a literacy event that shapes the way they use and respond to literacy on that occasion. With the study of literacy practices, enquiries can also be made about the power dynamics that underlie particular uses of reading and writing and how these are shaped by the relationships of inequality, struggle and resistance across class, language gender, ethnic, educational and other sorts of social gaps in the context of social inequality (Prinsloo and Baynham, 2008:5). The notion of practice therefore provides a good platform for enquiring into the specific context in which blind people use reading, writing and the specific power relationships experienced, as well as the strategies they use to encode, negotiate and interactionaly co-construct meanings from texts

The concept of practice in the study of literacy has both been productive and challenging. The term of practice is central to the New Literacy Studies approach to literacy, and according to Tusting, Ivanic and Wilson (2000:213), is used in two ways:

- Firstly, to refer to observable, collectable and/or documentable specific ethnographic detail of situated literacy events, involving real people, relationships, purposes, actions, places, times, circumstances, feelings, tools and resources. The term ‘practices’ in this sense often contrasts with, and hence complements the term ‘texts’, since it refers to those other aspects of literacy which go beyond the text itself.

- Secondly, it refers to culturally recognizable patterns of behaviours, which can be generalized from the observation of specifics. The term practice in this sense often includes ‘textual practices’, the culturally recognizable patterns for constructing texts.

When studying literacy as social practice, Street and Lefstein (2007:193) suggest the following dimensions and questions when examining literacy events and practices:

a. Setting: Where does the event take place? What is happening there? How is the site organised?
b. Participants: Who is involved in the event? What social and semiotic resources do they bring to the situation? What are their roles?
c. Text(s) and other objects: What texts are present as part of this activity? How are the texts identified by the different participants? What assumptions have the authors of each of the texts made about their prospective readers?
d. Actions and sequencing: What are the participants doing? Is there any particular order to these actions? How do participants know the event has started or ended?
e. Rules: What are the conventions – explicit and implicit – that govern the activity of the participants? How do we know how to read the implicit rules? Who is allowed to say and do what, and when?
f. Interpretation: How do the participants and observers make sense of the event and the texts involved in it? What are the meanings of literacy in this practice?
g. Contexts: How might we situate this event in historical and geographical context? How is it informed by previous events and practices, and by forces operating elsewhere? What relevant histories are brought to bear upon it? How have practices evolved over time? How have they moved from place to place? How do these trajectories affect the way the practice is currently experienced?
h. Pulling it all together: What does it mean to be literate in/through these practices? How does this meaning of literacy compare with official literacies promoted in policy and taught in school? To what extent are participants' models of literacy autonomous or ideological? What are the consequences of being literate or illiterate in this practice? What roles does literacy play, if any, in social differentiation and relations of power?

According to Prinsloo (2013:1), when studying literacy in community settings, the tendency is often to ask why certain people do not read and write, rather than to ask what forms of reading *do* happen (my italics). A focus on literacy in community settings on the other hand, shows that reading and writing can be taken up in different ways by different individuals and groups of people. Literacy is seen as embedded in social and cultural practices, not simply as a skill learned through formal schooling and detached from other social practices. This focus suggests that it is not helpful to think in terms of single literacy when there is remarkable diversity in the ways that people read and write for the performance of widely varying personal, social, and economic functions.

Literacy practices are closely linked with other communicative modalities; most obviously speech, but also image and gesture (Prinsloo and Baynham, 2008:3).

2.2.3.2. There are different literacies associated with different domains of life

Literacy is not the same in all contexts. Often, sets of practices are named for the particular domain of life, such as academic literacy or work-place literacy. Practices involving different symbolic systems, like film or computer, can be regarded as different literacies, called film literacy and computer literacy. In our normal day-to-day lives, there are distinct domains in which different kinds of literacies are applicable, for instance at work, home or school. These domains are structured, patterned contexts within which literacy is learned and used (Street and Lefstein, 2007:146).

A domain can also be identified as a way of being. In many cases it involves a set of cultural beliefs or a specific world view. These domains are usually site- specific, like school, but can also cross to another domain, for instance homework, which is a literacy practice from school carried out in the home domain.Although school will always be one of the first literacy domains that come to mind, the individual's literacy competence is also affected by their families, their attitudes and their social and economic circumstances. As an adult, the literacy domains of home, community and the workplace are important role players in the individual's

literacy experience. For the blind, as the observation of their literacies in their home environments suggests, the literacy practices are dependent on the use of their remaining senses.

Gee (1990:43) also locates literacy as situated practice and uses the term Discourse, with a capital 'D'. He defined Discourse as: "a socially accepted association among ways of using language, thinking, feeling, believing, valuing and acting that can be used to identify oneself as a member of a socially meaningful group or 'social network' and to signal a socially meaningful role". Each individual is an insider of a Discourse community. Each of these Discourse communities is different from one another and shares different literacy practices. In Gee's (1990:7) own words:

> When 'little d' discourse (language in use) is melded integrally with non-language 'stuff' to enact specific identities and activities, then, I say that 'big D' Discourses are involved. We are all members of a great many different Discourses, Discourses which often influence each other in positive and negative ways, and which sometimes breed with each other to create new hybrids.

According to Gee, for one to understand any word, symbol, image, or artefact (or a combination thereof) in a domain, it is important that one situates the meaning of the word, symbol, image or artefact (or combination thereof) within actual or mentally situated embodied experiences of action, interaction, or dialogue in or about the domains (Prinsloo and Baynham, 2008:14).

2.2.3.3. Literacy practices are patterned by social institutions and power relationships, and some literacies are more dominantly visible and influential than others

Dominant literacy practices are normally supported by dominant socially powerful institutions. For instance, schools for the blind will focus on braille as

the main literacy medium. These practices can be seen as part of whole discourse formations, institutionalised configurations of power and knowledge which are embedded in social relationships. Other vernacular literacies in people's day-to-day lives are less visible and less supported (Street and Lefstein, 2007:146). The larger number of research projects that focused on braille, being the perceived dominant literacy practice of blind people, versus the lack of research in the areas of the lesser visible vernacular literacies of blind people in their daily lives, is also evident of this. Braille is a good example of how text genres are power-embedded practices (Hultin and Westman, 2013:279), as this is a form of literacy practice that few outside of the blind community are obliged to master. Furthermore, when a blind person leaves the institution of school, they find that their braille literacy is not as highly valued as a resource in society at large.

New media, or technology, brings new opportunities through applications allowing citizens of a country access to various services, e.g. to pay traffic fines online, file taxes and even protest against bad service.. For a democracy, like the one in South Africa, to work, participation by its citizens is key. New media creates these opportunities, and ideally this public sphere should be open to everyone. However, appropriate conditions and equal power relations are needed to accomplish this ideal, but technology is not neutral and usually defends the hidden powers (Kist, 2000:131). The study conducted by Lemphane and Prinsloo (2013) on children's digital literacy practices in unequal South African settings, indicated that the literacy of people, in this case two social groups in South Africa and the domain of digital literacy, are shaped by local circumstances and *that it is indicative of wider social dynamics*. Thus, access to these various forms of media, are not equally spread – for example, the cost of new media for many blind people are out of reach.

Social networks and interpersonal relationships are important when acquiring literacies. People draw on social networks to help them with literacy requirements. In these networks people act as mediators, mentors, brokers,

sponsors and scribes to others. Such assistance can be enabling, or constraining, giving it a specific power dimension (Prinsloo, 2013:4).

2.2.3.4. Literacy practices are purposeful and embedded in broader social goals and cultural practices

The motivation for the use of literacy can be literacy itself but, typically, engaging with texts are more often a means to some other end (cf. discussion of Perry below 2.2.5). A study of literacy practices must keep the broader context and motivation for use in mind. People use text to meet particular needs and to pursue particular goals. A text on its own does not have a set of functions independent of the social purpose, significance and context in which it is used (Street and Lefstein 2007:147).

Apart from the fact that everyone brings the literacy practices from the culture to which they belong, people today are more and more communicating across cultures. Global communication changes, where people are connected by the Internet, means that literacy is both a cultural and global practice.

Heath's (1983) ground-breaking study of the community literacies of South- Eastern communities in the USA (cf. also Prinsloo, 2013; Chapelle, 2013). She found that although reading and writing took place in all three communities in the study, the local communities had varying histories and different rules for socially interacting and sharing knowledge and opinions. Language use (of children in the case of Heath's study) was dependent on the ways in which each community structured its family life, defined the roles that community members could assume and their concepts of childhood that guided child socialization.

Studying the everyday or vernacular literacies of people in their social settings, does not focus the attention on the literacy itself, but what it is used for to get things done. As Hamilton (2000:5) remarked:

> Everyday literacies are subservient to the goals of purposeful activities and are defined by people in terms of these activities.

In South Africa, illiteracy statistics are normally derived from school exits, and functional literacy correlates to four or five years of schooling. But as Prinsloo (in Wagner, Street and Venezky, 1999:8) points out, there is nothing functional in this measure at all, as it does not reflect the social practices that shape literacy use, nor the social conditions that ultimately give rise to different social practices. In a society like South Africa, with formal education unevenly spread, it becomes even more obvious and the social uses of literacy are very wide.

2.2.3.5. Literacy is historically situated

Literacy always has roots. It functions within a society and the lives of people that are constantly changing. Current practices are always based on ideology, culture and traditions. As Leu (in Leu, Kinzer, Coiro and Cammack, 2004: 11) points out:

> Literacy therefore, may be thought of as a moving target, continually changing its meaning depending on what society expects literate individuals to do. As societal expectations for literacy change, and as the demands on literate functions in a society change, so too must definitions of literacy change to reflect this moving target.

Literacy is influenced by family memories that go back to the beginning of the century or earlier. It is also influenced by the cultural history of literacy in the world that influences contemporary practices (Street and Lefstein 2007:147)(cf. above on global dynamics behind literacy).

Pierre Bourdieu calls the conditions that pertain to an individual's experience and in collective history, *habitus* (Prinsloo and Baynham 2008:9). This study of blind

people draws upon their specific situations, with specific possibilities and resources, as well as limitations. Bourdieu describes these, so easily forgotten, as history, as durable, transposable dispositions or embodied history internalised as second nature (Bourdieu 1991:12). *Habitus* also refers to a person's competence as a strategic player in a social field, in this case blind people in a sighted society, and how such personal resources are continually being sanctioned by relative successes and failures in social interaction (Prinsloo and Baynham, 2008:9).

The recent history of literacy in South Africa is also entwined with the legacy of *apartheid*. Under this ideology, Africans living in South Africa could enjoy political rights in their homelands, each designated for an identified tribe or ethnic group with its own language, under the apartheid myth of 'separate but equal (Lemphane and Prinsloo, 2013:2) The inequalities in the history of South Africa under the *apartheid* regime, are still visible today in South Africa with a group of more literate South Africans that had access to all the literacy resources in the past, and a group struggling to become more literate, overcoming past injustices. The focus of the government of the day to address these past injustices, and despite South Africa's constitution providing equal rights to all, brings with it a big burden on state finances, meaning that when it comes to a minority group like the blind, their specific needs are in most cases not met.

2.2.3.6. Literacy practices change and new ones are frequently acquired through processes of informal learning and sense making

The literacy practices of an individual change during his or her lifetime due to differing demands, available resources, new opportunities and interests. Learning takes place in a particular social context and part of this learning is the internalisation of social processes.

One of the funds of knowledge about literacy is the home environment. These are historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being (Moll et al,

1992:133). In their home environments, individuals learn new vernacular literacies like home economics, budgeting, childcare, sports, repair and maintenance, gardening, cooking, pet and animal care, family and local history. According to Hamilton (2000) some people even develop knowledge of legal, political, health and medical topics. Kell (1996:24) calls this the intergenerational nature of much of the literacy practices occurring in community settings. Also Auerbach's (2005) research supports this by discovering that people acquire language and literacy through a process of informal socialization through immersion in the practices and values of their particular context (cf. also above on Bourdieu and his notion of 'habitus'). In her research she moved beyond school settings to include domains such as homes, communities and religious institutions, examining the multiplicity of literacies enacted in these domains and recognizing, valuing and including local ways of knowing.

In their research on language and the use of new media resources, Lemphane and Prinsloo (2013), saw evidence of language shifting across generations. In their research, contrasting two groups of children in South Africa, the one group, the Boltons, moved towards monolingual English, while the other group, the Mahlele children, moved to a colloquial version of isiXhosa. This point to their contrasting class trajectories and their likely contrasting futures in school and beyond.

Agents who enable, support, teach, model, as well as recruit, regulate, suppress, or withhold literacy are called literacy sponsors (Brandt, 2001:556).The term literacy sponsors is a term generally used to described the figures in a person's memory of literacy learning, like parents, teachers, supervisors, influential authors, and others. Brandt (1997:3) has conducted research on ordinary American's recollection on how they learned to write and read. In the interviews, the people recalled in great deal the memories on how they learned to read and write across their lifetime, focussing particularly on the people, institutions, material and motivations involved in the process:

> The more I worked with these accounts, the more I came to realize that they were filled with references to sponsors, both explicit and latent, who appeared in formative roles at the scenes of literacy learning. Patterns of sponsorship became an illuminating site through which to track the different cultural attitudes people developed toward writing vs. reading as well as the ideological congestion faced by late-century literacy learners as their sponsors proliferated and diversified.

Today's literate individuals need to be multi-literate to function effectively. Print literacy is no longer enough. Attitudes towards information have also changed. People have become addicted to information. Readers, as the audience, have become digital users (Simsek and Simsek, 2013:127). Even at school level, traditional teaching methods needs to change and, according to Kist (2000:711), should have the following five characteristics: daily work should feature in multiple forms of representation; students have the choice of how they want to receive and present information; teachers should have meta-dialogues with their students; students should be involved in individual and collaborative activities; and, the classroom should be a place where students achieve a flow state, immersed in the activity.

2.2.4. New Literacies

In recent years there has been an interest to explore new "material' affordances of literacies. The so-called New Literacies use new screen based technologies instead of printed pages and with this provide a range of affordances for meaning negotiation that go beyond those required for print media.

New reading and writing practices have resulted from the use of computers and the Internet. The growth of the popularity of cellphone use in South Africa, where one in every two persons in the country has a cellphone (Lemphane and Prinsloo, 2013:15), means that more people have access to the Internet than ever before, meaning New Literacies and knowledge spreading. Apart from cellphones, other digitally organized communication technologies, like computers and tablets, are often linked to the Internet and use email, websites, Skype, Twitter, Facebook,

YouTube and other communication and writing resources.

As Hague and Williamson (2009:3) points out, “there are new opportunities to participate in new kinds of social activities, civic life, learning and work”. These are called 'new literacies'. These include digital literacy (Gilster, 1997), techno-literacies (Lankshear, Snyder and Green, 2000), electronic literacies (Warshauer, 1999), silicone literacies (Snyder, 2002) and multi-literacies (Cope and Kalantzis, 2000). In the *Handbook of New Literacies Research,* Coiro, Knobel, Lankshear and Leu (2008:10) note that all these terms are used to refer to phenomena we would see as falling broadly under a new literacies umbrella. Changes in technology, the media, work and the economy have led to new forms and practices of literacy (Gee, Hull and Lankshear, 1996). Commonly recognised examples of New Literacies include practices such as instant messaging, emailing, shopping online, participating in online networking spaces, creating and sharing music videos, photo shopping images and photo sharing, podcasting and video casting, participating in online discussions, processing and evaluating online information, among many other examples (Black, 2008; Coiro, 2003; Gee, 2000; Jenkins, 2006; Kist, 2007; Lankshear and Knobel, 2006; Lessig, 2005; Leu et al. 2004; Prensky, 2006).

New literacies are seen to integrate written, oral and audio-visual modalities of interactive human communication within screen-based and networked electronic systems, becoming multi-sensorial. This is in contrast to the print-based, paper-based and language-based reading and writing associated with older literacies (Prinsloo, 2005: 186).Thus, 'New literate' readers must be able to organise their reading across a range of media, flexible constructs, and typologies that break with traditional grammar orthodoxies (Kress, 2009:1).

Kress (in Gillen and Barton (2009:6) sums the current period of writing up as being affected by four factors, which, together, amount to a revolution in the world of communication:

a. Texts are becoming intensely multimodal, that is, image is ever-increasingly appearing with writing, and, in many domains of communication, displacing writing where it had previously been dominant.
b. Screens (of the digital media) are replacing pages and books as the dominant media.
c. Social structures and social relations are undergoing fundamental changes, as far as writing is concerned, predominantly in changes of authority structures, and in the effects of changing gender formations.
d. Constellations of mode and medium are being transformed. The medium of the book and the mode of writing have formed a centuries long symbiotic constellation; this being displaced by a new constellation of the medium of the screen and mode of the image. The consequences of this shift are profound.

Thus, the image has become the dominant medium in the world today (Kress, 2009:1). Visual literacy is the ability to see, to understand, and ultimately to think, create, and communicate graphically (Thibault and Walbert 2009:1).The visually literate viewer is able to gather data, place it in context, and determine whether or not it is valid.

The Internet and other new information and communication technologies (ICT's) are major new literacy forces. In their work, Leu et al. (2004:13) have pointed out ten principles of New Literacies emerging from the Internet and other ICTs:

- The Internet and other ICT's are central technologies for literacy within a global community in an information age;
- The Internet and other ICT's require new literacies to fully access their potential;
- New Literacies are deictic;
- The relationship between literacy and technology is transactional;
- New Literacies are multiple in nature;
- Critical literacies are central to the New Literacies;
- New forms of strategic knowledge are central to the New Literacies;

- Speed counts in important ways within the New Literacies; and
- Teachers or literacy sponsors are more important with a new role.

In the following section, these principles are explored:

2.2.4.1. The Internet and other ICT's are central technologies for literacy within a global community in an information age

Different literacies have emerged from different social contexts in history. For hundreds of years the printed page has shaped our literacy world but today the Internet and other new ICT's are starting to redefine what literacy means. As Warlick (2005:2) describes it:

> In the 19th century, it was said that the pen is mightier than the sword. In the 21st century, it may be said that the word processor is mightier than nations.

What is clear, to read and write are no longer enough: new skills are needed.

To provide some background to this fast paced changes in the world today, Leu and Zawilinski (2014:2), highlight the following that creates a backdrop to the times we live in:

- In 2005, over one billion people, one sixth of the world's population, were reading on the Internet. Most of this growth took place in the last five years. At this rate, nearly half of the world's population will be reading online in just five more years;
- In Japan, 98% of households have access to extremely high speed bandwidth;
- In the UK, 74% of young people between the ages of nine to nineteen have access to the Internet at home; and
- In 2004, nearly 75% of all households in the United States have access to the Internet.

2.2.4.2. The Internet and other ICT's require New Literacies to fully access their potential

New Literacies are always built on other foundational literacies, reading and writing. But it is important that the modern literate person should be able to: use a search engine effectively to locate information; evaluate the accuracy and utility of information on a webpage; use a word processor effectively, including functions like checking for spelling accuracy, inserting graphics and formatting text; participate effectively in bulletin boards or listserv discussions to get needed information, including social media platforms like Facebook and twitter; know how to use email to communicate effectively; and infer correctly the information that may be found at a hyperlink on a webpage.

Warlick (2005:1) describes what it means to be literate today as follows:

> Being literate in our digital world mirrors our traditional sense of literacy. We'll continue to access (read), process (arithmetic) and communicate information (write). But, like it or not, this information age requires skills that force the 3 R's (reading, writing and arithmetic) to evolve into the 4 E's (expose, employ, express, and ethics on the Internet).

This literacy is however not only based on the visual, the on-screen reading or typing on a key board, but is much wider. The example of blind people provides insight into how the computer literate person also employs their other senses when sitting in front of their computer. Think about the sound of your printer and the

page running through it. By hearing, you will immediately know that a page got stuck or you may run out of paper.

Leu and Zawilinski (2014:3) have studied the differences between normal reading and reading online. They concluded that reading online is quite different from normal reading. Although the two share a number of similarities, the online reading is more complex. Online reading involves new skills and strategies. They describe it as follows:

> Because information is so vast online, it requires new reading skills to locate the specific information that you require. And, because anyone may publish anything online, it also requires additional new reading skills to critically evaluate the information that you locate. We also read and synthesize information in new ways online. In fact, we actually construct the texts that we read by the links we follow in our quest. And finally, online reading always takes place while we are also composing messages, email, instant messaging, blogs, discussion boards, and much more. Thus, online reading comprehension also involves written communication.

2.2.4.3. New Literacies are deictic

The term deixis is used by linguists to define words whose meanings change rapidly as their context changes. The word, *tomorrow,* is a deictic term; the meaning of tomorrow becomes today every 24 hours. The meaning of these words change quickly and depends on the temporal context when it is uttered. To the same extent, literacy is also deictic because of the fast pace it is changing as new technologies produce New Literacies, making it important for people to be able to acquire new skills constantly to be able keep up with these changes. As explained in Alvermann, Unrau and Rudell (2013:1150):

> To have been literate yesterday, in a world defined primarily by relatively static book technologies, does not ensure that one is fully literate today where we encounter new technologies such as Google docs, Skype, iMovie, Contribute, Basecamp, Dropbox, Facebook, Google, foursquare, Chrome, educational video games, or thousands of mobile apps. To be literate tomorrow will be defined by even newer technologies that have yet to appear and even newer discourses and social practices that have yet to appear and even newer discourses and social practices that will be created to meet future needs, Thus, when we speak of New Literacies, we mean that literacy is not just new today; it becomes new every day of our lives.

Users of these new technologies often find new and creative possibilities for its use, meaning even more change that contributes to the deictic nature of New Literacies. The pace of change in the forms and functions of literacy are exacerbated by the speed with which new technologies and new envisionments are communicated – a faster pace than ever before.

An example of an everyday new literacy device used by most people, including the blind, is a cellphone. A few years ago, it was unheard of to communicate by cellphone, but today it has become second nature. With the advancement of cellphones and it becoming more complex to use, also means that people need to keep up with these advancements. The deictic nature of New Literacies means that people, including the blind, are only limited to their own ability to adapt to the New Literacies that emerge.

2.2.4.4. The relationship between literacy and technology is transactional

According to Leu (2014:2) researchers have different views on the relation between literacy and technology. He describes two examples, a transformative and transactional stance. Researchers taking a transformative stance, view

technology as transforming the nature of literacy. People find new ways of using the technology by their envisionments, meaning they imagine new possibilities for their literacy and then share these ideas with others. This happens every day on the Internet where new resources are added and people share their work with others. Each of these requires additional New Literacies for their effective use. These researchers would seek to understand the new forms of literacy that is possible within new technologies, including how multimedia, email and other technologies transform literacy and literacy learning. This kind of approach provides important insights into the many changes currently taking place in the nature of literacy and literacy learning.

However, it is not only technology that transforms the forms and functions of literacy, but literacy also transforms the forms and functions of technology. Therefore the relationship between literacy and technology is transactional. Researchers taking a transactional stance, observe that technology and literacy transact in multiple ways, mutually influencing one another. According to this view, technology transforms literacy but literacy also transforms technology as users envision new ways of using emergent technologies for literate acts.

2.2.4.5. New Literacies are multiple in nature

The singular label, literacy, fails to capture the complexity of the changes that can only be captured by a plural label, multi-literacies. Meaning is represented with multiple media forms. On the Internet, for instance, text integrates a range of symbols and multiple-media formats including icons, animated symbols, audio, video, interactive tables, virtual reality environments, etc. To demonstrate the importance of multi-literacy, the blind is a good example of how, in the absence of their visual sense, they make use of their other senses to cope with New Literacies.

Kasper (2000:105) mentions that for a person to be considered multi-literate today, it means that they acquired a battery of skills that enable them to take

advantage of the diverse modes of communication made possible by new technologies and to participate in global communities. Multi-literacy involves developed competencies in a range of functional, academic, critical and electronic skills.

Another term, multimodality, deals with meaning-making across different representational modes, including language, both written and spoken, as well as image, movement, sound, gesture, posture and facial expression. Kress (2006) explains that there is a shift from the dominance of the mode of writing and the medium of the book or page to the dominance of image and the medium of screen.

Another overlapping concept to the mentioned terms of multi-literacy and multimodality, is transliteracy. The term *transliteracy* refers to

> the ability to read, write and interact across a range of platforms, tools and media. Transliteracy is concerned with the mapping of meaning across different media and not with the development of specific literacies about various media (Houtman, 2013:2).

What is clear is literacy cannot only be viewed as text, but also the new forms of media provided by new technology. Moving on, the mere presence of these new media objects is part of literacy. It is all part of meaning-making.

2.2.4.6. Critical literacies are central to the New Literacies

New Literacies demand new forms of critical literacy and additional dependence on critical thinking and analysis as new information is encountered. People need to be critical consumers of information. New skills, strategies and insights are constantly needed to successfully exploit the rapidly changing information and media technologies continuously emerging in our world.

Critical literacy goes beyond understanding literacy as a set of skills or practices. Critical literacy is the ability to read texts in an active, reflective manner. It is a stance, mental posture, or emotional and intellectual attitude that readers, listeners

and viewers bring to bear as they interact with texts. This critical lens enables people to interpret messages in the modern word, often challenging power relations within those messages (Coffey, 2014:1). In McLauglin and De Voogd (2004) the following principles of critical literacy are identified:

- Challenging common assumptions and values;
- Exploring multiple perspectives and imagining those that are absent or silenced;
- Examining relationships, particularly those involving differences in power; and
- Reflecting on and using literacy practices to take action for social justice.

Being critically literate is not only central, but also necessary to being literate in a media-saturated, diverse world (Comber, 2001). The literate individual is someone who knows that there is more than one version available (Green. 2001).

2.2.4.7. New forms of strategic knowledge are central to the New Literacies

New technologies for networked information and communication are complex and require many new strategies for their effective use. The user needs strategic knowledge necessary to locate, evaluate and extensively use resources available within the Internet.

> As convergence develops apace, one needs to combine the skills of critical media literacy with traditional print literacy and new forms of multiple literacies to access and master the new multimedia hypertext environments (Kellner, 2000:249).

Mioduser, Nachmias and Forkosh-Baruch (2008:10), identified seven areas of strategic knowledge needed for the knowledge society. They are:

- **Multimodal information processing:** This encompasses the skills and knowledge required to understand produce and negotiate meanings in a

culture made up of words, image and sounds. The multimodality of this culture derives from the need to deal with multiple representational means and forms, the fact that is accessed from and addressed to multiple information agents, its use of multiple processing tools, within multicultural contexts;

- **Navigating the infospace:** This literacy relates to the ability to know when and why there is a need for information; how and where to find it in, and retrieve it from the vast infospace; and how to decode, evaluate, use and communicate it in both an efficient and ethical manner;
- **Interpersonal communication:** This literacy relates to the skills required for mindful, knowledgeable and ethical use of a wide range of communication means, using multiple communication channels for different purposes;
- **Visual literacy:** The ability to decode, evaluate, use or create images of various kinds using both conventional and modern media in ways that advance thinking, reasoning, decision making, communication and learning;
- **Hyperacy:** Hyperacy is the ability of a person to deal, as consumer or producer, with non-linear knowledge representations. The more profound layers comprise abilities such as envisioning a consistent epistemic structure out of various possible paths within a knowledge-web, the evaluation of the relevance of each unit to the evolving meaning, or the ability to move back and forth from the link level to the whole knowledge- structure level;
- **Personal information management:** This relates to the process by which an individual stores his or her information items in order to retrieve them later on; and
- **Coping with complexity:** The skills and methods required to perceive phenomena as complex, to study and understand these phenomena and to implement the gained understanding for coping with them.

