

DRAWING THROUGH TOUCH: A PHENOMENOLOGICAL APPROACH

Dr Deborah Harty, deborah.harty@ntu.ac.uk

Introduction

The paper will discuss the phenomenology of drawing and how this may be useful for thinking about documenting and holding information, to provide aids when working with blind and visually impaired students. Drawing is said to be phenomenological: not only capable of recording its own making, but also the movement of the thoughts and body of the draftsman. Rosand (2002, p.16) states, "Responding to drawings, we make our way back, through line, to the originary impulse of the draftsman. Interpretation involves a connecting act of *re-creation*, the self-projection of the viewer *reimagining* the process of drawing." Are these still viable claims when the visual element of the drawing is removed and replaced by touch? Working from the standpoint of Merleau-Ponty (2004) - who sought to identify the specific role of the body as mediator between the world and self - the paper will argue that they are and, as a consequence, drawing has the potential to enhance the documentation and transferring of information to the blind and visually impaired, through tactiles created from their own experiences of drawing through touch.

Merleau-Ponty's Phenomenology

Merleau-Ponty (2004, p.56) sought to identify the specific role of the body as mediator between the world and self, he states, "... rather than a mind *and* a body, man is a mind *with* a body, a being who can only get to the truth of things because its body is, as it were, embodied in those things." Identifying the specifics of the body in the world Merleau-Ponty (1964, p.163) suggests,

Visible and mobile, my body is a thing amongst things; it is caught in the fabric of the world and its cohesion is that of a thing. But because it moves itself and sees, it holds things in a circle around itself. Things are an annexe or prolongation of itself; they are encrusted into its flesh, they are part of its full definition; the world is made of the same stuff as the body.

Merleau-Ponty (1964) suggests that the artist is able to recreate in his artwork the specific phenomena of the world, rather than a reproduction of how it is presumed to appear, through the mediation of his body. "Since things and my body are made of the same stuff, vision must somehow take place in them. [...] Things have an internal equivalence in me; they arouse in me a carnal formula of their presence" (Merleau-Ponty 1964, p.164). Merleau-Ponty suggests the artist is able to communicate his specific mode of being-in-the-world through his art, revealing the world through the trace left on the canvas or paper. "It is by lending his body to the world that the artist changes the world into paintings" (Merleau-Ponty 1964, p.162).

The relationship between the body, the world and the trace left through mark-making on a surface is pertinent to this research. Merleau-Ponty (2002, p.239) states, "... perceiving as we do with our body, the body is a natural self and, as it were, the subject of perception." Whilst Rosand (2002, p.110) states, "Drawing records what has been seen and is known, but not after the fact – it is simultaneous with, and, for the draftsman, identical to perception." The body perceives and drawing is perception, as Rosand states, "The gesture of drawing is, in essence, a projection of the body ..." (Rosand, p.16) the body that is mediator between mind and world.

Drawing as phenomenology

Whilst there is much debate, and disagreement, concerned with answering the question – “What is Drawing?” - most (including, Farthing 2005 and Petherbridge 2008 *in* Garner 2008; Fisher 2003 *in* Newman & De Zegher 2003) acknowledge both: the intimate and immediate manner of drawing, and the capability of drawing to record the trace of the drawer. Marden (*in* Farthing 2005, p.30) states there is, “Less between the hand and the paper than any other medium” suggesting drawing’s immediacy. When discussing drawing’s ability to record the trace of the drawer Newman (Newman & De Zegher 2003, p.70) states that, “When we look, we enter the intimate space of a work that is as close to the action of an artist’s thought as one can get.” Taylor (2008, p.10) also believes in this quality of drawing stating, “... through the act of drawing we are not only left a trace of the physical act but a trace of the thinking process” In agreement with this, Bailey (1982, p.339) states, “More deeply than any other form in the visual arts, drawing immediately betrays how the draughtsman *thinks*.” Drawing, through its immediacy of means, reduces the space between the drawer and the drawing - leaving marks on the surface regardless of erasure - creating a visible trace of both the process of making and the drawer’s thoughts. Fisher (2002, p.222 *in* Newman & De Zegher 2003) states,

... the act of drawing makes possible the magical identity between thought and action because to draw is the quickest medium and can therefore protect the intensity of thought. To draw is never a transcript of thought (in the sense of writing) but rather a formulation or elaboration of the thought itself at the very moment it translates itself into an image.