2.2.4.8. Speed counts in important ways within the New Literacies

The vast information resources on the Internet mean that a person's ability to read, write and communicate at a high rate comes into play. This is a very important issue in this study, because the speed that a blind person traditionally reads and writes is slower than that of a normal seeing literate person. Within the New Literacies of the Internet slow readers and writers are challenged even more and might mean that these individuals might be left behind. The gap between highly literate and literacy challenged individuals will be exacerbated by the New Literacies of the Internet.

2.2.4.9. Learning often is socially constructed within New Literacies

Social learning plays an important role in the exchange of new skills and strategies needed to interact within increasingly complex and continually changing technologies for information and communication. This means that in the world of the Internet and other ICT's, young people may have higher knowledge about some New Literacies than most adults. Young people learn from each other in social environments, meaning that literacy learning is becoming increasingly dependent on social learning strategies. Socially skilled learners will be advantaged because the new technologies of literacy allow us to take advantage of the intellectual capital that resided in others.

2.2.4.10. Teachers or literacy sponsors are more important with a new role

The appearance of the Internet and other ICT's will continue to increase. The role of the teacher or literacy sponsor is also changing in that they should be aware of the emerging technologies for information and communication, capable of identifying the most important New Literacies that each requires, and proficient in knowing how to support their development. It is becoming a network where the sponsor of literacy can also learn from the person being sponsored and from other sponsors who possesses more knowledge than they do.

Coffey (2014:2) with the focus on critical literacy, explained the different role that teachers have today. In the past, the teacher stood in front of the class, transmitting the knowledge to students who sit idly learning or receiving the information. Freire (1970) called this the banking concept of education: the teacher turns students into containers to be filled by the teacher. Knowledge, according to this concept, is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing. But today, it is necessary for teachers to recognise the value of developing critical literacy. The student is no longer seen as a vessel to be filled but instead, the teacher creates experiences that offer students opportunities to actively construct knowledge.

As Leu and Zawilinski (2014:14) put it to teachers in new literacy classrooms:

> New literacies provide new opportunities. We need to take advantage of these opportunities to bring marginalized students to the centre of our New Literacies classrooms. Often, students get to go on the Internet when they finish their work. This helps the rich to become richer and the poor to become poorer. Instead, whenever you bring a new technology tool with New Literacies into the classroom, you should follow an important principle: Introduce New Literacies, first, to your weaker readers and writers. This privileges the weaker student, since he or she is now literate in this new literacy while others are not. The strategy places previously marginalized students into an important classroom position and allow them to regain the excitement about learning that sometimes starts slipping away because of challenges they face with foundational reading and writing tasks. It is a powerful strategy, a special one that the New Literacies of the Internet and other ICTs provide.

Special attention should be given to the use of 'New Literacies' to support people with special needs, like the blind. As Leu et al. (2004:26) states:

> It is quite possible that the gap between proficient readers and less- proficient readers will increase within the world of rich, complexly structured information networks as the effects of differences in reading rate and accuracy become magnified. If we do not wish to leave a single child behind, we must focus on the issue of how best to support students with special needs with the powerful new technologies that are available to us.

New Literacies also provide new possibilities to blind people and might even help them more, than rather creating a gap between those who can see and those who cannot. According to Aviv (2010:3) the use of technology can help to increase the use of braille, although the high costs might hamper access to it. Other researchers (Willis 1994b:11) feel that the dawning of the new literacy age also could mean that the evolving computer technology could expand the oral-aural literacy practices of the blind.

In the previous sections I focused on literacy as being socially embedded and within the theoretical parameters of the social practice approach. I explored how visual the understanding of literacy is. I then moved on to New Literacies and the impact it has on the understanding and practice of literacy. In the next section I will be moving on from this mutli-modal, multi sensorial world of the New Literacies to include a third part of the conceptual framing of the concept of literacy, Semiotic Landscapes and the role of objects in place – a poshumanist perception.

2.2.5. Semiotic Landscapes

As discussed earlier in this chapter, new literacy studies sees literacy as a social practice (Street, 1995; Barton and Hamilton, 1998; Gee, 1990) and that these practices can be observed in specific events, therefore making it contextually embedded and situationally variable. In this framework, the emphasis falls on how people apply their literacy in a specific context for a specific purpose (Barton, 1994:24). The study of literacy as a situated practice, is closely linked to other communicative modalities, including oral, written and visual, with a purpose always lying outside itself and is contextualised. (Prinsloo and

Baynham, 2008:3; Department of International Development, 1999:16). Thus, an important insight of a Social Literacies approach is that a written text or artefact is one manifestation of a chain of interactional and linguistic events – verbal messages are noted down, dictation may be taken, texts are read in interactive contexts for particular purposes, and may be transposed into other forms of multimodal representations (such as pictures, cartoons, signs in public space, audio recordings). One such resemiotization can also be how place, or objects in place are organized, as when the drawings of an urban planner are transposed into streets and buildings, or when a set of by-laws lead to the removal of illegally parked vehicles.

Since 1997, a field of sociolinguistic research has emerged and gained increasing momentum that focuses on the public display of language, namely the field of Linguistic Landscapes (LL) defined by Landry and Bourhis (1997:25) as:

> The language of public road signs, advertising billboards, street names, place names, commercial shop signs, and public signs on government buildings that combines to form the linguistic landscape of a given territory, region, or urban agglomeration.

A slew of studies emerged out of this initial conceptualization (Backhaus, 2005; Huebner, 2006; Cenoz and Gorter 2006; Rafael and Shohamy, 2006) in the ensuing years. However, since Landry and Bourhis broke the ground, other sociolinguistics studies followed that focussed on different areas of the linguistic landscape. The early focus on the linguistic and orthographic features of public signage as intentionally produced visual artifacts, has given way to a broader, more differentiated, and increasingly inter- and multidisciplinary field. One such development was a more comprehensive, broadened scope attending to the multimodality, materiality, emplacement and interaction order of displayed texts in public spaces (e.g. Stroud and Mphendukana, 2009).

The development of the field can in part be seen as a consequence of an ever- widening range of visual artifacts/inscriptions, and the modalities and materialities, studied (besides public signage in the form of signs and billboards, tombstones, rubbish/litter, TV boards, tattooes, graffiti, T-shirts, cups, internet chats, websites, phone texting, memorials,

as well as mobile signs on vehicles or subways). There has also been a movement away from a narrow focus on place names and commercial signs in dense urban settings to a wider array of genres (street signs, ecological signs, 'reading nature') in peripheral spaces. Attention to this wider field has necessitated a broadening of scope to signs in context and place, as well as to how people 'read' or use signs – not always in ways that the sign maker may have intended (Malinowski, 2009).

The extension of Linguistic Landscape studies beyond a narrow focus on the linguistic, orthographic, that is *visual*, has meant that a variety of other forms of semiosis, (e.g. Gorter, 2005; Shohamy and Waksman, 2009; Jaworski and Thurlow, 2010); such as the inscribed (e.g. tattooed) or represented body (Peck and Stroud, 2015); olfactory landscapes; oral language landscapes (Itagi and Singh, 2002); and sexed landscapes (Milani, 2014**)** have come into the spotlight. Recent developments of the field have taken a deliberate multi-sensorial approach, exploring the totality of different forms of semiosis and their interaction (e.g. signs in place with bodies enacting the sign, e.g. Stroud and Jegels) and to the dynamic interactions across semiosis (e.g. the notion of resemiotization, Stroud and Mpendukana, 2009).

However, importantly, contemporary approaches to LL show a burgeoning concern with the 'sign' as one dimension in a changing and quotidian complex production of Self in and of place/space. Linguistic approaches to inscriptions in place, divorced of spatial-temporal context, now sit side by side with approaches that see LL as part of an (interdisciplinary) endeavour to chart the ways in which the mobility of different forms of semiosis (sound, touch, language, smell) dynamically and inter-discursively link bodies, selves and memories across timesand places, as well as into and with time and place (cf. Stroud and Mpendukana, 2009, 2010; Stroud and Jegels, 2014). These various approaches all reflect in different ways the increasing attention in the field to the ways in which bodies/selves and places are interpellated in and through Semiotic Landscapes. One question, then, is in what ways do linguistic landscapes provide the discourses and important reference points whereby people make sense of local places (Leeman and Modan, 2009) and make sense of themselves in place?

It is here, in the multisensorial, transcontextual and interdependent ecology of signs, objects and the human, that we can begin to envisage a different framing of literacy to the

conventional.

Appadurai (1996) identified various scapes, including ethnoscapes, mediascapes, technoscapes, financescapes and ideoscapes. Building on this and his introduction of the term linguascapes (2003), Pennycook introduced the notion of the smellscape (2015), based on research that focusses on the interpellative and associational roles of smells in alternative semiotics of time and space.

Research mainly focusses on the visual and the sense of hearing, whereas the senses of touch, smell and tasting are not as prominent, as Pennycook (2015: 192) describes:

> The mind/body division in European though divided up the senses, so that the eyes and ears were invited to accompany the mind, while mouth, nose and skin were assigned to the body. One of the legacies of the European Enlightenment was therefore an idealization of the senses deemed to be involved with language and thought (sight and sound) and a relegation of the lesser senses that involved the body (touch, taste and smell).

Pennycook and Otsuji (2015:199) remark that it is common in linguistic studies to emphasis multimodality, referring often to a relation between textual and non- textual semiosis. It is however less common for studies that focus on the multi- sensorial:

> Clearly, if we wish to incorporate those other senses that have been overlooked in the European male sensorium – taste, touch and smell – we need to approach semiotic landscapes with a focus on multimodality but also a more embodied engagement with multi- sensoriality.

In summary, thus far I explored literacy from the vantage point of three conceptual frameworks namely, the Social Literacies approach, that of New Literacies and that of Semiotic Landscapes. The approaches are not mutually exclusive but are combined to provide a holistic, posthumanist view of literacy. Seeing that this study involves the everyday literacies of the visually impaired and how it manifests in their lives, brief

attention will next be provided to the concept of functional literacy.

2.2.6. Functional literacies

An important aspect of literacy for the blind is how to function in everyday life – functional literacy. Functional literacy is a range of skills and competencies – cognitive, affective, and behavioural, which enable individuals to: live and work like any other person; develop their potential; make critical and informed decisions; and, function effectively in society within the context of their environment and that of the wider community in order to improve the quality of their lives and that of society (LCC, 2012:2).

The term everyday literacy practices refer to tasks of varying difficulty associated with a range of adult roles and contexts. Therefore these tasks may range widely in content and nature (NAAL, 2012:1). Literacy is an everyday event and practice, and its practices are performed by everyone. It considers the functional literacy of the individual, in other words, the literacy that an individual needs to fulfil every function (Read Taber, 1987:458). Goodman (1985:9) sums it up by asserting that some of the mundane functions of literacy are the most important.

Other labels given to the term functional literacy are survival literacy or reductionist literacy. Functional literacy is an attempt to link literacy to purpose.

Functional literacy is increasingly defined by economic considerations, as literacy has become identified with the skills needed in the context of employment and economic development (Papen, 2005:9).

Three levels of functioning are distinguished (Schneider in Watermeyer et al 2006:10): the body, the person and the societal level.

The body refers to the physical level, in other words, in this case, the eyes of the person. The personal level of functioning refers to the undertaking or executing activities for daily living and the societal level takes the impact of the person's environment also into account. In the field of blind literacy, a very simple example might be a person that is totally blind (physical), has learnt braille (personal) and is employed (societal).

When dealing with the functional literacy of blind people, the ability to gain access to print independently when information is not in one's preferred medium is very important (Koenig, 1996:58). The focus shifts from school-based literacy to the real-world practical application of reading and writing.

The two characteristics of functional literacy that are very important in studyon the literacy of blind people are how the blind successfully accomplish tasks that otherwise require reading and writing in the absence of 'visual literacy'; and the use of skills or tools to independently gain access to regular print when literacy tasks require communication with others in this medium (Koenig, 1996:281).

Through his research, Koenig (1992) provides a framework for the understanding of the literacy of individuals with visual impairments. He states that literacy is demonstrated when an individual is successful in communicating with a desired audience through the completion of meaningful tasks that require reading and writing. He showed that literacy is demonstrated at different levels throughout the life of an individual, and that an individual with visual impairment must go beyond the basic level of literacy to gain access to materials in regular print, independently..

A social practices approach has critiqued the notion of 'functional literacy'. The conceptual turn of the social practices approach sees literacy not as an issue of measurement of skills. This critique of studies that measured functional literacy as a level of academic literacy of reading, writing and numeracy, steers the focus of functional literacy to a view of literacy as a social practice that differs from one context to another (Street in Baynham and Prinsloo 2009:21). Literacy is not an autonomous skill, but literacy practices are rooted in the social, cultural and political contexts. Attempts of defining functional literacy are, according to those that follow the social practices approach, too limited in scope and intention. Lankshear (1993:91) criticizes current definitions of functional literacy within the Third World as being overly utilitarian. The social practices approach to literacy challenges the simplistic, narrow vocationally-focused view of functional literacy as a measurable commodity that dominates most studies. The social practices approach cast a much wider net over the concept of functional literacy.

However, Perry (2012:55), in her critique of a social practices approach offers a perspective on literacy relevant to a broader notion of 'functional literacy'. First of all, Perry (2012:57) describes the different aspects of knowledge needed in order to engage in literacy practices in a model (see figure 2.1). According to this model, three types of knowledge are needed to engage in literacy practices:

- Lexico-syntactic and graphophonic knowledge: This consists of knowledge of vocabulary, syntax, and how print is encoded and decode in a given language;
- Written genre knowledge: This knowledge includes knowledge of the textual features, uses, purposes for use and organisation of given genres; and
- Cultural knowledge: This includes beliefs, values and expectations.

The usefulness of viewing literacy as a social practice can be clearly seen from this model (Figure 2.1) where the different areas of knowledge are interlinked and interdependant for a person to effectively engage in a literacy practice.

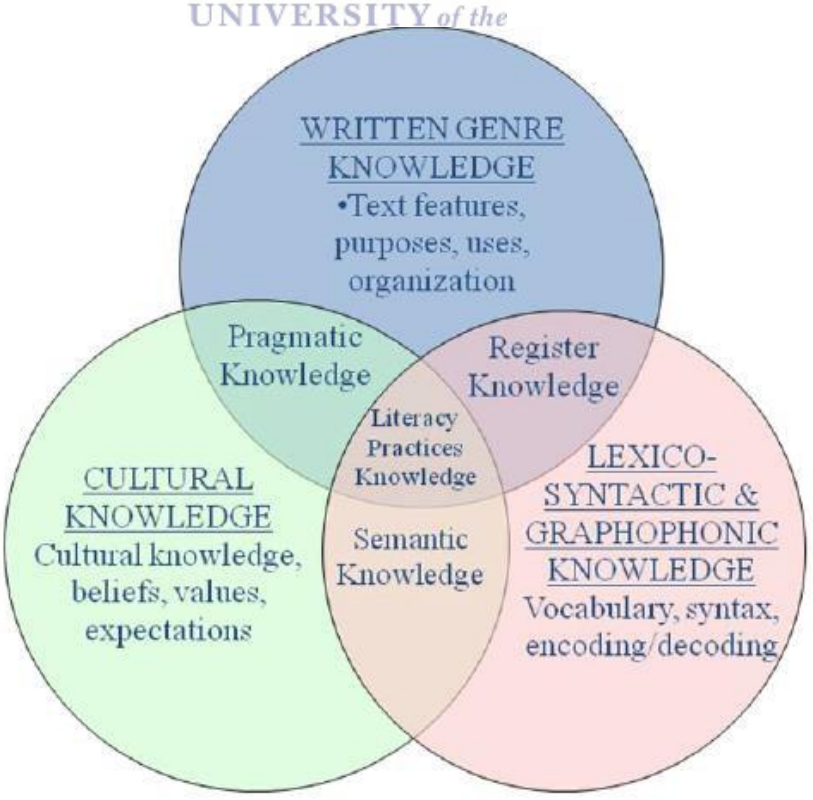


Figure 2.1: Aspects of knowledge needed in order to engage in literacy practices

Secondly, and more importantly, she offers a critique of the Social Literacies approach suggesting that the connection between literacy events and literacy practices are vague. She offers the following model (Figure 2.2.) to usefully represent the theoretical relationship between literacy events and literacy practices from the perspective of a broader notion of functional literacy.

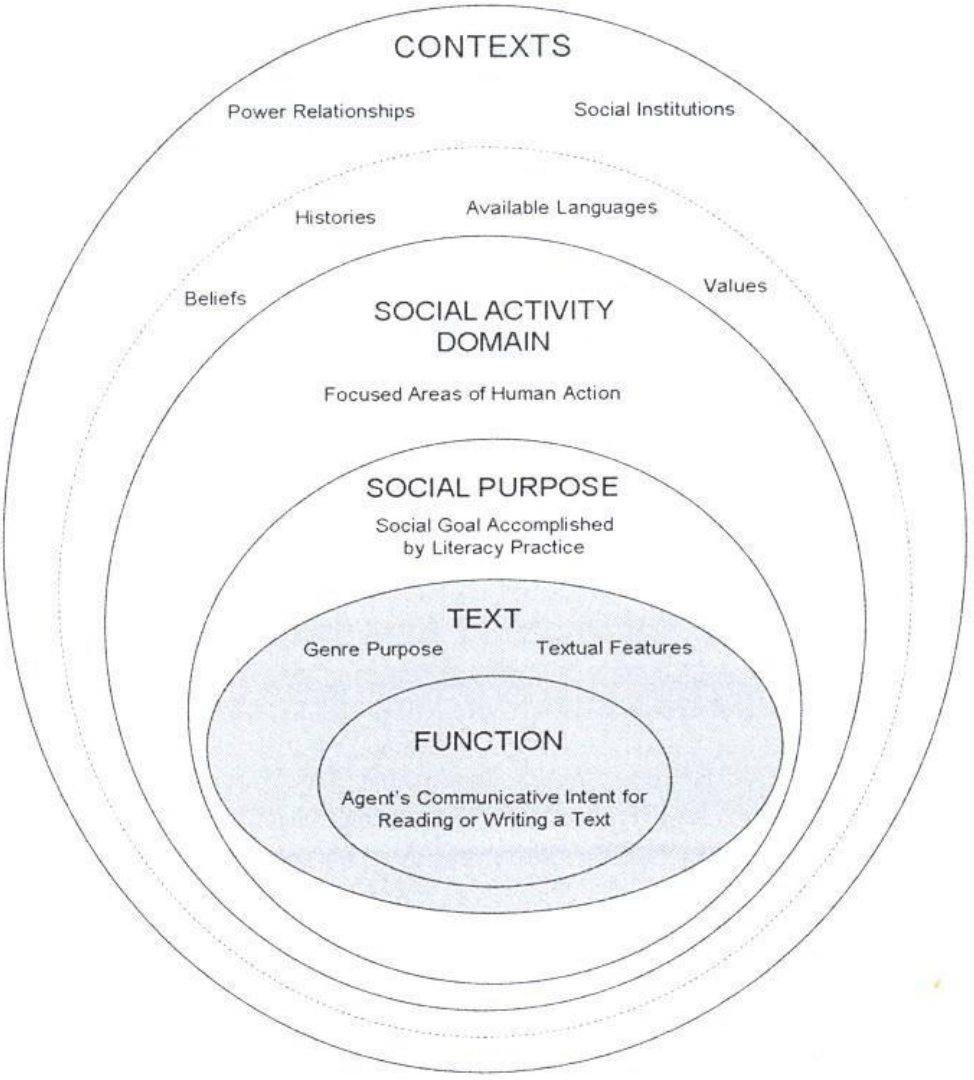


Figure 2.2: Model of a literacy practice

The model starts at the central, shaded area. For instance, a blind person who reads a braille book on guide dogs: He has an intent (FUNCTION) to read it, to find out on how to take care of his or her guide dog because he or she would like to get one. He or she then moves on to the text itself (TEXT) printed in the braille

book. This mediates the person's purpose for engaging in the event, to find out how to take care of his or her guide dog and to ultimately get one. The social purpose of this event (SOCIAL PURPOSE) in this case might be to accomplish better independent mobility by getting a guide dog. This falls into a larger domain of social activity (SOCIAL ACTIVITY DOMAIN); travelling, for instance. This is in turn shaped by other contextual layers (CONTEXT) for instance, the person values his or her independence and is staying alone in a flat. Power relations and social institutions are also integral to this context: the blind person lives in a society which doesn't cater for his or her specific independency needs, making him or her dependant on the help of others. The Guide Dog Association will also play a role by giving him or her a dog, or not.

This model goes a long way in illustrating the broader context in which a literacy event take place, not necessarily explaining the process of how a person reads and writes, but suggesting in which ways literacy is part of a larger transmodal and transcontextual series of goal directed practices and processes. Literacy practices are purposed and resemiotized. Clearly, for the purpose of getting a guide dog, a number of interlinked codifications/genres are necessary for the message to pass. This suggests the idea of a literacy event where print is central is but one aspect of this semiotic chain.

2.3. Conclusion

The ability to read and write, literacy, means access to information. This, in turn, leads to understanding and knowledge. And knowledge is power – the power to achieve, to function at home, to thrive in the community, to be successful in the labour market and to contribute to society.

In the sections above, I have explored three relevant dimensions of the framing of literacy – social literacies, New Literacies and Semiotic Landscapes.

This framing of literacy is moving towards an understandding of literacy that includes the role of material artefacts of literacy, a posthumanist understanding of

literacy. I also touched on the notion of 'functional literacy', and suggested that keeping a notion of functional literacy in focus and picking up on the transcontextual and transliterate aspects of getting on 'semiotically' on an everyday basis ought to be in focus in studies of blind literacy.

Chapter 3

Research methodology

3.1. Introduction

In this chapter it is explained how the research was conducted. The aim of the study, an exploration of how blind adults understand literacy, how it is functionally embedded in their daily lives and how this informs more appropriate forms of remedial literacies, was to answer the following five questions:

a. What does being literate mean to blind people?
b. How do blind individuals cope in their everyday lives without the ability to access visual messages? How to understand this semiotically?
c. What role do New Literacies play in the lives of the blind?
d. What implications do the literacy experience of blind individuals have on the general understanding of literacy?
e. What remedial literacy processes does this research suggest – if any?

Guided by the observations made in the research, the aim of the research was to demonstrate how the blind and their lack of one their sensory modalities employ their other senses and how this necessitates the revisiting of models of understanding of literacy that has the visual at the centre of literacy events. The remedial role that New Literacies play in the lives of blind adults was explored to allow blind adults to employ their other senses to be functionally independent. Thus, light can shine on our understanding how Semiotic Landscapes function how the blind contribute to our knowledge of how Semiotic Landscapes function.

The researcher acquired some insight from the research methodology employed by scholars investigating the idea of literacy as a social phenomenon. Barton and Hamilton (1998), Heath (1983) and Scribner and Cole (1981) made use of an ethnographic methodology. Heath (1983:93) studied literacy in a community in North Carolina and made the following remark about this:

> Characteristics of the structures and uses of literacy events vary from situation to situation. In addition to having an appropriate structure, a literacy event has certain interactional rules and demands particular interpretive competencies on the part of participants. Some aspects of reading and/or writing are required by at least one party, and certain types of speech events are appropriate within certain literacy events. Speech events may describe, repeat, reinforce, expand, frame, or contradict written material, and participants must learn whether the oral or written mode takes precedence in literacy events.

This remark by Heath is important when conducting this study regarding the social literacy practices of blind adults, because, due to the limitations blind people experience with regard to reading and writing, speech or oral events, and the employment of the other remaining senses of touch and smell, are essential complementary modalities in the exercise of literacy. The fact that text is often inaccessible to the blind means that other modalities of engagement or orientation play an important role. Given the perspective on literacy I discussed in the previous chapter as multimodal, multisensorial, etc. the focus falls on how do the visually impaired accomplish everyday tasks in the absence of written texts, instructions, etc. and can if we can see this as a form of literacy. Moving away from reading and writing as being central, to these functional literacies expands on what is traditionally seen as ways of engaging with literacy, to include the employment of other senses. Given that literacy events for the sighted means to be able to read and write, in this study, the focus falls on the blind and what literacy means to them and how a literacy event will look like for them in an everyday home context. To a blind person, to be functionally literate, means

that they can be independent and that means power. However, the ways in which these alternative or complementary modalities function merit more research.

Heath concludes that the shapes of literacy events differ from one specific context to another; the shapes are ever-shifting, embracing a protean interplay between oral and written languages. Heath's (1983) ethnographic study of language patterns and effects within the community, prompted other research to also push for the socio-cultural approach for literacy studies, as well as ethnographic strategies in literacy research that could explore the diversity of beliefs and motivations for literacy in people's everyday lives. Similarly, Gee (in Barton, Hamilton and Ivanic, 2000:181) expressed that reading and writing can only be understood in the context of the social, cultural, political, economic and historical practices to which they belong.

The use of the social setting with analysis using the Social Literacy Studies approach, links literacy to social and cultural practices and has become a popular approach in literacy research (Barton and Hamilton, 1998; Brandt, 2001b; Gee et al., 1996; Street, 1995). Rather than viewing literacy as a set of skills and competencies, the Social Literacy Studies describes literacy as an integral part of social events and practices, which are shaped by social, cultural historical and material contexts. This is also why the research of the literacy of the blind is best undertaken when focusing on blindness as a social issue. Very few studies, like the one of McKinley (2006), have been conducted that focus on how literacy is functionally embedded in the daily lives of blind adults. Many research projects have failed to incorporate the social context of literacy for the blind involving multi-sensory modes of making sense of the everyday as a way of understanding literacy.

One of the key areas focused on in this study is the model provided by Perry (Figure 2.2) on the broader understanding of the notion of functional literacy, by offering insight into the theoretical relationship between literacy events and literacy practices.

The areas covered in this chapter begin with the research design, focussing on the

different phases of data collection used in this research. A discussion of the validity, reliability and credibility of the research is provided, the process followed to analyse the data gathered and the presentation of it is explained. The chapter ends with a description of ethical considerations made with this study.

3.2. Research design

This research employed qualitative methods of data gathering. In the first phase of the study, explorative questionnaires were sent out to blind adults to inform the study on general literacy related information and themes for further investigation. Building on this information, the next phase of enquiry employed narrative methodology to explore the life histories of each of the participants.

This research phase aimed to answer the first research sub-question a, *What does being literate mean to blind people?*. Referring to the theory in chapter two, an account is provided on what literacy means to blind people, demonstrating that literacy is a life event that conjured up many emotions.

To answer sub-questions b, *How do blind individuals cope in their everyday lives without the ability to access visual messages?,* and c, *What role do New Literacies play in the lives of the blind?,* observations and open-ended interviews were employed, again making use of narrative methodology. A day was spent with each of the participants in the study to determine how blind individuals cope without the ability to access visual messages. The literacy landscape of the blind participants is described and the specific objects and codes to remediate their literacy explored.

During the observations and open-ended interviews phase as described above, the researcher collected examples that account for the use of New Literacies employed by blind people in their daily lives to mediate for the shortcoming of not being able to access the visual. New Literacies can provide for an accessible, remediating format for blind people.

The final two sub-questions, d, *What implications do the literacy experience of blind individuals have on the general understanding of literacy?* and e, *What remedial literacy processes does this research suggest – if any?*, are covered in the final chapter of this thesis.

3.2.1.1. Sampling

Questionnaires used during the first phase of the study were sent out electronically to blind people on the database of Blind SA. This research method was used because of the ease of administering it but also because many blind people have access to the internet via means of speech recognition software and braille printers.

Respondents in the second qualitative strand of the study are all adults residing in Cape Town, South Africa. The researcher is affiliated to Blind SA's Cape Peninsula branch. This body was established to support blind and partially sighted people and its activities are mainly focussed on mobility, training, job search and advocacy. This group also plays a role where these people can support each other. The respondents were also all involved in the questionnaire phase of the study, giving the researcher the opportunity to explore some of the themes identified in the previous phase in more detail by providing a narrative of their own life experiences, supported by observations made by die researcher and open-ended questions to explore certain themes in more depth.

3.2.1.2. Questionnaires

The aim of using questionnaires was to explore the subject of blind literacy in South Africa. Because of the limited amount of data that was available, the researcher had to get some background information to orientate towards what should be observed during the qualitative phase.

The questionnaires were kept very short and simple, without scales, tick boxes or other means of measurement. They were kept to plain text as far as possible for easier access by the blind, especially for those with speech software on their computers.

Areas covered in the questionnaires started off with biographical information, including name, age, gender and race. Basic biographical information is important to see if there are specific themes that arise when comparing questionnaire results. The participant's methods of communication, including braille and screen reading software, were also explored to give insight into the participant's primary and secondary means of communication, for instance using braille as a private note taking medium and his or her computer to communicate with a wider audience and at work. A question was also included on the occupational status of the participant to compare the results of other studies that showed a positive correlation between braille literacy and employment status.

The shorter questions were followed by a longer, more open ended question, seeking information on the individual's literacy in his or her own words to determine his or her understanding of what literacy is and how it manifests in his or her life:

> In as much detail as possible, tell me your life story. Include aspects like: Where did you learn to read and write? When and where do you make use of your reading and writing skills?; Are you helped by anybody to perform reading and writing tasks?; Which literacy (reading and writing) tasks can you do with ease and which pose a problem?; How would you define literacy? Feel free, if you prefer to discuss your feedback with family, friends or colleagues. There are no correct or wrong answers – feel free to write as much as you want and don't worry about spelling etc. I simply want to get to know you and to get insight into your daily literacy practices.

A total number of 20 responses were received. Results of this phase of the study informed the next phase of the study.

3.2.1.3. Observations and open interviews: a narrative approach

Narrative research is a form of qualitative research that involves the gathering of narratives, which can be written, oral or visual, and focuses on the meanings that people ascribe to their experiences. It provides insight that befits the complexity of human lives (Josselson, 2006:4). Narrative research typically focuses on the lives of individuals as told through their own stories because as human beings we come to understand and give meaning to our lives through stories (Andrews, Squire and Tambokou, 2008:3). A narrative method accepts the idea that knowledge can be held in stories that can be relayed, stored, and retrieved.

Narrative methods can be considered appropriate when real life problems are investigated. In a basic linear approach, they encompass the study of the experiences of a single individual embracing stories of the life and exploring the learned significance of those individual experiences. However, in most cases one will be creating an aggregate of narratives each bearing on the others.

The narrative approach captures the emotion of the moment described, rendering the event active rather than passive, infused with the latent meaning being communicated by the teller. Two concepts are thus tied to narrative storytelling: memory and notions of time, both as time as found in the past and time as re-lived in the present. It is often retrospectively that we come to understand and give meaning to events (Polkinghorne, 1995:2).

From the respondents in the questionnaire phase, ten were selected to participate in this phase of the study. The selection of these participants was purposeful: all residing in the Western Cape of South Africa, all adults, six men and four women, coloured, white and black. This was done to allow different perspectives to emerge. The observation and open interview phase was done in each of the participant's natural home environments, mainly based on narrative methods.

The researcher, guided by the dimensions suggested by Street and Lefstein (2007:193), made individual appointments with each of the participants. The researcher spent a day with each of the participants to observe literacy practices, to get a feel for the ecology they live in and to ask questions. All narrative and observations were supported by video recording.

Retrospectively, when the researcher started with the observation, certain themes became apparent because of it being mentioned by participants, e.g. the practical literacies used at home for instance to cook, clean, buy groceries, transport, correspondence and safety in the home environment. The researcher became more sensitive towards these themes and focussed observations on these functional literacy experiences of the blind participants and to answer the research questions of the study.

3.2.2. Validity, reliability and credibility

3.2.2.1. Validity

Internal validity is achieved when the findings of the researcher match reality. To achieve this, the questionnaire phase was conducted with the use of the largest database of blind people in South Africa. The use of the electronic medium to disseminate the questionnaires is motivated by the fact that email communication is an affordable and quick way to reach as many participants as possible. Whether participants were braille literate or not, did not influence the findings because the recipients of the email could use either method to read it, either braille or speech. Questionnaires were sent out in MS Word format, because this format is the easiest accessible format for blind people, while PDFs tend to pose problems when converted back to Word for the speech programmes to work.

In the qualitative phase internal validity has to do with the descriptions and explanations of how other humans understand reality. The researcher gave an honest account of how the subject group in this study, blind adults, view themselves and their experiences. Triangulation assisted in this because data was collected during observations, by listening to their stories (narrative), by exploring deeper by asking questions, and by video recording all interactions. The researcher also continuously consulted participants to verify if his observations were correct.

External validity is concerned with how generalisable the results of the study are; in other words to what extent the findings of the study can be applied to other situations. In this research, the researcher has gone to great lengths to provide a broad description of information in the specific context to allow the reader to make judgements as to whether these results could be applied to other situations. The context of this study is a very specific focus on blind adults in South Africa. A researcher would be able to make generalisations about the findings when comparing them to similar research amongst blind people in other parts of the world – the on-going debate of the necessity of braille in blind literacy, for example, has come up in this research as well as in other international studies. This also concerns research sub-questions *d* and *e* around the implication of the results for the understanding of literacy in general.

Having said this, however, I would also make the point that generalizability is most likely to be found at the level of the theoretical framework and concepts that emerge from the analysis of the particular, but that would serve as an explanatory lens with which to approach other contexts and situations.

3.2.2.2. Reliability

Reliability refers to the extent to which one's findings can be replicated by using the same techniques (Babbie, 1989:123). In this study, the researcher has taken a number of steps to ensure reliability. Questions asked in the first phase of questionnaires, were simple and allowed the respondents to answer in their own words, true to their own experiences. The open ended question on their literacy

experience is an example of this, because the concept of 'literacy' is not a concept that is easily understood by everyone, and is often seen as just reading and writing. This is also why the researcher had a second opportunity by giving the participants an opportunity to express themselves in narrative and observing the real-life experiences of the blind. The video recordings of each interaction give a good account on the techniques used. The researcher's own credibility was strengthened by having regular interaction with his study promoter, for guidance and reinforcement.

3.2.2.3. Credibility

According to Lincoln and Guba (1985), ensuring credibility is one of most important factors in establishing trustworthiness and made provisions that may be used by researchers to promote confidence in the accuracy of the recording of the phenomena under scrutiny. These provisions were applied to ensure credibility.

In this research project the researcher started off the study by making contact with the organisation Blind SA to get a feeling for the world of the blind adults and to investigate their willingness to participate in this study. The researcher also made use of established research methods that was also successfully used in other, similar research, specifically the work of McKinly (2006) in her study of blind adults in San Francisco. The researcher employed triangulation by using different methods, especially narratives, observation and individual interviews, which were video recorded. But as Van Maanen (1983:37) urges, the researcher was continuously aware to exploit opportunities to check bits of information across informants, including New Literacies to answer the study's sub-questions *b* and *c*.

The joining of Blind SA, as well as the researcher being visually disabled himself, created a rapport of honesty with respondents. Respondents in no way felt threatened to open up about issues related to the research to a co-member. The relationship between the researcher and the respondents has developed to such a point that the respondents also gave guidance to the researcher on issues that might have a specific relevance to the study. Guidance was also provided by regular contact between the researcher and the study supervisor.

However, there is another sense of 'credibility' that is perhaps even more important for a predominantly qualitative study of this type, and that is the credibility of the research *findings and interpretation*. In this sense, I would claim that my findings are compatible with the theoretical frameworks I am using. The fact that the findings have been triangulated from different data types (narrative, questionnaires, observations and autobiographical insight) that cohere around the analysis of findings also supports the credibility of the conclusions drawn from the analysis.

3.2.3. Method of data analysis

3.2.3.1. Descriptive analysis of questionnaire phase

All the data accumulated from the 20 questionnaire responses was entered into a spread sheet. This allowed the researcher to provide easy feedback on the findings. Open-ended responses were also entered here. Apart from the general view this provided on the subject of the blind in South Africa and their literacy practices, it also informed the next phase of the study, giving the researcher cues on themes that are common.

3.2.3.2. Qualitative content analysis of descriptive data in second phase of enquiry

Qualitative data was obtained from the video recorded narratives and observations in the home environments of each of the participants. The researcher made use of the technique of qualitative content analyse for analysing this collection of data.

Content analysis in general is described by Grbich (2007:112) as a systematic coding and categorising approach for exploring large amounts of textual information in order to ascertain the trends and patterns of words used, their frequency, their relationships and the structures and discourse of communication. This was applied to the narratives of each of the participants to identify all the themes, and in the observations made during the home visits to each of the participants. Berg

(2007:304) describes content analysis as a coding operation and data interpretation process. It also includes interpretations of latent content, making it a tool for qualitative analysis of a variety of data and to various depths of interpretation (Graneheid and Laundman 2004:105). The visible, obvious aspects of the text are referred to as *manifest content* and the underlying meaning of the text is referred to as the *latent content*. Apart from the content of the narratives, the researcher could also get a sense of the emotional value, the intrinsic value, of the literacy of participants.

After the interviews of each of the participants, the researcher sat down and reflected on paper a sense of the whole person, including aspects of their circumstances and their histories. The data was then placed into units as reported on in chapters four and five. These units of information, under the specific themes, helped the researcher to answer the specific research questions.

3.2.4. Methods of presentation of findings

Apart from the doctoral thesis that will be available for all other researchers to consult and to guide future research activities, the researcher already made a contribution on the subject of the braille code in an academic publication of the University of the Western Cape called *Society and communication*, aimed at first year students. The researcher was also approached to play an advocacy role in the activities of Blind SA. It is the wish of the researcher to give the regular, sighted public an insight into the world of the blind and the changing face of literacy in this community. The role of this thesis and findings in sensitizing people to the lengths that blind people have to go in order to be literate, functional participants in society, is of the utmost importance. The more exposure this subject can get, the better society will understand their role as sponsors of literacy of blind people.

Findings in this research thesis are reported on to answer the five research sub-questions. Apart from creating a deeper understanding of the world of the blind, these results can also have implications for the general understanding of literacy in theory.

3.2.5. Ethical considerations

Special care was taken to ensure that this research is founded on sound ethical principles. When observing and listening to blind participants, with the ever- present emotional layers, care was taken to give a true and correct relay of the literacy of this vulnerable group of people. In his research, the researcher considered the following important ethical agreements that prevail in social research (Babbie, 1989:472):

3.2.5.1 Voluntary participation

Participants were made aware that their participation is voluntary. In an introductory paragraph to the questionnaire, the researcher explained the purpose of the study, his involvement and that the person has a choice to participate or not. At the end, the participants were people who had a common goal: to create better awareness of their specific literacy practices in everyday society. The narrative, observation and open interview phase that followed the questionnaires involved ten of the same participants who voluntarily participated in that phase, thus the foundation of voluntary participation was already laid. When the participants were called, they already knew the researcher and the purpose of the study, and therefore could give informed consent to be observed and interviewed.

3.2.5.2. Anonymity and confidentiality

Participants had the option to remain anonymous, both in providing their information in the questionnaires and with telling their stories, in observing their home lives and the open interviews. It was very clear from the start that the participants trusted the researcher, being visually impaired himself, and shared the motivation behind the study, to create better awareness of their literacy circumstances. No participant opted to stay anonymous, giving this research even more credibility by making it possible for the researcher to make the findings even more personal. Personal information not related to the study was kept confidential.

3.2.5.3. Misleading subjects

In no way were subjects that participated in this study misled. They were informed about the reasons for conducting this research and how this information will be reported. Again, it was easier that subjects identified with the researcher as being someone with a visual imparity himself. One of the methods that the researcher used when recording observations was to ask the subjects if the observations he made was correct. Thus the subjects at all times knew what would be reported.

3.2.5.4. Analysis and reporting

Analysis of reported open and honestly, including problems encountered. In the chapters to follow, all findings are reported.

3.3. Conclusion

This chapter presented the research methodology used, describing the research design, the multiple methods used for data collection, its implementation, the data analysis methods used and ethical considerations that were taken into account. This research design helped to explore this area where there was limited previous research done.

In the next chapter, I note how the social literacies framework allows a textured understanding of the life-world of the blind. The emotional side of literacy, or the lack of literacy, is also explored to give a true account of what literacy means in the lives of the visually disabled person.

Chapter 4

Literacy in the construction of blind vulnerability

4.1. Introduction

From the accounts of the narratives of their lives of blind adults, this chapter aims to answer the first research sub-question (*a*): *What does being literate mean to blind people?* Referring to the theory in chapter two that explores literacy as a social practice, an account is provided of what literacy means to blind people, demonstrating that literacy is a life event that conjures up many emotions. The notions of practice and literacy event with their concomitant embeddedness in local situation, affect, interactional histories etc serve as a net with which to capture the complexities, the depth and the extent of being blind. Just as the everyday interactions around text generate a construct of literacy, they also construct a literacy persona that, in the case of the blind, is deficient and vulnerable. Vulnerability is reproduced, replicated through the engagement of the blind with visual literacy on a daily basis – it is part of its mechanisms of reproduction. Thus, a social literacies framing allows us to capture in minute detail the interactional, domain specific and affect-laden dynamics in the construction of vulnerability.

In the narratives provided by the blind participants about their life histories, literacy as a lifelong event could not be separated from what feelings it bring to the forefront for the blind.

Barton and Hamilton (1998:3), in their description of literacy as social practice, describe literacy as follows:

> Literacy is primarily something people do; it is an activity between thought and text. Literacy does not reside in people's heads as a set of skills to be learned, and it does not just reside on paper, captured as

> texts to be analysed. Like all human activity, literacy is essentially social, and is located in the interaction between people.

In the same sense Nardi and O'Day (1999:49), describes the interactions between human beings and the diverse forms of media and technology as an ecological system of people, practices, values and ecologies in a particular local environment. The authors continue to say that if we want to understand this ecology, we need to gather real examples from daily practice (1999:83). These real-life examples were gathered by listening to the life stories of the ten blind participants that took part in this study. With these real-life examples, described according the principles as set by the social practice approach, the research question on the meaning of literacy is answered. In order to see what a life in a social and material ecology without access to text (visual literacy) means, the social networks they require to accomplish tasks, and the sensibilities and senses of these practices, it can be illuminating to use the social literacies framework with a functional emphasis as a 'diagnostic tool'.

In this section, I briefly discuss blind literacies from the vantage point of social literacies (research sub-questions *a* and *b*) and pull out in what ways New Literacies (research sub-question *c*) are being used by the blind. This discussion will allow a discussion of blind literacy in relation to a wider concept of semiotic landscape, of which both more conventional literacies and New Literacies can be framed together with the role of Semiotic Landscapes in orienting the self in place (research sub-question *d*) and its implications for the understanding of literacy in chapter 6 (research sub-question *e*).

On the next page a table of the participants, their ages gender, when their blindness set on, their schooling (attending a special or mainstream school) and if they acquired the braille code, condenses some of the life history information:

Name of participant	Age	Gender	Onset of visual disability	Mainstream or special schooling	Acquisition of braille code
Christine	38	Female	Blind from age 4	Special	Yes
Ferdi	43	Male	Gradual onset. Blind from age 7	Special	Yes
Paul	51	Male	Gradual onset. Blind from age 27	Special	Yes
Adrian	36	Male	Sudden. Blind at age 11	Mainstream, then moved to special school	Yes
Veronica	71	Female	Sudden. Blind at age 2	Special	Yes
Frank	35	Male	Gradual. Blind at age 8	Special	Yes
Cindy	35	Female	Gradual. Blind at age 24	Special	Yes
Adam	41	Male	Partially sighted (sight in one eye)	Mainstream	No
Kuanita	49	Female	Sudden. Blind at age 34	Mainstream	No
Derrick	70	Male	Gradual loss of sight.	Mainstream, then special	Yes

Table 4.1: Summary of study participants

4.2 The intrinsic value of literacy for the blind

To answer the first research sub-question, *What does being literate mean to blind people*, could not be separated from the emotions that these capabilities resemble in their lives. Literacy has an intrinsic value that came out in the narratives

provided by the participants. The focus here is on the individual and the value of his or her reading and writing processes in their daily lives (Soler, Wearmouth and Reid, 2002:28). As Reaume (in Soler, Wearmouth and Reid, 2002:293), on the subject of language, explains:

> … most people value their language (literacy) not only instrumentally, as a tool, but also intrinsically, as a cultural inheritance and as marker of identity as a participant in the way of life it represents …

Literacy for the majority of the participants meant the ability to read and write braille. Some participants went as far as to say that without the ability to read and write braille a blind person can be considered as illiterate. This constant argument against the oral modality's role in their daily literacy has been exasperated with the introduction of many new technologies for blind people, leaning strongly on the hearing senses. Premier blind food critic of New York, Daniel Aronoff, made the following statement in his blog (2013) about the importance of braille literacy:

> Unfortunately technology is also being used regularly as a substitute for braille, which I cannot condone. Braille is my print, and I use it in my everyday life. A few examples include reading books, brailly notes and public signs (since I wouldn't want to walk into the wrong bathroom). I don't want this generation of children to grow up without knowing how to spell, with no knowledge of vocabulary, or not understanding concepts like paragraphs, tabs and margins. One of the comments on his blog, sums it up perfectly by saying that technology is a boon and a threat to literacy, for blind and sighted readers alike.

In 2009 the world celebrated the two-hundredth anniversary of the birth of Louis Braille (1809-1852), the inventor of the reading and writing code for the blind that bears his name. As part of this celebrations, Dr Abebe Teklu of the Canadian

Federation of the Blind (2009: 6), wrote a poem demonstrating the intrinsic value of literacy or braille literacy in this case, for the blind:

Louis Braille: From Literacy to Liberty

Louis Braille, who are you?
Physically, I've never met you.
You passed on to Heaven,
But still you are my companion.

You are my inner soul, my sight,
My trusted right hand for life,
A hero, who brings ever lasting light.
You've changed our lives, others and myself.

When my sight was taken away,
I thought I couldn't run and play.
I had to follow someone's lead.
No longer could I hope to read.

Before long I realized,
My life was not compromised!
The spirit of Braille whispered in my ear,
"You lost nothing: do not despair."

"You can still read", I heard him say
"Stories on paper and in other ways."
One door closes, and another opens.
No more losing second chances.

I trusted your advice, and went to school,
It was there, there, I met you, dear Braille!

Let me admit, when we first met,
Braille made no sense to me.

But the more I touched each dot and letter,
The more I began to see.
I regained my sight! Touching is seeing.
Nothing's better than this! I am an equal human being.

I could excel at everything!
Truly, I lost nothing.
I achieved alongside my sighted friends;
Nothing was lost to my blindness.

No other closeness can embrace my spirit;
You restored my word and merit.
Hopelessness merits defeat!
Braille, you've made my life complete.
A teacher and an alphabet, your name signifies;
Now, with braille, I write Braille's praise:

B – you made me Brave and Bright;
R – you Restored my confidence and sight;
A – since I met you, braille's Always been with me;
I – you gave me Indepence, you made me free;
L – again, I am always Learning;
L – you Lift my spirits, as I am achieving;
E – you are Ever my companion, always Enduring.

Although Braille the man
Passed on a long time ago,
Still you are with us,
Giving joy, not woe.

The gift of your invention
Spreads literacy world wide;
You create change for many that are blind,
Restoring power and pride.

As we learn your system
You open doors to many.
We thank you Braille for being the hero
You help us on our journey.

However, not all blind people can read and write braille. In fact, braille literacy is declining in the world. New technology, specifically cellphones, computers and assistive devices have opened new doors for blind people, allowing them to increasingly make use of the oral modality. Blind adults employ a mixture of their remaining senses to bridge the lack of the visual, a remedial literacy. In the following section, the blind adults share on how they feel about their own literacy, or in some cases, the lack thereof.

4.2.1. When literacy fails you

Literacy for blind people might mean to able to read and write braille, as can be seen from the research results. But braille literacy is not the main literacy of a highly visual world that puts a lot of emphasis on the visual literacy of people. This visual literacy might include everyday practices like reading signs on the street, to read your mail or the newspaper or to read a prescription or a recipe. All these everyday practices are not always considered as literacy, but it is these everyday literacy skills that can make you a fully independently functional individual.

The Social Literacies approach informs us that literacy is associated with affect of different types. I have already remarked on how the lack of visual literacy – as with the lack of the visual sense more generally – creates feelings of vulnerability and dependence on others. In the interactions with the ten blind individuals in this study, the following five emotional difficulties were identified as accompanying a lack of visual literacy in a world that emphasizes a narrow definition of what being literate means: shame, fear, dependency, frustration and a difficulty to adjust to change.

4.2.1.1. Shame

Blind people often experience a sense of shame. This shame comes from being labelled by the normal seeing world as being 'lesser individuals', with less to contribute and less intelligence. These labels are fixed by people who don't understand the world of blind people and measuring them according to their own norms and standards.

Examples of this shame include when a blind person needs to ask a seeing person for help. For instance, with regard to transport, blind people either need to make use of public transport or rely on other people. When making use of public transport, a sighted literate person will be able to read signage, the number of the train or bus, information on tickets, for instance. A blind person needs to compensate for this but, due to the fact that they are in need of help of a sighted person, this does cause shame. Christine has to rely on transport provided by her employer which causes her colleagues to feel that she is given special treatment. Ferdi drives in with a friend staying close to him. But, when his friend is not going to work for some reason, he is stuck. As he explains:

> This week I had a problem. My friend went to the doctor and I called a second guy that is my backup in situations like this, but he was also ill.

Ferdi went on to describe that he has to get over the shame of dependency on the goodness of others for his transport needs and how he had to call around to hear who can help.

Most blind people also feel ashamed because they cannot afford all the assistive devices that could make a difference to their everyday literacy needs. Paul sums it up:

> Due to limitations to access education and different occupations, blind people don't earn that much. Even if you get a guide dog, it is almost impossible to get one without a sponsor. Then, you need to have a house with a yard to keep the dog, which is also more expensive – too expensive for the average blind individual in our country.

Another participant, Adam, adds to this by remarking:

> I cannot improve my situation because my salary stays low.

Veronica says that her husband André would have been much further in his career if it was not for his blindness and describes the shame of being limited due to the perceptions people have of blind people's abilities:

> Although he is good with what he does, they still put limitations to what he can do. He applied for the position he currently hold already seven years ago. And, although it is office based, they turned down his application because he does not have drivers' license. And today, he is still doing the job, but still without a drivers' license.

Post received the normal way (snail mail) and written format, cannot be accessed by blind people, meaning that they need to ask a sighted person for assistance.

This causes shame, because, suddenly the things that you would have liked to keep private, becomes known to others. For instance, Frank tells that his mom needs to read his mail to him, including his banking statements.

4.2.1.2. Fear

The absence of sight, accompanied with a lack of everyday literacy skills, leads to many inherent fears faced by blind people. It is especially with regard to the lack of visual literacy that blind people experience fear.

An experience of not being able to read visual cues that lead to an accident that Veronica had which causes her to fear walking in the street on her own:

> One day I walked down the street to the shop. Suddenly I fell into a man hole. Thieves stole the covers of the man hole because it was made of metal and they could sell to a scrap yard …. I have not recovered emotionally from this incident and won't walk to the shop again.

This fear of unknown surroundings was detected in all the interviews with participants; blind people feel comfortable in their own area and surroundings, like their homes, and most would not venture outside these parameters because of a fear of what they might not see, the unknown.

Another fear that some blind people experience, is a fear of rejection and being judged by the sighted world. Examples of these include Veronica who used to dress and groom her daughter so carefully that the sighted world cannot say that she is not a capable mother; Christine describes how, because of her blindness, she had to attend school far away from her parents which lead to her feeling alienated from her family. Because of the limited number of schools in South Africa catering for the needs of blind learners, many blind learners had the same

kind of alienating experience. Ferdi describes how his parents stayed in KwaZulu-Natal and he had to attend school in the Western Cape, meaning he could only see his parents during school holidays.

In contrast, Paul, Veronica, Cindy and Derrick did not experience the fear of rejection by their parents, because their parents moved to be close them to attend school. Interestingly, all of these participants also mentioned that they were privileged to be socialized under normal circumstances, in other words as part of the seeing society, and not in such a protected environment like most learners have in hostels at school. Learners that stayed in hostels during their school career had limited socialization with sighted people. These learners all faced the fear of moving into the world dominated by sighted people when they finished schooling. This is also relevant to the social practice approach to literacy that stresses the importance of the social context within which literacy is learned and used.

4.2.1.3. Dependency

A lack of everyday literacy skills lead to blind people being dependent on sighted role players for help. In cases where the blind person is dependent, no or limited literacy skills transfer takes place. Especially in cases where the person's blindness set in later in life, the dependency on others grows.

Blind participants, like Christine, Ferdi, Paul, Veronica and Derrick, who were either born blind or whose blindness set in very early in their lives, managed to learn braille and other literacies that enable them to overcome some of the dependence on help of sighted people. For blind people that lost their sight later in life it is more difficult to catch up on learning these literacies, making them more dependent on the help and assistance of sighted people.

4.2.1.4. Frustration

The interviews with the different participants also show that blind people have a lot of frustration, especially due to the sighted world not understanding their needs and also what they can do and cannot do. Christine says:

> People don't give you a chance. They don't understand. They have a specific picture of blind people. This makes me feel depressed, because no matter what I do, I don't have a future. I am stuck behind a switchboard because there is where the sighted world feels comfortable for me to be. I don't have a lot of career prospects.

Also Frank, with an Honours degree in history, it has been frustrating and he also has to work behind a switchboard.

The frustration for blind people seems to escalate when they leave school. Suddenly they are confronted with a world where they are a minority, whereas in school the other learners shared the same fate and frame of reference. As Paul says:

> There is no emotional support for blind learners after they leave school. The world has a specific perception of blind people which makes it very difficult and frustrating.

4.2.1.5. Difficulty to adjust to change

A blind person has specific challenges when it comes to change. These changes can be on various levels, as can be seen from the various participants in the study. Derrick jokingly tells that he is fortunate to have a wife that don't move the furniture around in the house, because it takes a long time for him to get used to

navigating his environment. All participants feel comfortable in their immediate, known environments, but seldom venture outside these boundaries.