Rosand (2002) furthers the debate of this attribute of trace by both: considering drawing’s ability to record the trace of the draftsman; and by suggesting that drawing is a phenomenological process - recording its own making through the trace of the marks. Rosand (2002: 12) states, “... the line recalls the process of its becoming through the act of drawing, the gesture of the draftsman.”

The interest for this paper is the use of drawing as a means to record the trace of an experience through exploration. In this case, the experience of a blind or visually impaired person exploring and perceiving an object or part of the physical world through touch; recording their experience through drawing onto a tactile surface. Merleau-Ponty’s suggestion that the body is a mediator between the world and self alongside the ability of drawing to record the trace of the draughtsman’s thoughts and movements, opens up the possibility for the blind and visually impaired to gain understanding of the physical world through the act of touching objects within the world and recording the experience into marks that can be subsequently felt and re-experienced as a tactile. The focus here then, is not, as above, on the ability of drawing to communicate an artist’s thoughts to a third party, rather the opportunity a tactile drawing can offer a blind or visually impaired person to re-experience the object through their own drawings, subsequently enhancing their understanding of the physical world.

Tactiles for the Blind and Visually Impaired

Tactiles are generally two-dimensional images and at present are used in a variety of institutions including schools, colleges and museums to enhance the learning of blind and visually impaired people. The images can be created in a variety of ways, they are typically line drawings created on swell paper - a paper designed to raise the black lines of the drawing when heat-treated. Some images are also vac-formed to create a relief shape in the surface. In schools and colleges a tactile drawing may be used to communicate mathematical information. In museums, such as The Arts Institute of Chicago, tactile images are created to communicate information about works within the collections, to offer the blind and visually impaired a way through touch to ‘see’ and experience art.

The charity Living Paintings, formed by Alison Oldland MBE, creates and lends tactile sheets that aim to communicate paintings to the blind or visually impaired. The organization also supplies tactiles to several museums including the National Portrait Gallery, the RCA and the Tate. They create multiple layered books. Each layer describes a

single element of the painting, which builds the information contained within the artwork. The final layer brings all the elements together to allow the reader to understand the relationship of the elements and consequently the composition of the painting. An audio accompanies the book giving an extra layer of information and insight into the painting. One user of the Living Paintings books stated, "Nothing can ever equal the first shock of sheer joy as I slipped into a world of my own. Rather like Alice through the looking glass. The mind took over the touching and actually lived in the picture" (Living Paintings). It appears that alongside the educational benefits the tactiles bring to the blind and visually impaired, there is also a sense of a similar kind of aesthetic experience a sighted person may have when viewing a painting. So there are many uses for tactiles at present, which are considered to be successful in varying degrees.

Eriksson (1999) states,

Its surprising, the smallness of differences in level which can be detected by touch. The distinctiveness of the relief image is not connected with the height of lines and surfaces. Instead it is the clarity of form that decides: complicated shapes and carelessly drawn lines make the tactile reading of an image difficult.

Figure 1 shows an example of the kind of tactile currently used with students at the RNIB Residential College. Fran Howkins, the college's Adaptation and Transcription Team Leader, who is sighted, creates the tactiles. After many years of experience creating tactiles for students at the college she believes that there is only so much that can be communicated through images to a blind or visually impaired student. She believes that the drawings have to be simple line drawings without perspective or occlusion and that the most important part of the use of a tactile is actually the description that accompanies the image.