With the fast paced change in technology, many new doors have opened for blind people with regard to their adjustment in a sighted world. When Kuanita lost her sight as an adult:

> I was lost in a sighted world. At my young age, I was even put in an old age home so that I can receive the care that I needed. I realized I needed the help of other blind people to help me to adjust to the sudden change in my life.

Christine was recently divorced from her husband. It left her alone in their house. Suddenly she had to adapt to the new circumstances. She tells how her husband quickly went to the shop to pick up milk or bread. These things have become difficult for her without him around.

4.2.2. The value of remedial codes

Although the abovementioned section sketches the negativity associated with problems with visual literacy when the blind need to adapt to the mainstream sighted world, there is also a sense of accomplishment and satisfaction attendant upon the use by the blind of remedial codes and schemas. Inputs received from the ten blind participants in this study, can be summarized in the following three intrinsic values: dignity, freedom and connectedness.

4.2.2.1 Dignity

Their literacy give blind people a sense of being worthy of respect and also give them a reason to have a sense of pride in themselves. In contrast to the shame

sometimes experienced by blind people due to the fact that they feel different and dependent on the help of sighted peers, their literacy skills swings the balance to the positive side, making it easier to cope with the shame.

From a very early age many of the blind participants in this study had to face the feedback from other children and the educational system that they are different, lacking behind and need special attention. Derrick describes these feelings:

> At the age of eight my teachers realized that I am struggling to keep up, although I sat in the front row of the class. This period caused a lot of emotional damage. I did not feel part of a peer group. I could not play ball sports with the rest of my class mates. I felt different.

After attending a special school for the blind, where his specific literacy needs were addressed, including braille, speech assistive devices and mobility, Derrick went on to study and hold a professional career as a physiotherapist. His sense of dignity was restored.

Christine experienced problems with her health, which also affected her eyesight, from a very young age. She stayed with her grandmother because she needed constant care, and she attended a normal primary school, only to be told later by teachers that she should attend a school for the visually impaired because she could not keep up with the other learners. This had a negative impact on her sense of worthiness. After the death of her mother, her father remarried, and his new wife had a daughter the same age as Christine, with normal eye sight. Christine felt she was not good enough, as she describes:

> I felt left out because I was different and here was this perfect new daughter with no problems.

Learning braille, excelling in different sporting codes and the ease that she could move around with at the school for the blind, restored Christine's dignity. She was

surrounded by other learners with the same problems as herself, feeling that finally she belonged somewhere. Christine also completed her post-matric studies.

4.2.2.2. Freedom

For blind people who do access literacy in one way or the other, this means freedom – a freedom to express themselves and a freedom to live their lives independently from others. This independency differ between individual blind people but the various examples provided by participants, demonstrates how they cope with various tasks in their day to day lives without being able to see. Here are some examples from the various participants, demonstrating their freedom that comes with being literate:

All participants make use of cellphones with speech programmes installed on them. This not only allows them to make and receive calls, but also for them to make use of SMS's and Whatsup. Depending on their level of literacy associated with the cellphone usage, some even do banking (Paul) and buy pre-paid electricity with their cellphone (Veronica).

Some participants felt very strongly that braille is still the key to be literate for blind people. As Derrick explains:

> Computers, cellphones and other assistive devices are secondary tools to literacy. It makes your life easier. But first you need to know your ABC.

Many of the participants still use braille for their private and office needs. Paul, Christine and Ferdi, all being switchboard operators, needs to make quick notes at work – like messages. For this purposes they still use braille. Also at home, the participants make use of braille for various applications – some receive braille library books and magazines from the South African Library for the Blind, and

others make their life easier by marking things in braille in the house, like Veronica that marked their electricity meter with corresponding braille numbering.

New doors were opened for blind people by the use of computers, and with this new literacy skills, they experience more freedom. Today, with speech programmes, blind people can access their mailboxes, 'read' documents received in normal print by scanning it and running it through the speech programme, to earn a living (like Adrian that makes use of his computer for his sound engineering career), to do banking transactions and to listen to audio books.

A good example of how her literacy skills of assistive devices have given her freedom, is Kuanita. Kuanita, suffering a lot with health problems, rely a lot on assistive devices to monitor her health. Examples of these include devices with speech to measure her blood pressure and to measure her sugar (glucometer). Other examples of assistive devices that works with sound, are the liquid indicator to measure the level of warm liquids in a cup, clocks and wrist watches and colour detectors to distinguish between colours.

4.2.2.3. Connectedness

New technology has given blind people a sense of connectedness. Where the braille code was only accessible to other people that has learnt the code, today via means of cellphones and computers with speech applications, blind people can connect with the world around them.

The only thing standing between a blind person's ability to communicate freely with the seeing public via these new media platforms, is their own willingness to learn this new literacy skills and its affordability. As Veronica explains:

> Assistive devices are unaffordable to the average blind person. Most blind people, working on switchboards, earn low salaries and they

cannot afford these assistive devices. Most assistive devices come from overseas and to pay for it in pounds and in dollars with our exchange rate, is ridiculous.

4.3. The Social Practice Approach to blind literacy

The results of the narrative phase of the research enquiry are presented according to the six propositions made by Barton, Hamilton and Ivanic (in Street and Lefstein, 2007:14) about the nature of literacy according to the social practice approach:

- Literacy is historically situated;
- Literacy is best understood as a set of social practices; these can be inferred from events which are mediated by written texts;
- There are different literacies associated with different domains of life;
- Literacy practices are patterned by social institutions and power relationships, and some literacies are more dominantly visible and influential than others;
- Literacy practices are purposeful and embedded in broader social goals and cultural practices; and
- Literacy practices change and new ones are frequently acquired through processes of informed learning and sense making.

4.3.1. The historical situatedness of blind literacy

To understand the present, we must look at the past. As motivated by Barton and Hamilton (1998:12) life histories are essential when to studying the literacy practices of people in their everyday lives. The authors motivate for a life history approach where the history within a person's life is observed. When observing these histories that people use literacy to change their lives but, because people find themselves in a dynamic, contemporary world, literacy practices also change with time. Therefore the literacy practices that an individual engages with change over his or her lifetime, as a result of changing demands, available resources, and their interests.

A focus on life histories of individuals falls within the social practices approach, which orientates towards an approach of studying literacy as a sociocultural practice, recognizing the role and importance of the relationship between meaning and context, as well as the issues of history and power (Soler, Wearmouth and Reid, 2002:103).

The life histories of each of the ten participants as presented here provide insight into each of the individuals' literacy paths in life, including their family circumstances, the time of the onset of their visual disability, their schooling and career path until the time of conduct of this research, focusing on them in adulthood.

In the next section each of the participants provides a narrative or biographical descriptions of their lives, giving insight into the life-long learning that contributed to their literacy and what literacy mean in their lives.

4.3.1.1. Christine

Christine was born in Klerksdorp, in the North West Province of South Africa on 9 November 1979. She was the first child of her parents, who farmed in North West. A few years later, two boys were also born.

At the age of four, Christine contracted a children's disease called Still's disease. This disease attacks weak areas in a child's immune system. Unfortunately Christine's eyes were one of the targets of the disease. The doctors performed a cornea transplant on Christine's left eye. The operation failed and due to the fact that she still had some sight left in her right eye, decided not to operate on it, in case the operation also fails.

Apart from her eyes, the immune disease also affected her legs and Christine remembers that between the age of three and five, she wore heavy braces on both legs.

Then tragedy struck. At the age of five Christine's mom died in a motor vehicle accident. Christine had to go live with her grandmother, because she needed constant care. Her eyes had to be washed with a salt solution every couple of hours and she had difficulty walking with the braces. Her two brothers stayed on at the farm with her father.

Christine started her schooling at a primary school for sighted learners. But in Grade 1 the teachers advised that she should go to Prinshof School for the visually impaired in Pretoria, as she had difficulty keeping up with the other learners.

At Prinshof School she started learning the medium of braille. Unfortunately, Prinshof School, specializing more in teaching of partially sighted pupils, could only cater for her braille needs until Grade 3. She was then sent to Pioneer School for the visually impaired in Worcester. This was far away from her home town of Klerksdorp and she could only go home during holidays. Like most of the learners at this school, Christine had to stay in the hostel.

In the meantime, two years after her mom's death, her father remarried again. His new wife also had a daughter from a previous marriage more or less the same age as Christine. Christine felt left out because she was different, and here was this perfect new daughter with no problems. The fact that Christine had to attend school so far away, did not help either and she became alienated from her parents and siblings.

At her new school, surrounded with other learners with the same visual shortcomings, Christine came into her own. She felt at home on the school campus, designed to make it easier for blind learners to navigate. Christine started excelling in sport and for a number of years competed on a national level in various sporting codes. At school she also became totally braille literate, starting off by learning uncontracted braille and then moved on to contracted braille (that is shortened braille that makes use of contractions – see 1.1.1).

In 1999 Christine passed her senior certificate examinations. Christine stayed on at the school a while longer to complete a N4 in office practice, and a N5 and N6 in computer practice. This was not Christine's dream, however, because she wanted to study sport science to become a coach for other disabled athletes. Her dad was not convinced that his blind daughter will get a job in the sporting field and discouraged her to do it. So she ended up doing office and computer practice, always feeling that she never fulfilled her dreams.

It is during this study period that Christine met Niel, who would become her husband a few years later. They moved in together while she finished her studies. After completing her studies at the end of 2001, she got a job at the switchboard at the Strand Municipality. She stayed on her own in a flat and saw Niel, still in Worcester, over the weekends. In 2006 she got a job at a call centre in Worcester. Then, two weeks before their marriage, tragedy struck again. Like her mother, Christine's youngest brother also died in a car accident. Despite this sad turn of events, Christine and Niel still got married.

In 2006 Christine gave birth to a boy. She, independent and headstrong, looked after the boy with no additional help. During this period the couple moved a lot between towns for jobs: first to Robertson, but the company went bankrupt and had to retrench them; then on to Montague, where both of them worked at the local Montague Springs. In 2007 Niel got a job at a computer shop in Bellville, Cape Town. They moved to Bellville but Christine did not have a job yet. A frustrating period of job hunting followed for Christine – she was unemployed from 2007 to 2009. After two desperate years, Christine finally secured a job at the South African Police Service as switchboard operator, a job she holds till this day.

Christine and Niel recently divorced. A dark period followed for Christine. Suddenly the back-up she had was no longer there. She was left to stay on in their house on her own and to take care of their boy. Niel, the one that helped to

quickly pick up milk at the café or take her somewhere, was no longer part of the picture. She is learning to cope on her own again and, although it is very lonely, Christine is succeeding, as can be seen in the description of the visit to her house in the next chapter.

Christine feels that she wants to be more in her career as a switchboard operator. She wishes to do more with her life and achieve more. Her philosophy on blindness*:*

> I am comfortable with my blindness. That makes it easier for other people also to accept it.

4.3.1.2. Ferdi

Ferdi was born in 1974 in Pietermaritzburg, KwaZulu-Natal. His father worked for the South African Railway Services and also farmed with bees on a small scale on the side. His mom worked at the Post Office at first, but later became a full- time housewife.

Ferdi was born with glaucoma and could see until the age of nine. He has two older sisters but they don't have any eye conditions.

He attended Pioneer School for the visually impaired in Worcester for his school career, far away from his home and parents. Small Ferdi became part of a new society of blind children, like him, with the same needs as he has. As most of the pupils at Pioneer School, Ferdi became a resident in one of the school hostels. He only visited his parents during school holidays. Ferdi completed his whole school career at this institution.

Ferdi completed a post-matric course at Pioneer School for switchboard operation and computer studies. He was one of the lucky few that got a job immediately

after completion of his training as switchboard operator. He was employed at Stellenbosch Provincial Hospital, a position he holds to this day.

In 2007 Ferdi met his future wife, Elize. Elize was a guide for a hiking group of visually disabled participants. They got engaged in 2009 and married in 2010. 2013 saw the birth of their daughter, a new chapter in the couple's life.

Apart from Ferdi's extensive knowledge of music and his good musical ear which landed him in the popular South African television music contest, 'NootvirNoot', Ferdi is also a good cyclist. He completed the Argus Cycle tour a few times already, in the class of tandem cyclists, with a sighted person steering. He also completed various cycle tours as member of the South African Tandem Association for the visually impaired, including Alberton (Gauteng) to Hillcrest (KwaZulu-Natal), George to Franschoek, Somerset West to Cape Aghulas and recently also competed in Namibia.

4.3.1.3. Paul

Paul was born in 1966 in Windhoek, Namibia. He has a twin brother, Arthur, who is also blind. No other siblings in their family share their eye condition.

Paul was born with an eye disease that caused him to lose his sight. From the age of nine, Paul's eyesight had deteriorated to such an extent that he was registered as blind. At the age of 27 Paul lost all his remaining sight.

In 1975 Paul's parents moved to Worcester so that he and his brother could enrol at the Pioneer School for the visually impaired. Therefore he did not have to stay in the school hostels, something that helped him later in life with regard to his normal socialization in the sighted community. Although Paul could still see at this stage, his sight did not allow him to read normal print, so he started learning braille.

Paul completed his schooling at this institution and after completing his matric, he also completed courses in piano tuning and switchboard operation. After completing his studies, he first started working as piano tuner while he was searching for a switchboard job.

Eventually Paul's search paid off and he was employed as switchboard operator at Stikland Hospital in Bellville. Paul is a vital staff member at Stikland Hospital today – after 17 years at the switchboard there is not a lot that Paul does not know about the facility and its staff.

Paul and his brother Arthur shares a house on the grounds of Stikland Hospital. This ideal working situation means that he does not have to make use of public transport to get to work. With his guide dog he can easily walk to his office.

4.3.1.4. Adrian

Adrian was born in Stellenbosch in 1981. He was born with hydrocephalus, also known as water on the brain. A shunt was inserted to drain the excess water. He did not experience any problems with his eyes as a child. His dad was a motor technician at the South African National Defence Force and his mom a sanitation assistant. Adrian has a younger brother.

Adrian started his primary schooling in a normal sighted school, seeing that he had perfect eyesight. At the age of 11, in 1992, the shunt inserted when he was still a baby, became blocked. It damaged Adrian's optic nerves and he lost his sight. He then started attending the Athlone School for Blind from 1992 until he matriculated in 1999.

Creativity in general has always been at the core of Adrian's being. His entry to the music scene started in 1999 as a mobile DJ. In 2003 Adrian felt that he has learned quite a bit about beat matching, and entered into a mixing competition,

Wax War. He was chosen as one of 25 competing DJ's. In 2005 he completed a course in radio broadcasting and in 2006 began broadcasting at Bush Radio 89.5 fm. During this period Adrian co-produced and presented the Morning Cruise, a relaxed show from nine to noon. During his time at Bush Radio, he decided to study song writing to establish himself as a lyricist.

Adrian still had the need to improve his skills, so in 2009 he obtained the International Computer Driving License through the Cape Town Society for the Blind, the first blind person in Africa to achieve this prestigious qualification. In 2010 Adrian gave back some of his time to the Society for the Blind by helping other blind students with their computer studies.

Adrian, however, wanted to start his own music business. So, as he describes it, from 2010 he kept a lower profile to prepare himself to achieve his dream of having his own business. He equipped himself by attending workshops of the Small Enterprise Development Agency, and seminars at The Business Place on online marketing and the role of social media within business.

2012 saw the birth of Detour Music Pty Ltd, Adrian's music business. Unfortunately 2012 also brought its sadness when Adrian's father passed away at the age of 55.

Today Adrian is a specialist in music production and he navigates his music recording equipment with ease. Adrian runs his business out of a room at the back of his mother's house in Eerste River. Adrian's brother and his girlfriend, as well as their child, also stays with Adrian's mom.

4.3.1.5. Veronica

Veronica was born in 1946 in Vasco, Cape Town. Her father worked for the South African Railways and her mother as a seamstress in a factory. Veronica has six siblings. She is the middle child. None of her brothers or sisters had any problems with their eyes.

At the age of two Veronica developed acute inflammation in her eyes which resulted in her turning blind. Despite her blindness, she did not receive any special treatment from her mother. Her mother believed that all the daughters should be taught certain skills in the house, and at the age of ten, like her siblings, Veronica's mom taught her to cook (on a coal stove). To this day Veronica is a very competent and independent cook.

From the age of three Veronica attended the Athlone School for the Blind. Here she was taught the medium of braille. After completing her secondary education, she was trained as a switchboard operator.

Then her long career as switchboard operator started. During this period Veronica also got married and gave birth to her daughter. After a couple of years, the marriage did not work out and she and her husband divorced.

Twenty three years ago Veronica married her current husband, André, who is also blind. She and André never had children of their own.

After years of being a switchboard operator, Veronica could not stand the monotony of the job anymore. On advice from a colleague, Veronica applied for a post as secretary. After some convincing from her side that she would be able to perform all the necessary tasks of the position, she was appointed.

Today Veronica is happily retired after a long and productive career

4.3.1.6. Frank

The son of farm workers, Frank was born in 1982 on a farm in the Breede River Valley close to the Western Cape town of Worcester. Frank was born with glaucoma and lost the sight in his left eye when he was about four months old.

In 1987 Frank was enrolled as a pupil at the Athlone School for the Blind in Bellville, Cape Town. At this stage Frank was still partially sighted but in 1990 he also lost the sight in his right eye after a number of operations and retinal detachments.

Frank did the near impossible - he managed to learn braille in three months and completed his second year of schooling, Grade two, successfully.

Frank stayed on at the Athlone School for the Blind and passed his standard eight, or grade ten as it is known today, in 1998. He then went to Pioneer School for the visually impaired in Worcester, where he matriculated in 2000.

In 2001 Frank decided to complete a switchboard course and some computer training courses at the Department of Career Development, a post-matric training facility at Pioneer School.

But Frank still wanted to study further and in 2002 he enrolled at the University of Stellenbosch for a BA in International Studies. He graduated in 2005, majoring in political science and history. In 2006 he completes his Honours in history at the same university.

Frank's career life started at the end of 2006 when he started working as a part- time switchboard operator at the Carl Bremer Hospital in Bellville. In 2007 Frank also worked as a call centre agent for four months before he was appointed as switchboard operator at Swartland Hospital in Malmesbury. In October 2008 he was transferred to Worcester Hospital in the same capacity.

In May 2009 Frank joined the Department of Defense at Two-Military Hospital in Wynberg, Cape Town, a promotional position as switchboard operator. Today, Frank is still employed as switchboard operator at Two-Military Hospital.

Apart from his career path, Frank also moved to Cape Town for personal reasons - to be close to Cindy, his fiancée. The couple has a son.

4.3.1.7. Cindy

Cindy, the fiancée of Frank, was born in Bellville South where she also grew up. She attended a normal school for the sighted until she reached grade three when one of the teachers at her primary school realized something is wrong with her eyes. This led to a two year period during which Cindy was in and out of hospital regularly. She lost two years of schooling in the process.

Cindy's very bad eye sight meant that when she eventually could return to school, she was enrolled at the Athlone School for the Blind as a partially sighted learner. After matriculating, Cindy stayed at home and also focused on her sport activities. During this time Cindy also completed a business management course.

In 2006 Cindy fell pregnant and this impacted negatively on her eyesight. Suddenly her eyesight deteriorated dramatically. From somebody that could still read normal text, her eyes deteriorated to such an extent that in 2009 she was totally blind.

She started to learn both English and Afrikaans braille and completed a course in the speech computer application Jaws. After her first six month learning English braille, Cindy also started teaching braille to other adults.

During this period Cindy focused mostly on being a mother for her new born baby. One of the more difficult tasks she experienced was to learn to feed her

baby. To change nappies came naturally to her – she grew up with a lot of babies in their neighbourhood, so she still remembered how to do it.

After three years of being a full time mom, Cindy decided to get a job and in 2012 she got a position at a major retail outlet.

Cindy and Frank stay in Eerste River, a suburb of Cape Town. The couple shares the house with Frank's mom and plan to get married soon.

4.3.1.8. Adam

Adam was born in Stellenbosch. He has two brothers and a sister. He lost the sight of his one eye during an accident at the age of 16. He completed his schooling in mainstream schools for the sighted.

After matriculating in 1994, Adam started his working life as a farm worker and in 1995 he joined the South African Police Services (SAPS). At SAPS he worked in the gardens at the Maitland Police Garage, and after a few months, he was seconded to the mechanical workshop.

Adam's plans to further his studies to become a panel beater, was halted because of the strain that the dustiness placed on his remaining eye. He was eventually transferred to the archive and later to reception, where he is still working today.

Adam is struggling with his health. Apart from struggling with his remaining eye and the strain his job puts on it, he also suffers from chronic back ache due to vertebrae that have moved, pinching his nerves.

In 2007 Adam married. He and his wife do not have children of their own, but he has adopted his wife's daughter from a previous marriage. Their daughter is 14 years old.

4.3.1.9. Kuanita

Kuanita was born in a small town in the south of Namibia, Keetmanshoop, on 13 June 1968. Kuanita was born with normal eyesight. She grew up in a tight knit family, with an older brother and sister, and a younger sister. Her father passed away in 1987 after suffering a heart attack. All of her family, except her older brother, stays in Port Nolloth, on the northern west coast of South Africa. Her mom is still alive and recently turned 70. Her older brother stays in Windhoek.

She finished her primary and secondary education in Keetmanshoop. She then moved on to study at the Technical College in Stellenbosch.

After her studies, Kuanita returned to Namibia, this time to the capital Windhoek. Here she started her career at Sanlam where she worked from 1990 to 2000. In 2000 she made a career change and became the personal assistant of the managing director of First National Bank in Windhoek. Kuanita described herself, at this time of her life, as very active. She had a drivers' license and loved to travel.

In 2002 Kuanita developed kidney disease. It also affected her eyes. The doctors operated on her eyes but tragically she lost all sight. She described this tragic phase of her life as 'a total loss of freedom in a split second'.

A period of distress and frustration followed. The first two years to adapt to being blind was the worst. For the first two weeks after she had the operation, she stayed in her bed and just cried. She did not want to live anymore. That was until her younger sister walked into her room one day and encouraged her by saying that she should be thankful that at least she could see once and that she, for instance, knows how a cat and tree look like. Today she relies on these memories and her imagination.

From 2002 to 2006 Kuanita and her mom stayed in Kleinmond while she still received treatment at the kidney unit. In 2006 they moved to Port Nolloth to be

with the rest of the family. Kuanita went to stay in the old age home to receive the care that she needed.

It was in this period that she started exploring the world of the blind. She contacted another blind person, Mark, to find out about a 'speaking cellphone'. Through the regular calls and correspondence between her and Mark, the two started a relationship and later Kuanita moved in with Mark in Cape Town.

Through Mark Kuanita learned about the world of the blind. Mark introduced her to all kinds of audio devices, like cellphones, computers and even a wrist watch. Kuanita was even introduced to audio equipment to measure her glucose levels and blood pressure.

Kuanita says that she even tried her hand at learning to read braille, but her fingers could not distinguish between the different dots. Kuanita says she believes if you grew up with braille, it will be much easier to master it but she feels she was too old already. Her 'ABC' was still the one she learned as a sighted person. There are examples of individuals that learned braille as adults, but she felt that it was just too slow for her – she became impatient.

In 2007 Kuanita had a kidney transplant. Her relationship with Mark came to an end in 2009 and she moved back to the old age home in Port Nolloth, or 'Gerrasic Park' as she calls it. During this time Kuanita was elected as branch co-ordinator for Blind SA. She took the branch's contact list and phoned all the members on it to introduce herself. One of the members she called was Louis. During their conversations on the phone, Kuanita learned that Louis was unemployed and offered to help him to search for a job through Blind SA. One day she went to his flat to collect his CV. Kuanita and Louis, who is partially sighted, began to see each other more regularly and eventually, eleven months later, they got married.

Today, Kuanita and Louis are happily married and stays in Strand. Kuanita needs to go for dialysis three times a week. She surrounded herself with a lot of audio

devices to make her life easier and also has Louis to help her if she needs something done that she cannot do.

4.3.1.10. Derrick

Born in 1947, Derrick hails from Mooreesburg in the Swartland of the Western Cape. At the age of eight the teachers of the local primary school realized that Derrick is struggling to keep up, even if he sat in the front row of the class. His eyesight was very poor. This period in his life caused a lot of emotional damage – he did not feel part of a peer group, cannot play ball sports with the rest of his class mates – he felt different.

Then his parents made the wise decision to move to Worcester so that he could attend the local school for the blind. Unlike most of the other pupils at the school, Derrick never stayed in the hostel, and it had a positive influence on him, because he has the opportunity to also experience the normal sighted world outside the school walls

In Grade ten, the then Standard eight, Derrick learned about a physiotherapy course presented at the University of Pretoria aimed at training blind physiotherapists. He chose his school subjects in such a way that he could meet the entrance requirements. In his matric year, the university cancelled the course, leaving Derrick in a predicament. He did not have the correct matric subjects to gain entrance to the other physiotherapy course for the blind presented in London, in the United Kingdom.

Derrick placed this dream of his to the side for the moment and moved on to his second option, music. He trained to become a piano tuner. At that stage the career possibilities for blind people were limited to teaching, law, physiotherapy, piano tuning or to join the industries that made cane furniture. Derrick's ultimate dream

if he did not have the disability, was to study medicine, a dream that his children will fulfil later in his life.

After his training, Derrick started working at Diepman Pianos in Wellington. This company was well-known in its time and produced 25 pianos per day. Derrick started out doing piano tuning but later moved on to become a quality controller during which he played the piano every day for the whole day to see that the quality of the product is of a high standard and also to demonstrate it to clients.

In the meantime, while Derrick was working at the piano manufacturers, he completed the outstanding matric subjects that he needed to gain admission for the physiotherapy course in London. This was not an easy task because it was 'pre-computers'. People had to read to Derrick and he needed to make his own notes in braille. There were no handbooks available in braille either.

Motivated by the urge to make something more of his life, after passing the matric subjects, Derrick was admitted to study physiotherapy in London, six years after he initially passed matric.

Derrick thoroughly enjoyed his studies in London – it was in a new language (English) and it was challenging. Derrick was finally doing what he always wanted to do. The facilities in London were geared toward the needs of blind people. He did not feel like an outcast but he was part of an inclusive society that understood him.

Three months into his studies, Derrick met his future wife, Irene, another South African, while she and a friend of hers were on holiday in London. Two years later Derrick and Irene were married in London, about six months before he finished his studies.

On returning to South Africa, Derrick was offered a position at Tygerberg Hospital. It was quite ironic that Stellenbosch University and Tygerberg Hospital

did not want to train blind physiotherapists in South Africa, but now they offered him a position. Derrick got the position at Tygerberg Hospital without any interviews, a bitter pill for him to swallow to this day:

> Why did I, as a South African, had to go and study abroad to become a physiotherapist and the same institution that I was offered a position at, did not want to train me. To this day they are picking the fruits of trained physiotherapists but don't want to invest in their training.

Today, physiotherapists are no longer studying in London, but locally at the University of the Western Cape. This course is however more aimed at partially sighted students and not so much on blind students. The course is difficult for blind people, because of the community work that needs to be conducted all over the Cape Peninsula, making access difficult for them because of the travelling requirements.

After a year at Tygerberg Hospital Derrick decided to leave the employment at the hospital because the salary that they paid him did not allow him to create an existence for him and his family. Derrick also found the institution to be too burocratic. Derrick decided to open his own practice in Wellington.

After three years in private practice Derrick decided that the practice needed to grow more, so he and his family moved to Bellville where he started a new private practice. He spent 35 years in this practice. During this time Derrick also became involved with various causes for the blind in the Western Cape, like the Athlone School for the blind and the Society for the Blind.

Derrick and Irene have a son and a daughter, both medical practitioners and married. The couple decided to retire last year and eight months ago moved into a townhouse in a retirement village. Derrick is still very busy with his community work to further the blind cause and currently serves in five bodies of different charities and non-governmental institutions.

By way of summary (also see table 4.1): The history of each of the ten individuals in this study highlighted individual issues but also some common themes. Each individual had a unique path of coming to terms with their disability – some from birth and some losing their sight at a later stage in life, having a clear impact on their literacy skills later in life. Braille form the basis of the literacy of many of the individuals, the code in which they were educated at school.

But for those who lost their sight later in life, the learning of the braille code, the haptic mode, has been difficult and frustrating, leading to some opting to go for the route of focusing on their other remaining senses, especially hearing. What is clear is that each of them faces some challenges as adults to function effectively in their daily lives. Those fortunate enough to attend a special school for the visually disabled, being surrounded by other learners with the same needs and capabilities, were suddenly faced with new challenges entering the adult world after school.

To function effectively as a blind person in a world based on the needs of the sighted majority, means that blind adults have to employ more of their senses to be independent and functionally literate. Blind people employ a number of other modalities to address their lack of sight which is based on their remaining senses of hearing, taste, touch, and smell.

4.3.2. Literacy as a set of social practices

According to the social practice approach, literacy is embedded in social and cultural practices and not merely a skill learned through formal schooling. As noted earlier, less attention is paid to the practices that mediate the experience of the text, or that, in the case of the blind, compensate for the lack of visual engagement with a text. Making use of practices and skills that are not based on the visual to attain a functional goal by employing their senses of touch, smell, taste and hearing, means that the blind can meet their own personal goals. For a sighted person it might be reading a newspaper to gain information, but for the blind other, multisensorial forms of encoding and decoding information are required and used. It is these structured practices of engaging with the social and material context to attain functional goals that are focused on here.

According to Perry's model (see 2.2.5) of a literacy practice (2012: 55), it all starts with an intent on why the function is needed. In the context of the home environment of the blind, as investigated in this study, it involves an employment of a combination of their remaining senses to, according to the examples highlighted here, to feed a family, to clean the house, to make a bed, to make a cup of coffee, etc. These observations were made during the observation phase of the study during the visits at the ten blind participants: By looking at non-literacy based practices of engagement and orientation in relation to function and purpose goals in and presented according to the same six propositions of the social literacy approach as suggested in the theory exploration in chapter 2, we begin to see how the lack of visual/textual ability is compensated for (cf. for example, literacy sponsors).

On visiting Christine, she offers to make toasted sandwiches. Christine knows her kitchen. By touch and by regular practice, she moves around her kitchen effortlessly. Everything is organized in such a way that she can easily access it. In this instance, the organization of her kitchen correlates with Perry's model next level that focusses on the textual features. As in the case with text organisation, the kitchen is organised in a pattern that is familiar to the user, with a social purpose of preparing food.

Christine demonstrates this organization by unpacking her groceries into her fridge and by feeling where everything should fit according to a clear pattern or order she has developed – water in the fridge door, butter on the top shelf and cold meats in a small drawer in the fridge. The next level in Perry's model, the social activity domain, in this case is the kitchen. As Christine continues to make the toasted sandwiches, she demonstrates how she makes use of her remaining senses to manage the task, including feeling in an organized drawer for a sharp knife; taking out the butter out of the fridge, opening it and smelling that it is indeed the butter; spreading the butter onto the bread, carefully feeling that it reaches the corners of the bread; switching on the toaster, smelling it warming up and listening for the soft tone that indicates that it is has reached the desired temperature. The serving of the toasted sandwiches was her goal with this literacy practice.

Another blind participant, Paul, also demonstrated similar practices when making coffee: Paul, who shares a house with his blind twin brother, Arthur, enquires if I would like some coffee on arrival. He walks to the kitchen followed by his faithful guide dog. He switches on the kettle and gets out the cups. Again, this activity is a highly coded and scripted practice, and can easily be subsumed under the categories of Perry's functional model, although there is no text involved. The sequence of the organization of the practice – putting on the kettle, getting out the cups, adding coffee to empty cups, adding boiling water, milk and stirring - are guided by specific rules and conventions. He takes out his "fancy white cups" from a very well organized cupboard, pours milk in the cups and quickly puts it in the microwave to warm the milk – feeling as he opens the microwave door, pressing the desired function on the microwave's key pad and listening to the sound of the microwave going on and switching off. While all this happens, he also hears the kettle boil. As he pours in the hot water into the cups, he makes use of an assistive device, called a liquid indicator, which makes a buzzing sound when the hot water reaches the desired level in the cup. He then gets out his liquid indicator, a little device that fits over the rim of the cup that makes a noise when the water comes to a certain level, and pours in the hot water. After he adds sugar and sweetener, being able to distinguish between the two by where it was placed in the cupboard and by the form of the holder, he adds milk and coffee is served. Literacy goal achieved.

Kuanita also enjoys cooking and describes her remedial literacy practices as follows:

> I have a certain knife that I prefer to use and you don't dare take it out of its place. My slow cooker is my right hand in winter months when I like to make soups and stews. I struggle to read labels but that is what my right hand Louis (her husband) is here for, and he will put out the ingredients for me that I will need. Spices I can recognize by smelling them.

Kuanita tells that smelling, one of the senses that is not generally recognized as contributing to literacy, is very important to blind people in recognizing their environment:

> Just after my operation in which I lost my sight, with the bandages still covering my eyes, I and my mom walked through the mall. At some stage I said to my mother I know that we just passed the movies. My mother was quite shocked because I could not see, but then I reminded her that I could smell the popcorn. So, today when I go to the mall, I can distinguish the smell of shops. I would be able to tell you if we passed Pick 'n Pay, a coffee shop or Woolworths for instance.

To make a bed might seem a minuscule task, but if you look closer at the event it resembles a literacy practice. Christine starts off by taking off the old linen and then step by step makes up the bed. By making use of her touch sense she can distinguish between the fitted sheet, the duvet cover, duvet inner, cushion covers and cushions. To demonstrate that she is indeed using the correct duvet cover colour and design without the ability to see, she explains:

> This was a cheap buy and because of the lack of quality of the material, it has created a lot of woolly bits on the fabric. So, I know exactly which duvet cover this is.

Similarly, Adrian, makes use of touch when he distinguishes between different items of clothing when getting dressed. He explains:

> I can feel the texture of the different fabrics. Otherwise, I feel, the answer lies in organisation. I organize my cupboard in such a way so that I know what is on top, what is to the left, and so on.

All these activities among the blind can be understood as structured in accordance with the model of functional literacy proposed by Perry. Although there are no text involved, it does contain all the elements as included within a literacy practice, from intent, features that replace the presence of text accessed through the blind individual's other remaining senses (including human sponsors) a social purpose to the practice, a domain and context.

In addition, these practices have rules and interpretive competencies on the part of the participants (Heath, 1983:93). These literacy practices create meaning in the contexts used and it gives power to the blind individual to be independent.

4.3.3. Different literacies associated with different domains of life

Literacy practices differ from one domain to the other. Each of these domains are structured, patterned contexts within which literacy is learned and used (Street and Lefstein, 2007:146. In like way, the strategies that the blind use to interact with, and interpret, their environment, are also patterned and structured differently across domains. It is at their homes, in their own domestic environments, where blind people could arrange their environments to ultimately suit their needs. Here things are under their control and the predictability of this arrangement makes up for the lack of sight, the lack of visual literacy. It allows them to create a stable image of their environments in their minds.

Consider the home of Veronica and André, their domain. They stay in a very neat three bedroomed house in Kraaifontein. It is super clean and neat, almost to the extent that a sighted person might describe it as impersonal. Furniture is moved against the wall so that it cannot cause them to walk into it. There are no curtains in front of the windows, something that might be a priority for a sighted person. In the study, braille books are neatly packed on a bookrack. When Veronica goes outside to take off her washing, the washing line is right next to a sparkling blue pool and the lawns are neatly cut. Veronica knows her environment well, again demonstrating how she created an image in her mind of the area. She moves with ease around the pool, touching the clothes on the line to feel if it is dry. Around the house the high fences are evidence of the couple's security improvements.

The adaption with the lack of the visual in her domestic environment, is also evident on a visit to Cindy's home. Cindy shares the house with her partner, Frank, and their small boy. A sighted person will be able to see that his or her floor is dirty, but Cindy has made another plan, relying on her sense of touch:

When I sweep the floors, I take off my shoes, because then it is much easier for me to feel if there is still dirt on the floor. Then afterwards, I will go on all fours and clean the floor with a wet cloth.

Of these previous two examples of Veronica and Cindy, also involves a husband and a partner respectively that cannot see. In Cindy's case, Frank's mother also shares the house with them but Cindy likes to independently manage the household. Cindy's little boy, although he can see, is still too small to help in the house. Veronica's children already left the house, leaving her and André alone in their house.

But what happens when a sighted person with an active role in the household is present? How does this visual literacy sponsor influence the organisation of the home and environment?

An example that sheds light on this question is the home of Derrick. On entering Derrick's house I notice that this house looks different from the many I visited the past few weeks. It is filled with antiques and beautiful original paintings. There is a lovely colour scheme running throughout the house. Derrick walks without his white cane, because he knows his surroundings. Derrick explains:

> We moved in here eight months ago and it took me quite a while to get used to the house and the way it is organized. I can only say that now, eight months later, I feel more comfortable. Luckily, my wife understands, and she is not one of those that regularly rearrange the furniture.

In this remark Derrick describes the problems blind people experience when their environments change – their ease of manoeuvring in their surrounding is dependent on it being predictable, in line with the mental picture they formed. Unlike sighted people that can see when things change around them and make certain accommodations for it, it is not possible for the blind that need to make use their other senses to overcome these obstacles.

One of the participants in this study, Adam, describes how he arranges his domestic environment to accommodate his disability. Adam, although he can see a bit in one eye, is blind in the other. When people come to visit, he asks that they would sit on his right side, the side on which he still has some sight:

> I don't like when somebody sits to my left, because it is my blind eye and I cannot see any movements on that side. To see them, I have to turn my head totally around.

In their home environments the blind can create circumstances that suit them and allow them to compensate for their lack of sight by using their remaining senses. The predictable organisation of this domain is clear from the observations made at all the participants' homes. It is, however, when the blind venture outside of this

controlled environment, that they experience some problems. For example, Adam who decides where people could be seated in his home to ease his communication with them, cannot do the same when he is outside of this domain. Adam, who can still see bit, is also faced with another problem:

> People cannot judge how much you see. To them, you can see so they expect the same of you as from a normal sighted person. So they don't offer help and expect you to be able to what they do.

Domains, although distinguishable from one another, also overlap. A career is a direct link to the income and level of independency a blind individual can experience.

Paul has been a switchboard operator at Stikland Hospital for a number of years. He is fortunate that his employer understands his needs and made his work conditions as accommodative to his needs as possible, with a switchboard with the newest technology enabling him to utilize his remaining senses to execute his tasks. In cases where the employer does not understand the needs of the blind employee and his or her true potential, it leads to the blind individual not being promoted or utilized in other capacities.

Veronica's husband, André, was born blind and he is occupied as a LAN support technician. André is a specialist when it comes to computers and he helps a lot of blind people in the area to use the computer:

> My husband would have been much further in his career if it was not for his blindness. Although he is good with what he does and his work environment is good, they still put limitations to what he can do. One of the unfair things that happened to him was that the position that he is in now, he already applied for seven years ago. And, although it is office based, they turned down his application

> because he does not have a drivers' license. And today, he is still doing the job, without a drivers' license.

Veronica goes on to explain that it all depends on the willingness of the employer to take a chance and to give you an opportunity:

> After years of being a switchboard operator I couldn't take it anymore - the same thing day in and day out. So, a colleague of mine suggested that I apply for a position as secretary. My boss and colleagues were very wary of what I could do. So, one morning at a staff meeting, I asked for an opportunity to explain. I explained to them how I can use a computer with the speech programmes and most other tasks. So, my boss said that he doesn't see a problem and they appointed me. It is all about making what is unfamiliar to sighted people, familiar to them.

Adam is blind in one eye, with limited sight in his other eye. He experiences regular pain in his eyes for which eye drops don't help:

> The one eye works very hard to do everything, causing my eyes to feel fatigue very easily. That is also why I need enough sleep, otherwise I have a lot of pain in my eyes, leaving me very frustrated.

As an administrative clerk at work, Adam makes use of Zoom-text, a text enlarger, to make the letters on his screen larger:

> I do my job the same way as any other guy. Only when the work gets a bit much, I struggle a lot from eye fatigue. It becomes difficult because you don't want to say no to somebody.

What we see from these examples is that different domains require different types of 'code' in order that the blind can interpret and orientate themselves in the

domain. Just as different literacies appear in different domains, and allow visually literate individuals to function in those domains (think of a car license renewal at the traffic office and the type of check-box literacy that activity requires, when compared to the writing, signing and witnessing of a will) so are different codes, literacy artefact and interactional routines more or less appropriate for different situations an d the varying capacities of the blind. Based on the utilization of their remaining senses, blind individuals can make sense and share meaning in the distinguishable domains as underpinned in the social practice approach.

4.3.4. The influence of social institutions and power relationships on literacy

Just as dominant socially powerful institutions shape what visually based literacies are sanctioned or prohibited in particular domains, so do schools, government in general, employers and institutions that grant funding, all play important roles in the forming and practice of 'literacy' for the blind. These institutions, however, normally support the dominant literacies in society, while the lesser literacies, as those of the blind, are not receiving equal attention and support.

As could be seen from the life histories of the blind adults that took part in this study, the majority of them attended a special school. Here the foundation of their academic literacy was laid with instruction on and in braille. This tactile code, also based on the dominant literacy of the sighted ABC, becomes less important as the blind adults have to cope in society that does not support braille as its major medium of communication. Taking its place, are remedial literacies to function effectively as part of society.

An income provides the means to independence and self-sufficiency. This makes employers a very powerful force. Employers need to be willing to support the literacy needs of their blind employees. Adam describes the difficulty of being disabled and getting a promotion at work:

> I don't get promotion at work and have remained on my current level for many years. Ten years ago I was nominated at work to be trained as a panel beater but due to the dust that affected my eyes, I could not do it. Ever since then I am on post grade 3, and I cannot improve my situation because my salary stays low. My work load is not meant for somebody on Level 3, but rather somebody on Level 7. I spoke to my supervisors and the unions, but nothing came of it.

Derrick is a retired physiotherapist. He also describes the frustration of employers not having a clear understanding of blind people and their needs and contributions to the work place. When Derrick finished his studies in London in the United Kingdom, he started his career as physiotherapist at Tygerberg Hospital. He says:

> It was quite ironic that Stellenbosch University and Tygerberg Hospital did not want to train blind physiotherapists in South Africa, but now they offered me a position. I got the position at Tygerberg Hospital without any interviews, a bitter pill for me to swallow to this day. Why did I, as a South African, had to go abroad and study to become a physiotherapist and then this institution that did not want to train me, offered me a position. To this day they are picking the fruits of trained physiotherapists, but don't want to invest in their training.

Over the years Derrick has built up a very successful practice, which eventually moved to Bellville where they stayed for the past 35 years. In his practice he could arrange his circumstances to fit with his literacy practices. He even had a secretary that could read braille.

> We stayed in a big house in Bellville. We lived on the one side and my practice was on the other side. My surroundings became so

> familiar to me that I knew every bit of that house. I could get up in the mornings, and without touching or bumping into anything in the house, I could go to my practice on the other end.

The most important literacy sponsor in the work place, the employer, in most cases does not fully understand the needs of their blind employees. Some employers do help, like Paul working at the switchboard of the hospital that is fully accessible to him, and Christine, also working on the switchboard at SAPS, managed to arrange transport through her employer.

But the reality is that most blind people appointed at the switchboard never get the opportunity to venture beyond the switchboard to further their careers because employers don't understand their needs and the perception exist that because you are disabled, you are not able to do more. This means that many blind individuals stay in these low-paying, entry-level positions. This picture is even worse because as a blind person, you need to be able to pay for assistive devices, transport, guide dogs and in some cases even a helper to assist. As Paul mentions:

> We need the help of the government to make assistive devices more affordable for blind people. Due to limitations to access education and different occupations, blind people normally don't earn that much. Then, government websites and the systems that they implement should be more accessible to blind people. This will help blind people to get better jobs.

The government, as the most important service delivery agent in South Africa, has the power to support the needs of blind people, but also sometimes fails them. Two years ago Veronica had a terrible accident that could have cost her life. She tells the story in her own words:

> One day I walked down the street to the shop. Suddenly I fell into a man hole. Thieves stole the covers of the man hole because it was

> made of metal and they could sell it to a scrap yard. The issue was reported before I fell in, but the municipality did not come and fix it. After my accident they eventually came to repair it but again with a metal cover, which got stolen yet again. So, at this stage the hole is open again. I must admit that this incident made me lose my confidence to walk to the shop on my own. You never know if there is another hole in the road somewhere again. I hear that there is another man hole in the same street that does not have a cover. I have not recovered emotionally from this incident and won't walk to the shop on my own again.

The public transport system in South Africa is a big headache not only for blind people, but for all South Africans alike. For blind people it involves more – it involves that they cannot see all the visual cues including train numbers, door openings in trains and the names of stations on the way. Apart from these difficulties, very few stations have public announcements systems to announce trains and give details to passengers. As Paul states:

> I don't think that the needs in our country exist only for blind people but for all people. The biggest of these would be to upgrade our public transport systems.

Adrian mentions that a public announcement system will help people like the blind that need to rely on their hearing senses:

> Some stations have a public announcement system and every new train is announced. This is, however, not always in working order and at other stations there is no such system in place. If this could be improved, it will definitely help blind people find their way.

Veronica's husband André walks to the station with his guide dog. He is then, however faced with further problems, like she explains:

> Can you imagine being blind and you need to get on the train? People need to pull you into the already full carriages, with a dog. It is very dangerous because your foot can slip and you can fall. Trains get cancelled often, meaning that all passengers need to make use of the few, overcrowded trains that run.

Paul, who makes use of a guide dog, says that it is not easy to attain a guide dog.

> Even if you get a guide dog, it is almost impossible to get one without a sponsor because they are so expensive. Then, you need to have a house with a yard to keep the dog, which is also more expensive – too expensive for the average blind individual in our country.

Relationships that also have a powerful influence on the remedial literacy of blind adults can include those closely around them, like family and friends. These people act as literacy sponsors, which can assist them, but also have a power over them because certain information can be withheld. For instance, Derrick's wife would read certain bits of the daily newspaper to him. The articles that she reads are those that she thinks might interest him. Also in Frank and Cindy's household where both of them are blind, Frank's mom plays a similar role when they receive post, and although they have arranged for most of their correspondence to be sent to them electronically and thus making it accessible to them, there are some institutions that still insist on sending correspondence through post:

> I sometimes struggle with some institutions, like Standard Bank, to receive my correspondence electronically. Then my mom has to read it.

When they have to go shopping, Frank and Cindy is frustrated by the reality that they need someone's help:

> It is very difficult to rely on the goodness of others to get somewhere. We like to buy our groceries in bulk at Makro. The nearest Makro is at Cape Gate. Then, because the shop is normally very busy on a Saturday, the person taking us there needs to wait till we are finished. Sometimes they also have other things to do. We have a Shoprite close to us to buy smaller things but I cannot walk there because Eerste River does not have pavements. So you need to walk in the street and it would be too dangerous. So, if I walk there, it will always be with a sighted person.

Cindy, alike, needs to make use of Frank's cousin when she needs clothes shopping:

> She will describe the garment to me and I will feel the material.

It is clear from these relationships, that the power belongs to the person that sponsors the literacy. We note from these narratives how a wide range of codes in different modalities replace or compensate for the lack of visual literacy for particular purposes. Instead of reading a clothing label for price, size, colour and type of material of a piece of clothing, Cindy uses touch and the assistance of a sighted person, and/or an assistive device called a colour meter. Switchboards can be designed to facilitate the independence of the blind.

4.3.5. Purpose of literacies in meeting social goals

The social literacies framework tells us that literacy practices are means to an end. In other words, the focus does not fall on the literacy itself but what it is used for within a particular social context. Thus, in order to understand the significance of lacking visual literacy, we need to understand how the blind reach the goals and purposes for which sighted people would employ text. The remedial literacies that

blind people employ are at first glance very general, day to day activities, but if you look deeper into them, you will find all the facets of a literacy event, which in the circumstances of the blind are even elevated because it gives them the means of independence and self-sufficiency.

Taking care of your children is a human trait and similarly blind people also have to take care of their children. The dynamic differs in different home environments, depending if both parents are blind and if either the mother or father could see. It is especially difficult for blind mothers because the taking care of a baby mainly falls on the shoulders of the mother. Cindy became a mother in 2009 and tries to cope with the tasks that come with this role:

> The one thing that I found very difficult was feeding my baby. To find the mouth with a spoon is not easy when you are blind. To clean diapers was not a problem to me, because where I grew up there were always babies to look after. So I was used to it.

Demonstrating the skewed view that people have about the capabilities of the blind, Cindy says that when sighted people wonder about the way that she copes as a blind person to care for her boy, they will never ask her directly.

> They will ask the person next to me 'How does she cope?' as if there is something mentally wrong with me too and that I cannot answer the question myself. Depending on the mood I am in on the day, I will interrupt and answer the question myself.

Veronica adds to this and how she overcompensated for her lack of sight when she looked after her daughter, making sure that no one could ever find fault:

> People always used to say how neat my daughter looks. But I always concentrated on it that she is neatly dressed, with clean and ironed clothes, because it won't create a positive picture to the

> people out there if she looked neglected at all. Also when she was at school the feedback we received is that she is such a neat child. It was something I really concentrated on because people will judge you because you are blind.

This is, however not the same view that children have of their disabled parents. According to Cindy, her little boy acknowledges readily that his dad cannot see, but because she still cooks, irons and cleans the house, it is as if he doesn't notice her blindness so much.

> I think he feels that I am still taking care of him in the normal way.

Blind dads also try to support their wives in taking care of the children. Ferdi tells about the things he can support his wife with and which things are more difficult for him to handle when it comes to the taking care of their small child:

> One of the areas that I struggle with is feeding her. To give her a bottle is not a problem, but when it comes to feeding her with a spoon I struggle to manoeuvre the spoon to find her mouth. Because I struggle with this, I rather leave this to my wife to do. I have bathed her before and then there are the dirty nappies… Here I would describe my success as average. It is trial and error. Luckily, thus far, I did not have to clean the heavily soiled nappies and came off a little lighter.

Derrick and his wife have a son and daughter. Both are medical doctors and married. Both worked in Canada, but their son has recently returned to South Africa.

> My dad was a railway worker with only Standard 4 behind his name. He always encouraged us to further our studies to improve our circumstances from his. That is what I did, and today I can

proudly say that is what my children also did, improving again on their circumstances.

When my son was still small, he said one day: 'When I am grown up, I want to be a mommy'. So, we were quite shocked to hear our son say something like that. It turns out that he wants to be a mommy, because the mommy gets to drive the car. Because of my blindness, my wife always had to do all the driving, something the children picked up on.

Our children grew up to be very responsible from a young age, helping with tasks around the house. My son, for instance, would climb onto the roof to fix something or braai the meat at a very young age. I think, these responsibilities helped them later in life and that is why they got so far with their studies and careers.

On the subject of clothes shopping for her boy, Cindy explains:

Frank's cousin knows my taste very well and she will normally accompany me when I go shopping for clothes for my son. She will describe the garment to me and I will feel the material. Then I will decide if it is the correct clothes to buy for my boy.

Another participant, Kuanita makes use of an assistive device called a colour detector to detect the colour of a garment when getting dressed.

This is a colour detector which I use to determine the colour of something, especially for clothes that I wear. If I hold it against my top and press this button, it gives me an indication of the colour. It is not always totally accurate but it gives me a good indication. Another button on the device could be pressed to tell if the lights in your house are on or if it is dark. The texture of material also tells

me what garment it is. You make mental notes about the colour and also listen to what other people say about the colour.

South Africa with its high crime rate hold particular challenges with regard to security for its citizens. Houses are secured with safety gates, burglar bars, electric fencing, access controlled gates with intercoms and even large dogs. To ensure that your environment is secure relies mainly on your ability to see. Take, for example, what you would do if you hear a strange noise outside your house: you will go investigate by looking what it is. In the absence of the ability to see, it comes at no surprise that security needs of their families are one of the main concerns of the blind participants in this study, especially the male participants that feel the need to protect and keep their families safe. As a father and husband, Ferdi is also concerned with the security of his family:

It is always something in the back of my mind. I continuously ask Elize, my wife, if the gates are locked almost to a point that it can become irritating. Because I cannot establish for myself if the gate is locked, I constantly ask to make sure. Then we also have electric fencing around the house. But I try not to get paranoid, otherwise you will never be able to sleep. Sometimes Elize will wake me up in the middle of the night to say that she has heard something outside. There is not much I can do and then we trust that it is a mouse or something.

Veronica tells about an incident that happened at their house a few years ago. It is like something straight out of a movie thriller. She tells the story like this:

It was the 23rd of December. My brother visited us because there was some painting to be done in and outside the house. He was playing games on the computer and I said that he should rather use the earphones because André has already gone to bed. While he was playing games, I decided I am going to listen to a book. So I

made myself comfortable on the couch in the sitting room, a small blanket over my legs, put in my earphones and pressed play. I must have dosed off while listening to the book but suddenly I was awoken with a loud crashing sound. I sat upright. Remember the house is pitch black because we are blind and don't see the need to put on the lights. I listened if I could hear something. I was wondering if it was my brother but suddenly I heard another loud noise. Something was wrong. So, without my shoes on, I walked towards the study and stood still in the door. I heard a noise at the window. Till this day I don't know why I did it, but I walked towards the window and stuck out my hand. My hand went through the window and suddenly I grabbed hold of a thin arm. I jumped around and run into the passage and started screaming: 'There is someone in the house.' My brother came out his room and started firing his pistol towards the window. He shot the one guy in the arm. They ran off with the computer's keyboard. Turns out, the other one was sitting underneath the table trying to disconnect the computer when I came into the room. The police were there in two minutes and arrested two of the three guys. They were released on parole and, due to the incompetence of the investigating officer, the case was eventually thrown out of court.

Since the incident they have made the house safer with an intercom system and high fencing around it. Frank and Cindy are also security conscious around the house. When they are alone in the house they always keep the safety gates closed and they are very conscious with keys – never leave keys in the door. Outside they have dogs that help to protect them and then a sliding gate in front of the house that also locks.

There is more that we can do. Cindy and I want to install an intercom at the gate, because sometimes late at night someone will stand at the gate and call but I don't feel comfortable to venture

> outside, not knowing who is standing there. Then, the house is equipped with an alarm system but it is currently not connected to an armed response.

What becomes clear also, as with the previous section, is the dependence of the blind on complex networks of support – including objects, dogs and assistive devices, as well as persons – to mediate their engagement with the environment. Although independence is what blind adults strive for, there will always be some tasks where they will need the help of sponsors to assist.

4.3.6. Informed learning and sense making in the acquisition of new literacy practices

The life histories of the ten blind individuals that formed part of this study showed that their literacy practices changed throughout their lives - from the academic based literacy of school to the social context of adulthood in which their literacy takes on a remedial role to enable them to meet their practical needs. The domestic environment, as focused on in the observations made in this study, is evident of a lot of literacy acquisition that takes place informally through socialization and their mere participation in social activities. For instance, Veronica is quite an accomplished cook due to the things that she learnt from her mother since a very young age:

> When I bake, it comes naturally. The skills I got from my mom that did not treat me different from her other kids and she believed that every girl should be able to cook. So I bake without any measurements – I guess and it is something that came over time and is now instinctive.

According to Brandt (2001:556), agents who enable, support, teach, model as well as recruit, regulate, suppress or withhold literacy are called literacy sponsors. In their domestic environments the blind participants made use of literacy sponsors

to a lesser or greater extent. The role of the literacy sponsor is mainly focused on the need for a person that can help with tasks that is dependent on the visual. This can vary from cleaning to the reading of post.

For instance, Christine will sometimes call on her son for assistance, with tasks like matching socks when it comes out of the wash. She also has a domestic worker that assists her with things that she is unable to do, for instance cleaning marks on the walls.

Veronica, although very independent, also needs the help of others sometimes:

> The only times that I might ask for help is when something falls and I cannot find it again. Then I will ask the neighbours' children to come help me to find the item.

Kuanita says that when she turned blind, she turned to other blind people for advice on how to cope. One of the people she met was Mark, a blind guy, who opened the possibilities for her that she has as a blind person.

> He introduced me to the world of the blind. Suddenly I got to know of a variety of audio devices. Like this talking watch to tell the time.

Kuanita says she feels that blind people needs to tell the people around them what they need and how they can assist:

> We are fortunate to have good neighbours and they are very interested in how I live. She will sometimes come over to do my makeup and was astounded to see that by the time she got here, I already applied my foundation and how neatly I have done it. Then Louis (her husband who is partially sighted) will also regularly

> jump in, after I applied my own foundation, to apply the 'war paint' on my eyes.

Sponsors of literacies include schools, parents, domestic partners and support organisations for the blind, but the most important sponsor for literacies are other blind people. Blind people hear from each other what works and what does not. It is especially the blind individuals that lose their sight later in life that learn a lot from their blind peers. It might be quite controversial, but for the blind, a guide dog can also be a literacy sponsor, making up for some of the visual cues that a sighted person takes for granted. Adrian had a guide dog that recently passed away. In contrast with the amount of freedom he experienced with the help of his guide dog, he now relies on his white cane and the help of others. When it comes to mobility in an around the house, he experiences no problems, but when he ventures outside, he needs help:

> When I had my guide dog, I managed to cross main streets with ease, but it's something that I won't endeavour to do with my white cane. With my guide dog I also made use of trains as means of transport but I don't feel at ease to use it on my own.

Porter is Frank's guide dog. This is his second guide dog, since the previous one retired. Frank demonstrates how his dog assists him in walking down the street, acting as his eyes: He puts the harness on the dog. The dog is totally obedient and patiently waits till the process is finished. Frank gives him a command and they walk out of the house and out of the front gate, down the street. They walk on the left hand side of the road. Today Porter has got his work cut out for him because Frank's boy is also with them on his bike. At the end of the road, the dog stops and Frank stops, holding his son's hand. The dog sees if there is any oncoming traffic. One vehicle passes and they cross the road. Coming back, the dog takes Frank to the opposite side of the road, left hand side of the road again.

Paul, himself making use of a guide dog, says that it is not easy to attain a guide dog:

> Even if you get a guide dog, it is almost impossible to get one without a sponsor because they are so expensive. Then, you need to have a house with a yard to keep the dog, which is also more expensive – too expensive for the average blind individual in our country. But I am fortunate to stay on the premises of the hospital where I am employed, so, with the help of my guide dog, I can get to work easily.

By way of summary: In the above, I have attempted to embed the narratives of my participants in a social literacies framework that sees literacy as a purposeful, socio-semiotic accomplishment that changes over time and in relation to different domains and is subject to the norms of dominant social institutions. In doing so, I have wanted to bring out how my participants cope with their lack of sight through a range of remedial practices, and how these practices – or codes - of making sense and orientating to the environment can be seen as equally determined by similar parameters - such as institutional power relations - to the codes of literacies. However, just as importantly, is the emotional framing in which remedial practices occur: the fear and insecurity of not having independent agency and mastery of the circumstances weighs heavily on the blind – as we saw with the security issues experienced by Frank and Cindy, and adds to their feelings of vulnerability. In an important sense, visual literacy contributes to vulnerability.

5.3. Conclusion

After listening to each of the participants life histories, what we could call 'the remedial literacies' of the blind adults were described according to the six propositions suggested by Barton, Hamilton and Ivanic (in Street and Lefstein, 2007:14). The narratives of each of the blind participants proofed how literacy is a life-long event, changing according to different domains, influenced by socially dominant institutions and sponsors and how it is applied to meet social goals.

Intrinsically literacy has value. For blind adults that struggle to function

effectively with their functional literacy skills, it can lead to shame, fear, dependency, frustration and a difficulty to adjust to change. Examples that were mentioned are emotional damage because of being perceived as different, dependency on other people for reading and transport, lack of career development because of a lack of opportunities and understanding, and the importance of the known environment versus the unknown environment when it comes to mobility.

In the next chapter, the findings from the observation phase of the study are reported to answer research sub-questions b and d: *How do blind individuals cope in their everyday lives without the ability to access visual messages?* and *What role do New Literacies play in the lives of the blind?* In particular, the chapter picks up on the various ways touched on here that the blind make use of alternative semiotic codes, artifacts and networks in order to engage meaningfully with the environment. Attention is given to specific examples of objects, employed by the blind in their daily lives to mediate for the shortcoming of not being able to access the visual.The chapter concludes with a discussion of the different kinds of objects in the literacy landscape of the blind and with a discussion of how 'objects' can be seen as part of the semiotic landscape.

Chapter 5

Getting on in the everyday

5.1. Introduction

To gather real examples of how the blind get on in their everyday lives, and to explore the forms of literacy that they are able to employ (with the wider notion of functional literacy), each of the ten participants that were introduced in the narrative, life history phase of enquiry in chapter four, were visited at their homes. In their home environments, a personal space where the blind can orientate themselves with greater ease, we find an ideal cosmos of meaning making to further give answer to sub-questions b, How do blind individuals cope in their everyday lives without the ability to access visual messages?, and c, What role do New Literacies play in the lives of the blind?

I noted in the previous chapter that the blind participants organized their interactions with the environment, among other ways, through the judicious use of artifacts or objects in place. In the section to follow I look more closely at the ways in which objects and artifacts remediate for the loss of the visual sense. The everyday literacy practices of the blind that are multimodal and multisensory in nature includes a dynamic relationship with objects.

5.2. The role of objects in meaning making for blind adults

To see how the blind naturally co-exist with objects in their lives provides undisputable evidence of the prominent role of objects and artifacts. By making use of one or a combination of their remaining senses the blind construct their social reality in which their literacy is fused with the presence of objects and artifacts.

On visiting the blind participants in their own real-life environments, their homes, it is evident that the environment is organised to fit their own needs. From the way that furniture is organised, the décor in their homes, the organisation of their cupboards and fridges, to the way that their gardens are laid out, all of these

objects are set out to be predictable, accessible and to ease mobility. The home environment is the one space that they have control over to make their lives as easy as possible with the use of their remaining senses.

5.2.1. Arrangement of furniture and other objects in the domestic environment

Consider the home of Veronica and André, a blind married couple. They stay in a very neat three bedroomed house in Kraaifontein. It is super clean and neat, almost to the extent that a sighted person might describe it as impersonal. Furniture is moved against the wall so that it cannot cause them to walk into it. There are no curtains in front of the windows, something that might be priority for a sighted person. In their study, braille books are neatly packed on a bookrack. All of the moving objects are organised to create a functional space in which they feel comfortable – without risks of continuously bumping into objects and also to create an order that is familiar and predictable. When Veronica goes outside to take off her washing, the washing line is right next to a sparkling blue pool and the lawns are neatly cut. With the object of a washing line, next to pool that might seem dangerous for a person that cannot see, Veronica demonstrates that she has control over her environment well - she created an image in her mind of the area. She moves with ease around the pool, touching the clothes on the line to feel if it is dry.

On entering Derrick's house I notice that this house looks different from the many I visited in the past few weeks. It is filled with antiques and beautiful original paintings. There is a lovely colour scheme running through the house. Derrick walks without his white cane, because he knows his surroundings. Derrick explains:

> We moved in here (to the old age home) eight months ago and it took me quite a while to get used to the house and the way it is organized. I can only say that now, eight months later, I feel more

> comfortable. Luckily, my wife understands, and she is not one of those that regularly rearrange the furniture.

In this last remark, Derrick demonstrates that for a blind person to function effectively in their environment, there should be a minimum movement of objects. This arrangement of his landscape assists him only when objects stays in one place. The difference between Derrick's house and those of some of the other participants, the décor and the organisation of things in the space also gives a clue on who else stays in this house – Derrick's wife can see, thus these objects to beautify a space has got meaning for her but to accommodate her husband's blindness, she needs to keep these objects remaining in their original order to create a pattern that can become familiar to her blind husband through his regular interaction with these objects.

Derrick was a physiotherapist before retiring. Over the years Derrick has built up a very successful practice, which eventually moved to Bellville where they stayed for 35 years. In his practice he could arrange his circumstances to fit his everyday needs. He even had a secretary that could read braille.

> We stayed in a big house in Bellville. We lived on the one side and my practice was on the other side. My surroundings became so familiar to me that I knew every bit of that house. I could get up in the mornings, and without touching or bumping into anything in the house, I could go to my practice on the other end.

In this remark Derrick describes the problems blind people experience when the arrangements of objects in their landscape change – their ease of manoeuvring in their surrounding is dependent on it being predictable, in line with the mental picture they formed. Unlike sighted people that can see when things change around them and make certain accommodations for it, it is not possible for the blind that need to make use their other senses to overcome these obstacles.

What happens when the objects in their known environment gets moved? In the case of Veronica, it caused emotional trauma and led to her self-dependency taken away from her: she was walking to a shop near her house and suddenly fell into a man hole. The cover of the manhole was stolen.

We recall how yet another participant in this study, Adam, describes how he arranges his domestic environment to accommodate his disability. Adam, although he can see a bit in one eye, is blind in the other. When people come to visit, he asks that they would sit on a chair on his right side, the side in which eye he still has some sight.

5.2.2. Arrangement of objects in the kitchen

On visiting one of the participants, Christine, offers to make toasted sandwiches. Christine knows her kitchen. All the objects are placed so that she could, by touch and by regular practice, move around her kitchen effortlessly.

Christine, who just came back from shopping when I visited her, demonstrates how the order of things is important for her to make sense of it by packing produce in her fridge. By feeling, she arranges all the objects where they should fit according to a clear pattern or order she has developed – water in the fridge door, butter on the top shelf and cold meats in a small drawer in the fridge.

When Christine starts to make the toasted sandwiches, she demonstrates how she makes use of her remaining senses to manage the task, including feeling in an organized drawer for a sharp knife; taking out the butter out of the fridge, opening it and smelling that it is indeed the butter; spreading the butter onto the bread, carefully feeling that it reaches the corners of the bread; switching on the toaster, smelling it warming up and listening for the soft tone that indicates that it is has reached the desired temperature. Christine would not have been able to complete this task with such ease if the objects in her kitchen were not ordered in such a

way to enable her to make sense of it. All objects have a specific place that she can access with her remaining senses.

Another blind participant, Paul, also demonstrates how the organisation of things in his kitchen assist him to make sense of it and how this organisation enables him to complete tasks with his remaining senses. On arrival he enquires if I would like some coffee. He walks to the kitchen followed by his faithful guide dog. He switches on the kettle and gets out the cups from a cupboard slightly removed from the kitchen. He explains:

> This is my fancy white cups.

Paul demonstrates that the fancy white cups are packed in a specific cupboard and from its distance from the kettle, I guess that he only takes it out on a special occasion because there a more cups standing on a shelve close to the kettle. The specific organisation of the objects, cups in this case, demonstrates a specific familiar pattern, enabling him to make sense during the activity of making coffee. Everything during this activity is organised: the kettle is standing on its 'usual spot', the specific cups are in a specific cupboard and the condiments of coffee, sugar and milk are accessible, because they were not moved from where they are usually placed.

Kuanita also enjoys cooking and describes how important the order of things in the kitchen is by remarking:

> I have a certain knife that I prefer to use and you don't dare take it out of its place.

5.2.3. How order in a clothes cupboard can aid effective sense making

Adrian makes use of touch when he distinguishes between different items of clothing when getting dressed. To make sure that he dresses correctly, that is, colours matching or a specific pair of pants or a specific shirt, order if of the utmost importance for him when it come to how his clothes cupboard is organised. He explains:

> I can feel the texture of the different fabrics. Otherwise, I feel, the answer lies in organisation. I organize my cupboard in such a way so that I know what is on top, what is to the left, and so on.

5.2.4. Objects that assist

Assistive devices, are, as the name suggest, objects that aid the blind to access information by utilizing their other remaining senses. For instance, Kuanita makes use of an assistive device called a colour detector, an audio device, to detect the colour of a garment when getting dressed. She explains:

> This is a colour detector which I use to determine the colour of something, especially for clothes that I wear. If I hold it against my top and press this button, it gives me an indication of the colour. It is not always totally accurate but it gives me a good indication. Another button on the device could be pressed to tell if the lights in your house are on or if it is dark. The texture of material also tells me what garment it is. You make mental notes about the colour and also listen to what other people say about the colour.

Adrian demonstrates how he accesses audio library books:

> This is the Victor reader. It reads different kinds of audio files. I received this audio book from the South African Library for the Blind entitled 'Vroueuit die Bybel' (Women of the Bible). The CD is posted to me and when I am finished with it, I merely turn the address

> section on the sleeve around to post it back to the library. This is a free service for blind people in the country. Also the player comes on loan from the South African Library for the Blind. I can forward and rewind the book, and also set a timer. So, I can set it to turn off after fifteen minutes. One of the nice things about this is that I can continue with other things while still listening to the recording. I guess you could call me a lazy reader.

Kuanita, who became blind later in her life, can read a bit of braille but mostly makes use of audio assistive devices in her life:

> Here is what is called a pyramid clock. If I press this button it tells me the time. Then it can show you the time here at the bottom for normal sighted people, which I don't use. It also has an alarm that I can set and it can ring in different tones. I have a scale to weigh myself, also with audio and then there is the liquid indicator that you can use when pouring warm liquids to determine the level – it buzzes when the water in your cup gets to a certain level. And then there is the money stick and coin box that can be used to determine the monetary value of currency – each note and coin fits into a size slot.

Other objects employed by Kuanitaare specifically aimed at assisting her with health issues that she struggles with. For instance a blood pressure meter with a built in speech programme:

> I press here. And then the voice would say if it is ready to take the measurement.

Kuanita presses the button and a women's voice says 'ready'. The machine starts pumping. After a while it starts giving the readings – the systolic and diastolic reading and her heart rate. Then the machine gives a diagnosis and the voice says 'reading normal'.

Kuanita has been a diabetic since the age of eight. The next instrument she demonstrates is a glucometer:

> This is the instrument that you use to prick your finger. If you pull here at the back it 'clicks' and then you know it is ready to take the blood sample.

Kuanita's practiced hands feel around until she gets the little sample sticks. Each stick is equipped with a little memory plate that calibrates the machine.

> I can feel the ridges of the plate, so I know which side should go in.

Kuanita puts the stick inside the device. The voice comes up to say it is ready. "Apply blood now". Kuanita pricks her finger and applies the blood to the stick. "Reading in progress," says the voice. The results come through and the voice says "30,6".

> That is a bit high but I have not injected insulin today and I had a cookie earlier.

She gets out the injection pen and sets it to the correct amount of insulin she needs, ten clicks this time. She then takes the needle and injects herself in the stomach.

These assistive objects gives power to the user, enabling them to access information or formats that were in its original design, meant for the sighted to use.

5.2.5. A guide dog as an object

We can see the guide dog as an object, not, of course in any way to suggest it is a lifeless object, but more through its function to aid literacy. A guide dog gives its

owner the freedom to bridge spatial distances and domains. Guide dogs and their owners share an emotional relationship, giving its owner a feeling of freedom, ease of mobility and even companionship.

Adrian explains how much a guide dog has meant to him when he had one. His guide dog recently passed away. In contrast with the amount of freedom he experienced with the help of his guide dog, he now relies on his white cane and the help of others. When it comes to mobility in an around the house, he experiences no problems, but when he ventures outside, he needs help:

> When I had my guide dog, I managed to cross main streets with ease, but it's something that I won't endeavour to do with my white cane. With my guide dog I also made use of trains as means of transport but I don't feel at ease to use it on my own.

On visiting another participant, Frank, I was given insight on the assistance a guide dog gives to its owner. Frank, holding the hand of his son, guided by the dog, Porter, walks down the street. It gives Frank the freedom of movement and a means to meet his needs. The relationship between the human and object is naturalised, part of the family.

Paul, also making use of a guide dog, says that it is not easy to attain a guide dog:

> Even if you get a guide dog, it is almost impossible to get one without a sponsor because they are so expensive. Then, you need to have a house with a yard to keep the dog, which is also more expensive – too expensive for the average blind individual in our country. But I am fortunate to stay on the premises of the hospital where I am employed, so, with the help of my guide dog, I can get to work easily.

5.2.6. Beyond mobile communication - cellphones

According to the Pew Research Centre (2015:3), 90% of South Africans own a cellphone of which 34% are smart phones. Cellphones have transformed communications in South Africa because it also allowed many people who did not have a landline due to a lack of infrastructure, to skip the landline stage and jump right into the digital age. According to this report, only 6% of South Africans have a landline in their household.

The cellphone, an object, also opened up doors for blind people. With its ability to give audio cues to the user, a blind person can navigate the device with ease. These mobile objects have become one of the most important means of crossing boundaries of communication with other people because it is based on audio, making it accessible to the blind.

Consider these observations made during the visit to Christine: Her phone rings. She answers it by touch. Under conditions where a caller's number was saved on the phone, Christine would have received an audio cue on who is calling but not this time, and she asks:

> Have you changed your number again? You must let me know, otherwise I don't know who is calling me.

All numbers on Christine's phone are assigned to an audio system that will give her an audio cue of who is calling when it starts ringing. It is her son's birthday and the caller would like to wish her son a happy birthday. Christine walks to her son, switches the phone to 'speaker mode' so that her son could talk. Thus, the cellphone has become part of Christine's natural environment, also providing on the emotional level by making it possible for her to connect to others.

During the observation phase at Ferdi's house, he demonstrates how he listens to his messages: The voice of a man gives him cues on the navigation of the phone. His fingers work quickly up and down the screen. He taps twice on the screen and

the phone responds: “Speech on”. He hears that he has 39 new messages, but because there are other people present, he is reluctant to listen to them.

> This is one of the problems, the lack of privacy when listening to messages. In the evenings I turn off the screen so that the light does not bother Elize (his wife) when she is sleeping and put the volume very low. This also helps to make the battery last longer. I use my phone for the more basic stuff, like messaging and Whatsup and making calls. I don’t use the other features.

Paul keeps up with all new developments that could assist him in his daily live, including what he can do via his cellphone. He does most of his banking via his cellphone:

> When I do credit card transactions, luckily nowadays you receive a sms from the bank letting you know. With my audio assisted computer and cellphone devices I can access these messages.

As objects cellphones are easy to access and mobile, thus improving on the speed that communication can occur in. Adrian likes the idea that he can take his cellphone everywhere with him:

> Because my cellphone is mobile, I have it with me 99% of the time. It gives me access to the internet. I make use of a Blackberry with voice applications.

The competent blind user could use their cellphone to make their lives easier. This is dependent on how well the blind user is informed about what New Literacies could do for him or her, as Leu et al. (2004:13) note: new forms of strategic knowledge are central to New Literacies. Veronica and André, for instance, make use of their cellphone to buy pre-paid electricity:

> We buy the top-up electricity online. The electricity company then forwards the code for the new units to our cellphones and, because the cellphone can call out the numbers, we can then type in the code ourselves. Although the electricity meter is not blind-friendly, we added a braille sticker to each of the numbers on the keypad. But we still need to ask somebody to read to us how much electricity is still left on the meter.

In this example of André and Veronica, the transactional role of New Literacies is shown with the use of their cellphone to do the transaction and then when it comes to the typing of the code into the electricity meter, they still make use of conventional braille letters to assist. The role of the literacy sponsor has changed, because the couple can do more for themselves but still cannot read the reading of the number of electricity units that is still remaining on the electricity meter.

Like the other blind participants in this study, Kuanita also relies on her cellphone a lot. She uses a phone without a touch screen because she finds it easier to still be able to push the buttons on a key board. She explains how she deals with the matter of privacy when listening to voice messages:

> When I receive SMS's, I set the speed of the incoming message to very high. This makes it difficult for other people to listen to my private messages. Then I will also set the screen so that nothing shows, in case somebody wants to look over my shoulder and view the message. Privacy in general is a bit difficult, so if I find that the message is of a very personal nature and I can wait, I would rather listen to it when I am alone.

In this last example, Kuanita shows how she adapted to making use of New Literacies in her life. She accomplished a new way of using her cellphone to adapt to her circumstances. Thus she demonstrates the deictic nature of New Literacies

by which makes use of this technology, her cellphone, but found a new and creative possibility for its use

Cellphones have become invaluable objects for the blind, giving them access to information and also giving them independence.

5.2.7. Computers and the Internet – opening up new worlds

The computer and the access it gives its users via Internet, has changed the lives and how people go about doing things for all people, including the blind. These objects, with speech applications, provide freedom to the blind to do things that they previously would not have been able to do. It can include normal day to day activities like buying groceries, as Paul explains:

> If we need to get groceries we make use of Pick 'n Pay online. They come and deliver the groceries at our house.

It can also be a means of employment, like for Adrian who is a sound engineer. On demonstrating how he makes a sound clip, the speed of the audio is set so fast that it is almost incomprehensible to the normal ear. The object and the human have created a unique symbiotic relationship. He demonstrates on how he makes a sound clip: He switches on his computer. The programme that he uses is called 'Reaper'. Adrian explains further:

> This is a song that I am currently working on. It is a dance song. I normally let the sound grow – it is never the same as that I initially envisaged it to sound like. I give it freedom.

He pushes the keys on his keypad and a very up-tempo song starts playing. Adrian navigates the whole system with the keyboard and by listening to commands.

> I am not a musician of any sorts. When I lost my sight, I learned about technology and the doors that it opens to blind people. This is one of them and this is how I came to do this. Computers always fascinated me with their artificial intelligence.

Adrian starts demonstrating how he makes a new song. First he creates a file. The speech programme in the background 'talks' at such a pace that I cannot understand a word it is saying. He then uses a musical instrument interface to send instructions to the sound module. His experienced hands work fast over the keys of the keyboard. Every key becomes a different sound. He chooses 'piano' and the keys then sound like that of a piano. Now, he cuts and pastes the sounds and duplicates them to create a sound clip.

> These are the basic building blocks. One sound on top of another.

Most of the participants make use of their computers, coupled with a scanner, to scan post and then 'read it through the computer' via a speech programme called Jaws: Veronica explains:

> There are some items of post that are personal and you don't want to ask your neighbour to come and read it for you. You also want to be able to do as much for yourself as possible and not always bother other people to assist.

For Frank and Cindy the computer has made it possible for them to access correspondence:

> I (Frank) arranged that I receive most of my correspondence electronically which I can then access via the speech programme on my computer.

As objects, computers made it possible for blind people to cross boundaries and enter new worlds that were previously inaccessible. The relationship between the

human and the object has become so interwoven, that most blind people will agree that they cannot see their lives without the help of a computer. These objects, with the freedom it gives its users and to bond with other people, has got a deep emotional value to its users.

Derrick relies a lot on his computer to communicate and to write, but to him this technology is secondary to braille. He strongly feels that, for a blind person to be considerate literate, they need to be able to read and write braille.

> Of course it will be different in circumstances when a person lost their sight later in life and they were taught to read and write normally, they will still be considered literate. To only rely on audio, however, does not make you literate. You need to know the general rules of spelling, grammar, punctuation, etc. Computers, cellphones and other assistive devices are secondary tools to literacy. It makes your life easier. But first you need to know your ABC.

From these examples it is clear that computers allow blind people access to more information and methods to communicate than a few years ago. Developments in the area of new literacy technology also hold the promise that this situation will just improve in future. In the next section, I present a conceptual framework for understanding how objects may contribute to finding meaning in place.

In their study Burdach, Kell and Patrick (2015) focus on objects and language in trans-contextual communication. The turn in linguistic studies towards the social in the 1960s, for example Hymes (1964), has gradually overturned the primacy of structuralism of older linguistic studies and thus neglected objects or things in materiality. Later, with the emergence of the new literacy studies, the focus turned towards the literacy events and practices of people in the real world, but the focus was still on the written text in context. As explained by Burdach, Kell and Patrick (2015:390):

> However, ground-breaking work in social semiotics had widened

> the scope of discursive analysis beyond a consideration of the linguistic, and included a wider range of semiotic modes, recognized as making substantial contributions to social meaning-making. This had opened the door to an increased attention to objects and their power to shape human interaction in significant ways.

5.3. Bounded, boundary and bonding objects

In their framework Burdach, Kell and Patrick typify objects as bounded, boundary or bonding (2015:393).

5.3.1. Bounded objects

Burdach et al (2015:393) describes bounded objects as objects that firmly emplace, mostly immobile, and part of specific, highly scripted, or abstract spaces. Bounded objects are part of a carefully planned infrastructure that is laid out spatially in specific ways to cater for particular, prescribed, and carefully monitored actions. In these spaces, the moving objects are meticulously controlled - leaving its place presents a risk of creating imbalance in the interactional and moral order of the space. These objects have limited mobility to travel across contexts, for instance the furniture in your house or the layout of your garden.

On visiting the blind participants in their own real-life environments, their homes, it was evident that this environment was organised to fit their own needs. From the way that furniture is organised, the décor in their homes, the organisation of their cupboards and fridges, to the way that their gardens are laid out, all of these objects are set out to be predictable, accessible and ease mobility. The home environment is the one space that they have control over to make their lives as easy as possible with the use of their remaining senses. As reported on in chapter 4 and earlier in this chapter, examples of bounded objects include the arrangement of furniture in Veronica's house against the walls; how Christine organized her kitchen cupboards; the arrangement of kettle, cups and condiments in Paul's kitchen; Kuanita's preference to work with a certain knife that she always

leave in a certain spot; and Adrian's clothes cupboard that is organized in such a way to aid his sense-making of the colours of the different items of clothing.

5.3.2. Boundary objects

Boundary objects are able to move physically across contexts and are endowed with the ability to carry meaning. Objects become the reference point for social meaning making in relation to a particular feature of object design or as form of human-object relation (Burdach et al. 2015:393). These objects also attract issues of power, specifically when the interaction around objects makes differences and inequality visible. Here one can think about the object of a white cane in the hands of the blind, providing them with increased mobility. It also means something to the sighted when they see someone with a white cane, e.g. to be sensitive to needs of the person with the white cane because it means that this person cannot see. The differences and inequality are visible.

Boundary objects for the blind include assistive devices, which, as the name suggest, aid them to access information by utilizing their remaining senses. As observed in earlier in this chapter, assistive devices employed by the blind include audio clocks, audio colour detectors, liquid indicators, audio books, money boxes, and audio glucometer and blood pressure machines, to name but a few. The objects here are boundary objects because they can carry meaning across contexts because they are made to be more mobile than bounded objects. It gives power to the blind user, enabling them to access information or formats that were in its original design, meant for the sighted to use.

5.3.3. Bonding objects

The third category of objects suggested by Burdach et al. (2015:394) is bonding objects. These objects flow freely across contexts and display a stability of meaning despite bridging spatial distances, domains and contextual boundaries. These human-object relationships involve an emotional investment, with a meaning that is familiar and naturalized. The close bond between object and human is visible when looking at the relationship of blind participants and the various

bonding objects in their lives, including guide dogs, cellphones, computers and, one could mention, human literacy sponsors. There is a close emotional connection between the blind participant and these objects, if not there, will create a void in their lives. Bonding objects gives the blind the bridge to cross freely into the sighted world, keeping its meaning across different contexts.

In this chapter the real-life examples of the blind participants in place were described, with specific reference to the role of objects in their lives. Objects, typified as bounded, boundary or bonding, were seen as an integral part of how the blind orientate toward and get on in the world. Whereas the organization of *bounded* objects provides a stable, controlled and familiar environment for the blind to increase mobility and functionality, boundary objects, with specific reference to assistive devices, allow the blind to venture outside the confines of the familiar (in social literacies terms, boundary objects are the mobile, literacy sponsors).

People establish meaningful interactions with objects and artefacts. Once designed and introduced in the linguistic landscape by humans, texts, artefacts and objects of any kind make sense and have an agency on their own. As Caronia and Mortari (2015:404) remark:

> Things are performing entities in that they define a context as a certain kind of context, create some state of being that simply was not there before, shape occurring activities and create the premises for further action. Through their design and location in a given context, objects participate in the construction of social reality.

Objects have agency. This is not a return to materialistic determinism but, as Latour (1996) remarked, once objects have been created, constructed, installed in a human situation by human beings, delegated by humans to perform a certain task, are doing it without relying on their author or creator. After it was created, an object enters a social world endowed with meaning and performativity (Cariona and

Mortari, 2015: 405).

Objects are interactants in a network of social and material, linguistic and non-linguistic agencies which shapes the activity setting and the relevance and force of the linguistics performances occurring within it. But, as expressed by Cariona and Mortari (2015:406) human beings are still part of the interaction:

> Acknowledging the passive dimension of any interaction, the multiple ways and circumstances in which things do things or we are led by things to do things, does not minimize our active role in the unfolding of the interaction: whichever are the constraints put forward by materiality, any action or reaction is actively implemented by individuals. We may diligently follow the path traced by things, challenge their force, use them in unpredictable ways and even resist to their performativity yet in any one of the hypothetical cases things make us do something as even resistance is an action.

5.4. Conclusion

A Social Literacies approach to reading and writing informs us that text as practice and event is best understood in terms of a larger sociocultural framing of activities. Introducing a revised conception of functional literacy with reference to a social literacies framing allows us to ask how text figures in the everyday living arrangements of the blind, and what they do when visual literacy is inaccessible to them, but 'necessary' for managing the everyday.

From the analysis of observations in this chapter, I noted how, by not being able to see, the blind employ their other senses, touch, hearing, smell and tasting, to create meaning in place. I also noted how the blind employ objects of different types and spatial ordering and positioning as well as other senses such as smell to manage their everyday lives. This multi-sensorial scape of the blind is a dynamic layout of surfaces and objects that work together to enable the blind to function independently, to create meaning in context.

The examples mentioned in this chapter are only a few prominent examples picked up on visits to the homes of the blind participants and relayed through their stories. It is in no means an exhaustive list of all objects but provides motivation for the importance of objects and their arrangements in the world of the blind. I introduced the idea of a transcontextuality and referred to a typology of objects that allowed me to connect to the different ways objects served as codes to organize how the blind participant managed to engage with the everyday environment.

Chapter 6

An integrated posthumanist framing of literacy

6.1. Introduction

In this study I employed three theoretical frameworks: the Social Literacies approach to literacy where literacy is described as a social practice, a contextually embedded and a situationally variable skill that attends to the ecology of messaging; the New Literacies studies that focuses on understanding the contribution that technological advances carry for reading and writing; and Semiotic Landscapes that deals with the structure and content of signs in place and how the literacy practices of the everyday include a dynamic relationship between semiotic resources, activities, artefacts and space.

Much has been made of the distinction between autonomous and ideological literacy as a watershed mark in literacy research. What characterized the social practices 'revolution' in literacy was its embedding in everyday events and practices. The New Literacies paradigm has taken the Social Literacies approach further into the complex object world of computers and cellphones. The question, of course, is how one can see these various forms of literacies in a more comprehensive framework. The literacy needs and practices and coping strategies of the blind have given some insight into what such a comprehensive framework would imply.

In this study, focussing on the literacy of blind adults, the insights we have gained from objects in transcontextual language and Semiotic Landscapes offer a foundation to start to make sense of an integrative view on how the blind make use of all their senses to create meaning in place, or multi-sensorial scape. Hasanagas and Koskina (2011), in a study focussing on semiotic perceptions applied to the area of landscape designed for people with vision problems, compared the use of senses by sighted and non-sighted participants. The results of their study showed that vision as a sense played the most important role for both these groups - that is vision as 'imaginary vision' for blind people. Touching was the second most important sense, followed by hearing and smell.

This study also aimed to create, and motivates for a posthumanistic understanding of the role of material artefacts or objects. According to Pennycook (2016:2):

> a posthumanist applied linguistics does not assume rational human subjects engages in mutually comprehensible dialogue; the multimodal and multisensory semiotic practices of the everyday include the dynamic relations between semiotic resources, activities, artefacts, and space.

In this chapter the results of the research are summarized, conclusions spelled out and recommendations made for further study. By combining all the information gathered through the various stages of research, I attempt to answer research sub-questions d, *What implications do the literacy experience of blind individuals have on the general understanding of literacy?* and e, *What remedial literacy processes does this research suggest – if any?*.

The research problem of this study was: *How do blind adults understand the concept of literacy, and how is literacy functionally embedded in their daily lives?* This main research problem was broken down into five areas, or sub-questions:

a. What does being literate mean to blind people?
b. How do blind individuals cope in their everyday lives without the ability to access visual messages? How to understand this semiotically?
c. What role do New Literacies play in the lives of the blind?
d. What implications do the literacy experience of blind individuals have on the general understanding of literacy?
e. What remedial literacy processes does this research suggest – if any?

The summary of results and the conclusions are presented according these five sub-questions:

6.2. The concept of literacy for blind adults

With research question *a* the aim was to establish what blind adults understand as literacy.

Against the backdrop of the social practice approach, literacy is seen as essentially social and that it is located in the interaction between people. Results reported on in chapter 5 were combined under the themes of the propositions proposed by Barton, Hamilton and Ivanic (in Street and Lefstein, 2007:14) about the nature of literacy.

The narratives of each of the blind participants in this study, recorded in chapter 4, gave insight on how their literacy practices changed across their lifetime with changing demands, available resources and their changing interests. Their narratives had some common themes, including coming to terms with their disability, the role of literacy sponsors in their lives, their school education and their adaption into adulthood after leaving school and starting a career. What was prominent in all the narratives were how the parents of each of these blind participants dealt with the disability of their child, accepting that they need specialist intervention with the education of their child – all the participants, except two, one who is only blind in one eye (partially sighted) and one who was already an adult when she lost her sight, attended various schools for the visually impaired in South Africa. It is clear that in these institutions that the literacy foundations were created for each of them. These foundations were built around the braille code.

From the onset of this research, in line with results of similar studies conducted in other countries, it was clear that a study of literacy of blind adults cannot be separated from the subject of the braille code and that the concept of literacy holds intrinsic value, entangled with both positive and negative feelings, dealing with issues such as power, freedom, self-worth and living an independent life.

It is clear that literacy for these participants cannot be merely defined as reading and writing. A broader understanding of literacy is needed. Literacy can be achieved through print, braille or through listening or in combination – that is employing the senses of touch, hearing but as noted in the observations, smell and taste also play a role.

Blind literacy is a set of social practices. For the adults that are able to use braille, this ability is fundamental for them to being literate, but for a blind person to be truly considered literate, they should also be effective in using recorded or speech enabled applications, the so-called New Literacies. Independency is the ultimate goal. To be functionally literate a blind person should be able accomplish tasks requiring reading and writing, but also use skills or tools to independently gain access to regular print when literacy tasks require communication with others in this medium. The latter, the so-called non-schooled multi-literacies as explored in this study, are fundamental to blind adults to be considered functionally literate in a society in which they find themselves to be a minority group.

To be functionally literate or illiterate has high value for blind adults, either positive or negative. Literacy is always a means to an end. Not only does functional or remedial literacy mean that they can find employment and that it enable them to have an improved quality of life, it ultimately means independence. For those blind adults with limited functional or remedial literacy, it means a life in which they will stay dependent on others for assistance.

As elaborated on in chapter four, to be functionally literate has the following positive intrinsically situated attributes:

- It provides a sense of dignity, of being worthy of respect;
- Literacy means freedom to blind adults, allowing them to live their lives independently; and
- Whereas braille is a code only accessible to very few people, New Literacies introduced by technology like cellphones and computers have opened up doors to blind people to connect with the broader sighted world.

For those who don't have these functional literacy skills, it means:

- A sense of shame because they are labelled as less intelligent individuals;
- An inherent fear;
- Dependence on sighted role players for help and in this kind of relationships no or limited skills transfer takes place;
- Frustration due to the sighted world not understanding them and categorising them is escalated when functional literacy skills are absent; and
- Difficulty in adjusting to change.

6.3. How blind individuals cope in their everyday lives without the ability to access visual messages

Research question *b, How do blind individuals cope in their daily lives without the ability to access visual messages?* gives the reader insight of the daily world of the blind adult and how they cope without the ability to see.

The observations made during this phase were all made in the home environments of the blind adults. Here the blind adults demonstrated various everyday literacy skills to make it possible for them to function effectively within the ecology of their own homes, but also part of a broader ecology of a society that brings various challenges for persons without the ability to see.

In their homes the blind adults showed how they located themselves, or emplaced themselves in a semiotic sphere. By their example, the blind participants demonstrated how they create meaning by means of their remaining senses, which is touching, smelling, hearing and tasting. Their homes are a dynamic layout of surfaces and objects, providing meaning.

All the homes visited were arranged in such a way to be familiar, predictable and uncluttered. Contrasting with the explosion of visuality in the world that we live in, the home environments of the blind participants seemed stark, leaning towards

the more practical and functional.

A clear difference was detected between the houses where only blind residents stayed and houses with some sighted residents that shared it. At houses where all the residents were blind all furniture were arranged against the wall, with no curtains in front of the windows and no artwork on the walls. Even the gardens were laid out in such a way to cause minimum obstacles. In homes where the spouse or children of the blind participant could see, more visual elements were introduced, although still arranged in such a way to ease the blind individual's movement. As Derrick remarked:

> Luckily I don't have a wife that constantly rearranges the furniture in the house.

From the previous it is clear that in the homes of the blind participants there is a definite focus on it being practical, aiding in their everyday literacy. This is in contrast to the world that is becoming more and more visual. For blind people to effectively function in their home environments, things should stick to the familiar. At Veronica's house, with her husband also being blind, I was struck by the absence of curtains in front of the windows, even in private spaces like the toilet – a clear indication that this is not a priority in their lives, What matters is that they could cope with minimum help. The electric metre in their house is marked with braille letters that they stuck onto the keypad, and this, coupled with the voice application of her husband's cellphone, they can buy electricity online and key in the information.

In their homes they are familiar with everything and made it functional for themselves. On the other hand, when they have to venture outside of this familiar environment, they don't feel at ease and because of this, most of the participants either choose to stay in their familiar surroundings at home, or need to ask a sighted person for assistance.

Objects in their homes carry meaning, assisting them to function effectively. Apart from the predictable arrangement of their home environments as described above, blind adults incorporate a number of assistive objects that tap into their remaining sensory resources to assist them in their daily lives. These objects include devices like watches, clocks, liquid indicators, blood pressure machines, glucose measuring machines, colour detectors, audio books, all of which tap into the hearing sense of the blind individual. The sense of smell aids in cooking, but also in recognising their environment, eg the example of Kuanita walking in the mall and recognising the smells of various outlets. Taste also comes in handy when cooking. Apart from hearing, touching are also one of the senses that becomes a familiar lifeline for those who cannot see, from the essential reading of braille, to manoeuvre through spaces, and organising spaces, relaying important messages about their environments.

The sense of self, autonomy, feelings of security or alienation articulated among the blind participants to a great degree could be linked to how emplaced they felt in a specific space. The regularity and predictability of the home environment through the layout of furniture and other objects anchored the blind comfortably in place. The blind participants established meaningful interactions with objects and artefacts, which in this sense opened up their opportunities for creating identities and sense of place the process of geographical imaging, the locating of self in space, claiming the ownership of specific places, or by being excluded from them, by sharing space and by interacting with others.

6.4. The role of New Literacies in the lives of the blind

Research question *c* dealt with the role of New Literacies in the lives of the blind. New Literacies that comes with the continued developments in the fields of new technology, has opened up various new doors to blind people, especially with the access to these devices through audio and touch. In the lives of blind people, audio devices becomes like an artificial limb would be for a paraplegic person. It was evident in all the living environments of the participants. The audio devices that I recorded during my visits were:

- A digital voice recorder to record a meeting;
- Cellphones with audio applications;
- Liquid indicator;
- Computer with audio applications;
- Audio scale;
- Audio books;
- Audio watch;
- Audio alarm clock;
- Colour detector;
- Audio blood pressure meter; and
- Audio glucometer.

To operate these machines and the contribution it makes to the lives of blind people, can be considered as part of their remedial literacy skills. Apart from the fact that it enables them to perform various day to day literacy tasks, it also provides them independency.

The computer and the access it gives its users via internet, has changed the lives and how the blind do things. Not only gives the computer with its various voice applications the blind access to written communication, but online shopping has opened new ways to make their lives more independent. Computers have also become the main tool in many blind people's careers and new avenues are continuously explored, like sound engineering as evident in this study.

It is however the cellphone that has improved the lives of the blind the most. With its ability to give audio cues to the user, a blind person can navigate the device with ease. This mobile device, or bonding object, has become a true remedial literacy to the blind, giving them access to banking, shopping, messaging, search functionality on the internet and general communication. The blind has transformed the use of the cellphone to their own needs, for instance, when listening to messages by setting the speed of the audio so fast that it becomes inaudible to the normal ear.

6.5 Objects in place

Jaworski and Thurlow (2010:7) capture how we can rethink literacy in a the framework of linguistic landscapes when they underscore how signs only have meaning through their relation with other signs in their social environments. In fact, a semiotic or ecology of signs may lay bare relationships between written discourse and "other discursive modalities: visual images, non-verbal communication, architecture and the built environment".

Literacy as we conventionally envisage it (as de/encodable textual artefacts) is a particular moment in the circulation of signs in an ongoing construction of a semiotic landscape that positions and embodies people in place. This is the case both for social literacies (that hinge text onto the human in social context) and the New Literacies framework, on the other (which textually mediates the human through the object artefact). one where signs are studied for how they are actively deployed in constituting space; where inscriptions are studied temporally as they emerge and shift meaning across chains of production (Stroud and Mpendukana, 2009, 2010, Scollon and Scollon, 2003).

Following on Pennycook's work, objects take space and take place, their surfaces implying varied sensory experiences. They mark their surrounding landscapes and inform places, creating meaning in context (Chmielskwa, 2009:2). Multi-modal and multi-sensory practices of the everyday include the dynamic relations between semiotic resources, activities, artefacts and space. Spaces are sensorily organinised in relation to broader social, linguistic and cultural practices (Pennycook and Otsuji, 2015: 209). Objects therefore needs to be understood as a resource for emplacement.

A semiotic landscape is not a fixed image but a dynamic layout of surfaces and objects (Chmielewska in Jaworski and Thurlow, 2010:288). The body is the basis of faculty to relate to the world, to engage with it. The hand that reaches out to grasp an object "knows" what it is reaching for, and where the object is; there is no need for the consciousness to construct a space-time diagram calculating the

points through which the hand will pass. A movement is learnt when the body ”gets it”, when it assimilates or incorporates it (Merleau-Ponty, 2009:171). Our “being-in-the-world” does not begin with an “I think” but with an “I can”.

Fuchs (2011) analysed how situations and interactions experienced in the past fuse together to form body memory, and through repetition and superimposition, form a structure, a style that sticks to the subject, usually without the subject’s knowledge. For example, if you have always kept your coffee and sugar next to you kettle, your body forms a memory of it, and without you really thinking about it, you will reach out for the sugar and coffee next to your kettle. As Chmielewska (2009:1) has remarked:

> landscape is not merely viewed or read but actively perceived by the subject emplaced within a semiotic sphere.

6.6. Implications of the literacy experience of the blind for the general understanding of literacy

Print literacy is what defines literacy. Braille is considered being literate, whereas other forms of retrieving ‘information’ from ‘print’ is not (e.g. audio). This reduces literacy to a linguistic system/technology involving immediate textual contact that the relevant senses decode. Decoding or repurposing/remediating, e.g. through literacy brokers is not considered being literate. This conception rests on a Cartesian division between body and soul – certain senses are considered more important as part of literacy than others. It downplays the multi-sensorial; even in the field of social literacies, the parameters of affect, history, etc. are not taken sufficiently into consideration. Literacy is dislocated from semiotic landscape, providing priority to a particular, isolated, component of an ecology of repurposed and re-signified meanings. Focusing on the blind gives an understanding of linguistic landscapes, and this in turn could offer a different inroad to understanding the complex and multifaceted character of literacy.

From the example of the blind, there are implications for the general understanding of literacy. It is clear that literacy for the blind cannot be merely defined as reading and writing. A broader understanding of literacy is needed. Literacy can be achieved through print, braille or through listening or in combination. For the adults that are able to use braille, this ability is fundamental for them to being literate, but it is clear that for a blind person to be truly considered literate, they should also be effective in using recorded or speech enabled applications, the so-called New Literacies. Independence is the ultimate goal. To be functionally literate a blind person should be able accomplish tasks requiring reading and writing, but also use skills or tools to independently gain access to regular print when literacy tasks require communication with others in this medium. The latter, the so-called non-schooled multi-literacies as explored in this study, are equally as important to blind adults to be considered functionally literate in a society in which they find themselves to be a minority group. Seen through the lens of a social literacies perspective, these new literacy devices or objects could rehabilitate the idea of 'functional literacy'.

Examples gathered through observations in this study, supports the widening of the understanding of functional literacy. To function effectively in their everyday lives, the blind participants in this study demonstrated a use of literacy skills that is linked to their other senses, which is generally not included in the general understanding of literacy. These understandings of literacy are generally mainly built upon the visual. By making use of hearing, touching, smelling and tasting, or in combination, blind people demonstrate that the definition of literacy has mostly neglected the use of other senses.

In Chapter 6, I explored the variety of coping strategies the blind employ for goal-directed, functional everyday purposes, paying special attention to how the participants orientate themselves in place through various forms of object organization. I suggest that we could potentially see this as a form of functional literacy that relies on a multi-sensory code - a form of multisensorial literacy - and more specifically, as part of a landscape of trans- contextual, transposed and resemiotized literacy events. I suggest that this requires a post-humanist idea of

literacy wedded to a stance on Semiotic Landscapes as affordances for the orientation of people in place.

Objects for the blind becomes part of their semiotic landscape, part of their literacy activities in the broader and revised conception of the term, providing them with access to information and ways to function effectively in the absence of the visual. The results of this research suggest that it would be worthwhile to explore this multi-sensorial definition of functional literacy in more detail.

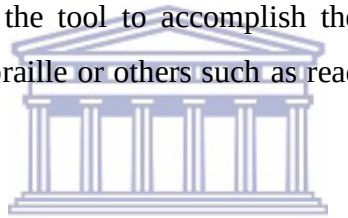
6.7. Remedial literacy processes

The literacies of the blind are richly multi-textured. They can involve the perceptual modes of sight, sound, touch and even taste to utilise a variety of literacy technologies. And although this study focuses on the literacy of blind people, it is clear that the way that functional literacy is traditionally defined, focussing on reading and writing of text and numeracy, falls short and needs to be expanded to include the use of other senses as well, also for people without a visual disability. I have argued for an understanding of literacy that is multi-sensorial in nature. By walking through a garden, you are not only met by the colours of the plants around you, but you are also hearing (birds in a tree), smelling (the scent of grass), touching (the bark of a tree) and even tasting (taste of the air). I would suggest that these multi-sensorial co-ordinates help orientate the visually impaired individual in place and this could inform an extended notion of literacy as an embodied set of resemiotized coding practices based on a revised notion of functional literacy.

As the results of this study indicate, it is also needed that teachers of blind learners should be equipped and knowledgeable about New Literacies that can be used by the blind. When a blind person leave school, away from the familiar confines of his or her familiar surroundings, away from the study material in braille, they often find themselves in deep water when it comes to making use of new technologies in his or her life. Teachers need to be sensitive about this and equip learners better for this transition in their lives.

A study of the everyday literacy practices of blind adults can never leave out braille as a literacy skill. For many researchers this is the primary concern when it comes to blind people living independent lives. In her research, Ryles (1996:20) noted that blind individuals who had learned to read braille as their original reading medium, were employed at a significantly higher rate than individuals who didn't read braille. If an individual can read braille, it can encourage them to develop the positive lifelong habit of reading as adults, enhance their employment opportunities and thereby increase the possibility of financial independence. As much as 85% of the blind employed in America use braille as their primary method of reading and writing (Spungin, 1989:6).

A blind individual should be able to determine the requirements of a given task and then have to select the tool to accomplish the task most appropriately and efficiently, for instance braille or others such as readers, taped materials and word processors.



An important component for the blind to demonstrate their functional literacy, is a commitment to lifelong learning. As new communication skills are needed to meet the demands of essential tasks, such as for a new job, the individual takes steps to gain the needed skills. As Koenig (1992:20) remarked:

> A person who has attained functional literacy continually evaluates the demands of a given environment and assesses his or her ability to complete required literacy tasks successfully.

With the provided example of the blind, it is clear that the common understanding of literacy, based on the visual, should be expanded to include the use of other senses as well. Although different opinions exist regarding aspects of blind literacy, including braille and listening, it is clear that a multi-sensorial approach is needed to truly define literacy. In a study by McKinley (2006) about literacy in the lives of the blind in the San Francisco Bay area, it was similarly found that blind adults do make use of a combination of their remaining senses in literacy practices. When it comes to making use of their other senses, blind people are much faster and

sensitive to information received than most of their sighted counterparts. When receiving an SMS, a blind person, also to make it inaudible for people around him, will set the speed of the voice application so high that a person not familiar to decode the incoming message, will not be able to understand it. This is a true example of the multi-sensory nature of literacy.

Similarly, blind people have become dependent in using their cellphones. Blind people make use of audio cues on their cellphones to navigate through its various applications. A blind person can for instance make use of the voice enabled GPS to get directions. Some blind people got used to the button keyboards on their cellphones and struggle with newer touch screen phones – an example of how they also need to learn New Literacies to keep up with technology advancements.

6.8. Suggestions for future research

Future literacy studies in the area of blind literacy, may focus on one of the following that transpired as needs during the study:

- Further research that motivates for the widening of the understanding of functional literacy. In this study the specific example of the literacy of the blind was used to illustrate that literacy cannot only be understood as merely reading and writing. Research in other contexts, involving other groups of focus, could further this cause.
- Employment is one of the biggest concerns of the blind adult to create an existence for themselves and a bigger purpose in life. Further research is needed to determine what makes blind people employable and where their specific literacy skills could benefit the South African labour market.
- In this research I suggested a wider framing of literacy and this needs to be researched further to establish what this would mean not only for the notion of literacy but also our understanding of Semiotic Landscapes.

6.9 Conclusion

In this study undertaken from the perspective of the social practice approach, New Literacies studies and Semiotic Landscapes, the everyday functional literacy practices of blind adults in their natural home environments were investigated. By doing so, the five research questions of what does it mean to be literate from the perspective of blind adults, how blind adults cope in the absence of the visual, the New Literacies employed in their daily lives, the implications of the literacy experiences of the blind have for the general understanding of literacy, and suggested remedial literacies could be answered.

It is hoped that the results from this study will go some way to inform relevant stakeholders about the daily lives of blind adults and that this knowledge could influence decision makers to accommodate their needs. It is also hoped that this research study will spark more research in the area of multi-sensorial landscapes where all senses are combined in the literacy practice.

The richly multi-textured literacies of the blind, combining the perceptual modes of sight, sound, touch and taste in the absence of the visual, indicate that the manner in which functional literacy is traditionally defined as reading and writing, is too narrow. We need to move beyond the glass ceiling towards a multi-sensorial understanding of literacy.

References

Aitchison, J. & Harley, A. (2006).South African Illiteracy statistics and the case of the magically growing number of literacy and ABET learners. *Journal of Education.* No 39.

Alvermann, D.E., Urau, N.J. & Ruddell, R.B. (2013).*Theoretical Models and Processes of Reading (6th Edition).*International Reading Association.

Andrews, M., Squire, C. & Tamboukou, M. (2008).*Doing Narrative Research*. London: Sage.

Appadurai, A. (1996). *Modernity at large: Cultural dimensions of globalisation.* Minneapolis: University of Minnesota Press.

Aranoff, D. (2013). *The importance of braille literacy.* [Online] Available: http://www.visionaware.org/blog/visionaware-blog/the-importance-of-braille-literacy-an-open-letter-to-the-new-york-times-from-daniel-aronoff/12 (accessed 13 March 2015).

Auerbach, E. (2005).*Connecting the local and the global.* In Anderson, J. & Kendrick, M. (2005). *Portraits of literacy across families, communities and schools: intersections and tensions.* London: Lawrence Erbaum.

Aviv, R. (2010). *Listening to Braille*. [Online]. Available: http://blindaccessjournal.com/2010/01/ (accessed 21 September 2012).

Babbie, E.(1989). *The Practice of Social Research.* Belmont: Wadsworth Publishing Company.

Backhaus, P. (2005) Signs of Multilingualism In Tokyo — A Diachronic Look At The Linguistic Landscape. *International Journal of the Sociology of Language* 2005.175-176

Barton, D. (1994). *Literacy: an introduction to the ecology of written language.* Oxford: Blackwells.

Barton, D. & Hamilton, M. (1998). *Local literacies: reading and writing in one community.* London: Routledge.

Berg, BL. (2007). *Qualitative research methods for the social sciences.* Boston: Allyn and Bacon.

Best, H. (1919).*Blindness and the blind in the United States.* Toronto: Macmillan.

Black, R. (2008). *Adolescents and online fan fiction.* New York: Peter Lang.

Blake, S. (2011). *The importance of Braille literacy.* [Online]. Available: http://blindnessgrowingstrong.org/ed/aa10101a.html

Bourdieu, P. (1991). *Language and symbolic power.* Cambridge: Polity Press.

Brandt, D. (1997). *The Sponsors of Literacy*. National Research Centre on English and Achievement. University of Albany. Report Series 7.12. [Online]. Available: http://www.albany.edu/cela/reports/brandtsponsors10001.pdf (accessed 15 March 2013).

Brandt, D. (2001a).*Literacy in American lives.* Cambridge: Cambridge University Press.

Brandt, D. (2001b).*Sponsors of literacy.* In Chushman, E, Kintgen, ER, Kroll & Rose, M. *Literacy: A critical sourcebook.* Boston: Bedford, St Martin's.

Burdach, G., Kell, C. & Patrick, D. (2015). Objects and language in trans-contextual communication. *Social Semiotics* 25(4):387-400. Routledge.

Busch, B. Linguisitc repertoire and Spracherleben, the lived experience of language. (2015). *Working Papers in Urban Language and Literacies*, Paper 148. [Online] Available: http://www.kcl.ac.uk/sspp/departments/education/research/ldc/publications/workingpapers/abstracts/WP148-Busch-2015--Linguistic-repertoire-and-Spracherleben,-the-lived-experience-of-language.aspx (accessed 1 June 2016).

Canadian Federation for the Blind. (2009). *The Bind Canadian*, Volume 4. [Online] Available:http://www.cfb.ca/the-blind-canadian-volume-4-october-2009 (accessed 13 March 2015).

Caronia, L. & Mortari, L. (2015).The agency of things: how spaces and artefacts organize the moral order of an intensive care unit. *Social Semiotics* 25(4): 401-422. Routledge.

Cenoz, J. & Gorter, D. (2006). Linguistic landscape and minority languages. *International Journal of Multilingualism* 3(1): 67-80. Taylor and Francis Group.

Chmielewska, E. (2009). Semiosis takes place or, radical uses of quaint theories. *interKULTUR.* [Online] Available: http://www.research.ed.ac.uk/portal/en/publications/semiosis-takes-place-or-radical-uses-of-quaint-theories(63b9cd8d-596e-4dde-bab1-44c60beb05db)/export.html (accessed 1 June 2016).

Chapelle, CA. (2013). *The Encyclopaedia of Applied Linguistics*. Blackwell Publishing.

Chu, CM. (1999). Literacy practices of linguistic minorities: Socio-linguistic issues and implications for literacy services. *Library Quarterly*,69(3).

Coffey, H. (2014).Critical literacy. *Learn NC.* [Online]. Available: http://www.learnnc.org/lp/pages/4437?ref=search (accessed 3 June 2016).

Coiro, J., Knobel, M., Lankshear, C. & Leu, D.(2008). *Handbook of research on New Literacies.* New York: Laurence Erlbaum.

Coiro, J. (2003). Exploring literacy on the Internet: Reading comprehension on the Internet: Expanding our understanding of reading comprehension to encompass New Literacies. *The Reading Teacher*, 56(5).

Collins, J. & Blot, R.K. (2003). *Literacy and literacies: texts, power and identity*. Cambridge and New York: Cambridge University Press.

Comber, B. (2001).*Classroom exploration in critical literacy.* In Fehring, H. & Green, P. (2001).*Critical literacy: A collection of articles from the Australian literacy educators' association.* International Reading Association. Newark: Delaware.

Cope, B. & Kalantzis, M. (2000). *Multiliteracies: Literacy Learning and the Design of Social Futures.* London: Routledge.

Crwys-Williams, J. (1994). *Dictionary of South African quotations.* London: Penguin Books.

De Castell, S. & Luke, A. (1988). *Defining literacy in North American schools.* In Kintgen, E.R, Kroll, B.M. & Rose, M. (1988). *Perspectives on literacy.* Carbondale: Southern Illinois University Press.

Department of International Development. (1999). *Re-defining Post Literacy in a Changing World*. [Online]. Available: http://r4d.dfid.gov.uk/PDF/Outputs/Misc_Education/paper29.pdf

Diaz, E. & Flores, B. (2001).*Teacher as sociocultural, sociohistorical mediator: Teaching to the potential.* In De la Luz Reyes, M. & Halcon, J.J. *The best for our children.* Columbia: University Teacher's College.

Durando, J. (2008). *A survey on literacy instruction for students with multiple disabilities.* Journal of Visual Impairment and Blindness, Issue 102.

Erickson, K.A. (2006). *Literacy and persons with developmental disabilities. Why and how?* UNESCO.[Online]. Available: http://unescodoc.unesco.org/images/0014/00145968e.pdf

Fiedrich, M. (1996). *Literacy in Circles?* London: Action Aid.

Ferguson, R.J. (2001). *We know who we are: A history of the blind.* San Francisco: Caddo Gap Press.

Ferrell, G. (1956). *The story of blindness.* Cambridge: Harvard University Press.

Flanegan, W. (2011). *Stuff on blindness: Lessons for sighted people who live, work and play with people who are partially sighted or blind. Available online:* www.sancb.org.za/article/stuff-blindness-booklet *(accessed 28 August 2012).*

Freeberg, E. (2001). *The education of Laura Bridgeman* . Cambridge: Harvard University Press.

Freire, P. (1970). *Pedagogy of the oppressed.* New York: Continuum.

Fuchs, T. (2011). *Body Memory and the Unconscious.* [Online] Available:*https://www.klinikum.uni-heidelberg.de/fileadmin/zpm/psychatrie/fuchs/Body_memory_Unconsious.pdf (accessed 1 June 2016)*

Gee, J.P., Hull, G. & Lankshear, C. (1996). *The New Work Order: Behind the Language of the New Capitalism.* London: Allen and Unwin.

Gee, JP. (1986). Orality and Literacy: From the Savage Mind to Ways with Words. *TESOL Quarterly*, 20(4).

Gee, J.P. (1990). *Social linguistics and literacies: ideology in discourses.* London: Falmer.

Gee, J.P. (2000). *The new literacy studies: From socially situated to the work of the social.* In Barton, D., Hamilton, M. & Ivanic, R. *Situated literacies: Reading and writing in context.* London: Routledge.

Gillen, J. & Barton, D. (2009). *Digital literacies.* Literacy Research Centre: Lancaster University.

Gilster, P. (1997).*Digital literacy.* New York: John Wiley.

Goodman, K. (1985). Commentary: On Being Literate in an Age of Information. *Journal of Reading*, 25(5):388-392.

Gore, J.M. (1998). *Disciplining Bodies: On the Continuity of Power Relations in Pedagogy*. In: Popkewitz, T. & Brennan, M. *Foucault's Challenge: Discourse, Knowledge, and Power in Education*. New York: Teachers College Press.

Gorter, D. (2005). Linguistic Landscape. *Multilingual Matters, 2006*. England: Clevedon: England.

Grbich, C. (2007). *Qualitative Data Analysis: An Introduction*. London: Sage.

Green, P. (2001). *Critical literacy revisited.* In Fehring, H. & Green, P. *Critical literacy: A collection of articles form the Australian Literacy Educators' Association.* International Reading Association. Newark: Delaware.

Hague, C. & Williamson, B. (2009). *Digital participation, digital literacy, and school subjects: a review of the policies, literature and evidence*. [Online]. Available: http://archive.futurelab.org.uk/resources/publications-reports-articles/literature-reviews/Literature-Review1473 (accessed 21 September 2012).

Hamilton, M. (2000). *Sustainable literacies and the ecology of lifelong learning.* Department of Educational Research, Lancaster University.

Harley, A., Aitchison, J.J.W., Lyster, E. & Land, S. (*1996). A survey of adult basic education in South Africa in the 90s.* Johannesburg: SACHED Books

Hasanagas, N. & Koskina, A. (2011). *Non-visual Landscape: Landscape Planning for People with Vision Problems.* Stuttgart: Columbia University Press.

Hatlen, P. (2004). *Literacy according to Phil.* [Online]. Available: www.tsbvi.edu/seehear/spring04/phil.htm (accessed 28 August 2012).

Hatlen, P. (2009). *Comprehensive literacy.* [Online]. Available: http://www.braille.org/papers/jvib0696/vb96034b.htm (accessed 28 August 2012).

Hawisher, G.E. & Selfe, CL. (2000). *Global literacies and the Word-Wide Web.* London: Routledge.

Heubner, T. (2006). Banckok's Linguistic Landscapes: Environmental Print, Codemixing and Language Change. International Journal of Multilingualism, 3(1). [Online]. Available: http://www.tandfonline.com/doi/abs/10.1080/14790710608668384. Accessed: 6 January 2017

Heath, SB. (1983). *Ways with words: language, life and work in communities and classrooms.* Cambridge: Cambridge University Press.

Heath, S.B. (1991). *The sense of being literate: Historical and cross-cultural features.* In Barr, R., Kamil, M., Mosenthal, P. & Pearson, P.D. *Handbook of reading research.* New York: Longman.

Hultin, E. & Westman, M. (2013).Literacy teaching, genres and power. *Education Inquiry,* 4:2.

Houtman, E. (2013).*New Literacies, learning, and libraries: How can frameworks from other fields help us think about the issues?* [Online]. Available: www.inthelibrarywiththeleadpipe.org/2013 (accessed 17 March 2014).

Hymes, D. (1964). *Toward ethnographies of communication: The analysis of communicative events.* In Giglioli, P. *Language and social context.* Harmondworth: Penguin

Ianuzzi, J.W. (1999). *Braille Literacy in America: A student's view.* [Online]. Available: https://nfb.org/images/nfb/.../the_braille_literacy_crisis_in_america.doc*(accessed 13 March 2015)*

Itagi, N., & Singh, S. (2002). *Linguistic landscaping in India with particular reference to the new states: proceedings of a seminar*. Mysore: Central Institute of

Indian Languages and Mahatma Gandhi International Hindi University, New Delhi.

Institute for the Blind. (2012). [Online]. Available: www.blind-institute.org.za *(accessed 29 August 2012).*

Jaworski, A. & Thurlow, C. (2010).Semiotic Landscapes: Language, image, space. *Language in Society,* 41: London.

Jenkins, H. (2006). *Fans, bloggers and gamers: Exploring participatory culture.* New York: New York University Press.

Jewitt, C. (2006). *Technology, literacy and learning: a multimodal approach.* London: Routledge.

Johnson, L. (1996). The Braille Literacy Crisis for Children. *Journal of visual impairment and blindness*, 90(3).

Jones, K. (1999). *Texts, talk and discourse practices: exploring local experiences of globalisation.* Unpublished PhD thesis, Lancaster University, Lancaster.

Josselsen, R. (2006). *Narrative research and the challenge of accumulating knowledge.* John Benjamins Publishing Company. [Online] Available: http://ruthellenjosselson.com/articles/article.pdf (accessed 1 June 2016).

Kasper, L. (2000). New technologies, New Literacies: focus discipline research and ESL learning communities. *Language, Learning and Technology,* 4(2).[Online]. Available: www.llt.msu.edu/vol14num2/kasper/default.html (accessed 12 March
2014).

Kell, C. (1996). *Literacy practices in an informal settlement in the Cape Peninsula.* In Prinsloo, M. & Breier, M. *The social uses of literacy.* Amsterdam: John Benjamins.

Kellner, D. (2000). New Technologies/New Literacies: reconstruction education for the new millennium. *Teaching Education.* 11:3. [Online] Available: http://ldt.stanford.edu/~ejbailey/05_MASTERS/MA%20Articles/kellner_newtechnewlit.pdf (accessed 13 March 2015).

Kist, W. (2000). Beginning to create the new literacy classroom: What does the new literacy look like? *Journal of Adolescent and Adult Literacy*, 43 (8). Newark: International Reading Association.

Kist, W. (2007). *Basement New Literacies: Dialogue with a first-year teacher.* English Journal 97(1).

Koenig, A.J. & Holbrook, M.C. (2000). *Foundations of education: Instructional strategies for teaching children and youths with visual impairments.* New York: AFB Press.

Koenig, A.J. (1992). A framework for understanding the literacy of individuals with visual impairments. *Journal of Visual Impairment and Blindness*, 86(7).

Koenig, A.J. (1996). *The literacy of individuals.* In Neuman, S. & Roskos, K. *Language and literacy learning in the early years: An integrated approach.* Fort Worth: Harcourt Brace Jovanovich.

Koskina, A. & Hasanagas, N. (2011).*Non-Visual Landscape: Landscape Planning for People with Vision Problems.* [Online] Available: http://www.ibidemverlag.de/Unser-Verlagsprogramm/Architektur---Baustoffkunde/Non-Visual-Landscape--Landscape-Planning-for-People-with-Vision-Problems.html (accessed 3 June 2016).

Kress, G. (2009). *Literacy in the new media age*. Oxon: Routledge

Kress, G. & Van Leeuwen, T. (2006). *Reading images: the grammar of visual design.* London: Routledge.

Landry, R. & Bourhis, R. (1997). *Linguistic Landscape and Ethnolinguistic Vitality: An Empirical Study.* [Online] Available: http://jls.sagepub.com/content/16/1/23.abstract (accessed 1 June 2016).

Lankshear, C. (1993) in McLaren, P. & Leonard, P. *Paulo Freire: A Cricital Encounter.* Routledge.

Lankshear, C. & Knobel, M. (2003).*New Literacies: Changing knowledge and classroom learning.* Philadelphia: Open University Press.

Lankshear, C. & Knobel, M. (2006).*New Literacies: Everyday practices and classroom learning* (second edition). New York: Open University Press & McGraw Hill.

Lankshear, C., Snyder, I. & Green B. (2000). *Teachers and Techno Literacy: Managing Literacy, Technology and Learning in Schools.* St. Leonards: Allen & Unwin.

Latour, B. (1996). On Interobjectivity. *Mind, Culture and Activity*, 3(4). [Online} Available: http://www.bruno-latour.fr/sites/default/files/63-INTEROBJECTS-GB.pdf. (accessed: 30 May 2016).

Lemphane, P. & Prinsloo, M. (2013).Children's digital literacy practices in unequal South African settings. Tilburg Papers: 60. [Online]. Available: www.tilburguniversity.edu/upload/677760c1-ce2a-4762-941c-ab01ae138754-TPCX_60_Lemphane-Prinsloo.pdf (accessed 28 February 2014).

League of friends of the blind/LOFOB. (2012). [Online]. Available: http://www.lofob.org.za/html/Braille.html (accessed 21 September 2012).

Leander, K. & Sheehy, M. (2004).*Spatializing literacy research and practice.* Bern: Peter Lang.

Lessig, L. (2005). *Free culture: The nature and future of creativity*. New York: Penguin.

Leu, D.J. & Zawilinski, L. (2014). *The New Literacies of Online Reading comprehension.* [Online]. Available: www.academia.edu (accessed 12 March 2014).

Leu, D.J. (2014). *Literacy and Technology: Deictic Consequences for Literacy Education in an Information Age.* [Online]. Available: www.sp.uconn.edu/-djleu/Handbook.html (accessed 17 March 2014).

Leu, J.R., D.J., Kinzer , C.K., Coiro, J., & Cammack, D.W. (2004). *Toward a Theory of New Literacies Emerging From the Internet and Other Information and Communication Technologies*. In Ruddell, R.B. & Unrau, N.J. *Theoretical Models and Processes of Reading.* Newark: International Reading Association.

Lincoln, Y.S. &Guba, E.G. (1985).*Naturalistic inquiry*. Beverly Hills: Sage.

Literacy Coordinating Council/LCC. (2012). *What is functional literacy?* [Online]. Available: www.lcc.deped.gov.ph/lcc (accessed 28 August 2012).

Literacy Encyclopaedia. (2013). *Literacy.* [Online]. Available: www.experiencfestival.com/a/Literacy/id/1903743 (accessed 27 August 2013).

Lorimer, P. (2000). *Reading by touch: Trials, battles and discoveries.* Baltimore: National Federation of the Blind Press.

Lorimer, H. (2008). Cultural Geography: non-representational conditions and concerns. *Progress in Human Geography*, 32**:** 551-559.

Luke, A., & Freebody, P. (1997).*Shaping the social practices of reading.* In Muspratt, S., Luke, A. & Freebody, P. *Constructing critical literacies: Teaching and learning textual practice.* Cresskill: Hampton Press.

Luke, C. (1994). Feminist pedagogy and critical media literacy. *Journal of Communication Inquiry*, 18(2).

Mac Giolla Chriost, D. (2007) *Language And The City*. Basingstoke: Palgrave Macmillan.

McKinley, P.L. (2006). *Literacy in the lives of the blind: an ethnographic study in the San Francisco Bay area.* Unpublished PHD-thesis. University of Iowa.

McLauglin, M. & DeVoogd, G.(2004). *Critical literacy: Enhancing students' comprehension of text*. New York: Scholastic.

Merleau-Ponty, M. (2009).*Phénoménologie de la perception.* Gallimard.

Milani, T. (2014) Sexed signs – queering the scenery. *International Journal of the Sociology of Language,* Issue 228: 201-225.

Mioduser, D., Nachmias, R. & Forkosh-Baruch, A. (2008). *New Literacies for the knowledge society.* [Online]. Available: www.researchgate.net/...New_Literacies_for_the_Knowledge_Society/.../60b7d522a4627b646.pdf (accessed 17 March 2014).

Moll, L., Amanti, C., Neff, D. & Gonzales, N. (1992). Funds of Knowledge for teaching: Using a qualitative approach to connect homes and schools. *Theory Into Practice*, 31.

Moll, L. (1994).*Literacy research in community and classrooms: A sociocultural approach.* In Unrau, NJ, Ruddell, RB & Singer, H. *Theoretical Models and Processes of Reading* (4th ed.). Newark: International Reading Association.

Muller, M. (2015).Assemblages and Actor-networks: Rethinking Socio-material, Power, Politics and Space. *Geography Compass* 9:1: 27-41. [Online] Available: http://onlinelibrary.wiley.com/doi/10.1111/gec3.12192/abstract (accessed 1 June 2016).

Nardi, BA. & O'Day, V. (1999).*Information Ecologies*. Cambridge: MIT Press.

National Assessment of Adult Literacy (NAAL). (2012). *Definition of Everyday Literacy Tasks.* [Online]. Available: *www.nces.ed.gov/NAAL/* (accessed 28 August 2012).

National Federation of the Blind. (2009). *The Braille Literacy Crisis in America; Facing the truth, Reversing the Trend, Empowering the Blind.* [Online]. Available: *www.nfb.org* (accessed 29 August 2012).

Office of the Deputy President. (1998). *Opening of the Perkins Brailler project: Opening address.* Office of the Deputy President of South Africa.

Oliver, M. (1996).*Understanding disability: From theory to practice.* Basingstoke: Macmillan.

Olson, D. R. (1988). *From utterance to text.* In Kintgen, E.R., Kroll, B.M. & Rose M. *Perspectives on literacy*. Carbondale: Southern Illinois University Press.

Papen, U. (2005). *Adult literacy as social practice: More than skills.* London: Routledge.

Peck, A. & Stroud, C. (2015). Positioning the body as a corporeal linguistic landscape or 'skinscape'. *Linguistic Landscape Journal*.1 (1-2), 133-151.

Pennycook, A. (2003). Global Englishes, Rip Slyme and performativity. *Journal of Sociolinguistics*, 7(4), 513–533.

Pennycook, A. & Otsuji, E. (2015). Making scents of landscape. *Linguistic Landscapes*, 1:3:191-212. John Benjamin Company. [Online] Available: https://www.researchgate.net/publication/286408936_Making_scents_of_the_landscape (accessed 1 June 2016).

Pennycook, A. (2016). Posthumanist Applied Linguistics. *Applied Linguistics*, 1-18. Oxford University Press.

Perry, K.H. (2012). What is Literacy? A Critical Overview of Sociocultural Perspectives. *Journal of Language and Literacy Education,* 8(1): 50 - 71.

Pew Research Centre. (2015). *Cellphones in Africa: Communication Lifeline.* [Online] Available: https://www.klinikum.uni-heidelberg.de/fileadmin/zpm/psychatrie/fuchs/Body_memory_Unconsious.pdf (accessed 1 June 2016).

Pink, S. (2008). An urban tour: The sensory sociality of ethnographic place-making. *Ethnography*, 9:2: 175-196. [Online] Available: http://eth.sagepub.com/content/9/2/175.abstract (accessed 1 June 2016).

Polkinghorne, D. (1995). Narrative configuration in qualitative analysis. *International Journal of Qualitative Studies in Education*, 8:1. [Online] Available: http://www.tandfonline.com/doi/abs/10.1080/0951839950080103 (accessed 1 June 2016).

Prensky, M. (2006). *Don't Bother Me Mom > I'm Learning! How Computer and Video Games Are Preparing Your Kids For the 21st Century Success > and How You Can Help!* St.Paul: Paragon House.

Prinsloo, M. (2005).*Studying Literacy as Situated Social Practice: The Application and Development of a Research Orientation for Purpose of Addressing Educational and Social Issues in South African Contexts.* Unpublished PhD thesis, University of Cape Town, Cape Town.

Prinsloo, M. & Baynham, M. (2008). *Literacies, Global and Local*. Amsterdam: John Benjamins.

Prinsloo, M. (2013).*Literacy in Community Settings*.InChapelle, C.A.(2013). *The Encyclopaedia of Applied Linguistics* .Blackwell Publishing.

Rafael, E., Shohamy, E. Amara, M. & Trumper-Hecht, N. (2006). Linguistic Landscape as Symbolic Construction of the Public Space: The Case of Israel. International Journal of Multilingualism, 3(1): 7-30.

Read Taber, S. (1987). Current definitions of literacy. Journal of Reading, 30(5): 458-461.

Resnick, D. & Resnick, L. (1977). The nature of literacy: An historical exploration. *Harvard Educational Review*, 47, Harvard University.

Rex, E., Koenig, A.J., Wormsley, B.P. & Baker, R.J. (1994). Issues related to literacy of legally blind learners. *Journal of Visual Impairment and Blindness,* 83.

Ryles, R. (1996).The impact of braille reading skills on employment, income, education and reading habits. *Journal of Visual Impairment and Blindness,* 90 (3).

Shohamy, E. & Waksman, S. (2010). Building the nation, writing the past. in Jaworski, A. & Thurlow, C. (eds.), *Semiotic Landscapes: Language, image, space*, Continuum: 241-255.

Schroeder, F.K. (1996). Perceptions of Braille usage by legally blind adults. *Journal of Visual Impairment and Blindness,* 90(3).

Scollon, R. & Scollon, S. (2003). *Discourse in place: Language in the material word.* London: Routledge.

Scribner, S. (1984).Literacy in Three Metaphors. *American Journal of Education*, 93(21). University of Chicago Press.

Scribner, S. & Cole, M. (1981).*The psychology of literacy.* Cambridge, MA: Harvard University Press.

Shohamy, E. & Gorter, D. (2009). *Linguistic landscape: Expanding the scenery.* New York: Routledge.

Simsek, E. & Simsek, A. (2013). New Literacies for digital citizenship. *Contemporary Educational Technology*,4(2).

Snyder, L. (2002). *Silicon literacies: communication, innovation and education in the electronic age.* London: Routledge.

Soler, J., Wearmouth, J. & Reid, G. (2002). *Contextualising difficulties in literacy development.* London: Routledge.

South African Institute of Race Relations. (2012). Press release: *South Africa's literacy level lower than other emerging markets despite spending more.* [Online]. Available: *http://www.sairr.org.za/media/media-releases/SAs%20literacy%20level%20low%20despite%20spending.pdf/view*

(accessed on 2 August 2012).

South African National Council for the Blind. (2010). [Online]. Available: www.sancb.co.za (accessed 13 March 2015).

Spungin, S.J. (1989). *Braille literacy: Issues for blind persons, families, professionals, and producers of braille.* New York: American Foundation for the Blind.

Statistics South Africa. (2010). [Online]. Available: http://www.statsa.co.za (accessed 15 December 2014).

Street, B.V. (1984). *Literacy in theory and practice.* Cambridge: Cambridge University Press.

Street, B.V. & Lefstein, A. (2007). *Literacy: an advanced resource book.* London and New York: Routledge.

Street, B.V. (1995). *Social literacies: critical approaches to literacy in development, ethnography, and education.* London and New York: Longman.

Stroud, C. & Mpendukana, S. (2009). Towards a material ethnography of linguistic landscape: Multilingualism, mobility and space in a South African township. *Journal of Sociolinguistics*, 13(3): 363–386.

Taylor, V. (2001). *Report of the Committee of Inquiry to a comprehensive system of social security for South Africa.* Pretoria: Department of Social Development.

Thibault, M. & Walbert, D. 2009. *Reading images: an introduction to visual literacy.* [Online]. Available: http://www.learnnc.org/lp/pages/675?style=print (accessed 21 September 2012).

Thomson, R.G. (1997). *Extraordinary bodies: Figuring physical disability in American culture and literature*. New York: Columbia University Press.

Tusting, K., Ivanic, R. & Wilson, A. (2000). *New literacy studies at the interchange.* In Barton, D., Hamilton, M. & Ivanic, R. *Situated literacies.* London: Routledge.

UNESCO. (2012). *Indicators: Total public expenditure on education as a percentage of total government expenditure*. [Online]. Available: http://stats.uis.unesco.org/unesco/TableViewer/tableView.aspx?ReportId=3561 (accessed on 21 September 2012).

Van Maanen, J. (1983). The fact and fiction in organizational ethnography. *Qualitative methodology*, 37–55.Beverly Hills: Sage.

Wagner, D. & Kozma, B. (2005). *New technologies for literacy and adult education.* Paris: Unesco Publishing.

Wagner, D., Street, B. & Venezky, R. (1999). *Literacy: An International Handbook.*Westview Press.

Warlick, D. (2005). The New Literacy. *Administrator Magazine,* March/April 2005. [Online]. Available: www.scholastic.com/browse/article.jsp?id=263&print=1 (accessed 12 March 2014).

Watermeyer, B., Swartz, L., Lorenzo, T., Schneider, M. & Priestly, M. (2006). *Disability and social change: a South African agenda.* Cape Town: Human Sciences Research Council Press.

Willis, M. (1994a). *Listening to the Literacy Events of a Blind Reader*. [Online]. Available: www.fairuselab.net/2009/09/22/listening-again-to-a-blind-readers-literacy (accessed 21 September 2012).

Willis, M. (1994b). *Literacy, Orality, and Cognition: An Overview.* [Online]. Available: www.wright.edu/~mark.willis/essays/oralcog.html (accessed 21 September 2012).

Lanza, E. & Woldemariam, H. (2014). Multilingualism and Local Literacy Practices in Ethiopia: Language contact in regulated and unregulated spaces. *Multilingual Margins – Journal of Multilingualism from the periphery.* Volume 1. Stroud, C. & Williams, Q (eds). Center for Multilingualism and Diversity Research, University of the Western Cape: 55-76.

Wormsley, D.P. (2006). *Braille literacy: A functional Approach.* American Foundation for the Blind.