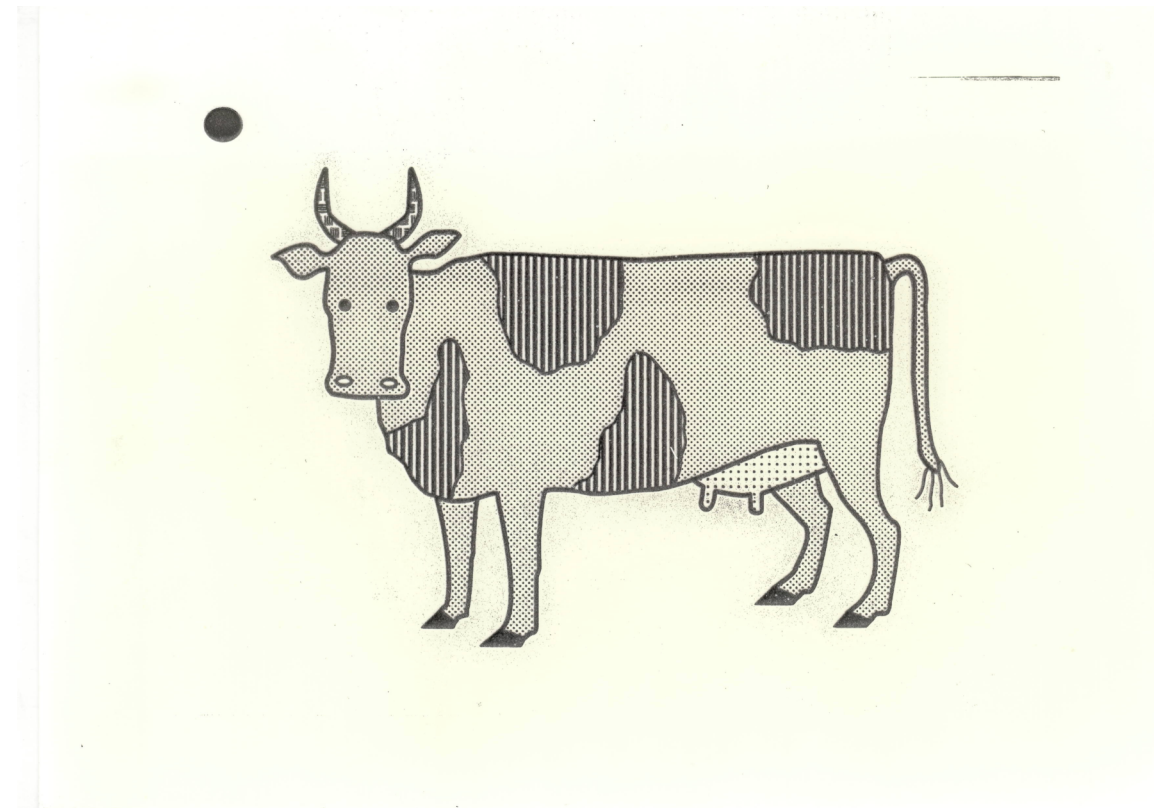


Figure 1: 'cow' Fran Howkins 2011 RNIB College

Figure 2 demonstrates a drawing created to support a story, which is considered to be greatly unsuccessful. The reason for this is multi-fold. Firstly, the use of perspective, whilst

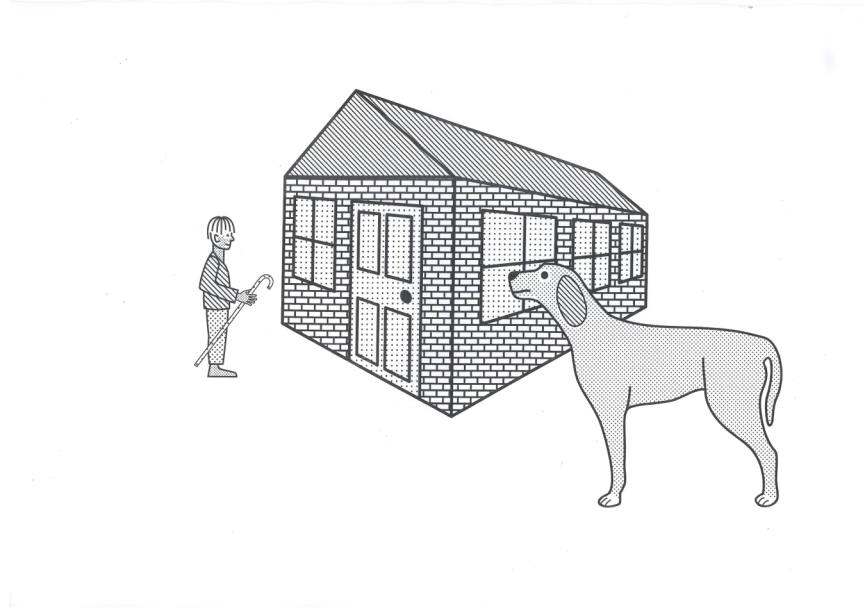


Figure 2: 'perspective' Fran Howkins 2011 RNIB College

late blind or visually impaired students may have some memory of the illusion created by depth, the congenitally blind have no experience of how the world appears visually. Therefore it is reasonable to assume the use of perspective in a tactile drawing would be confusing to them. Secondly, a congenitally blind person reading this drawing through touch would potentially consider that dogs were enormous; once again the result of perspective means that the reality of the physical world is distorted by the illusion created by perspective. Thirdly, the dog's head and neck overlap the side of the house and would therefore potentially become confused with the wall of the house if experienced through touch. As a consequence of these issues the tactile was redrawn as *figure 3* demonstrates. The house now appears straight on from a single viewpoint, there are no overlapping objects or figures and the house, person and dog are all drawn in relative scale.

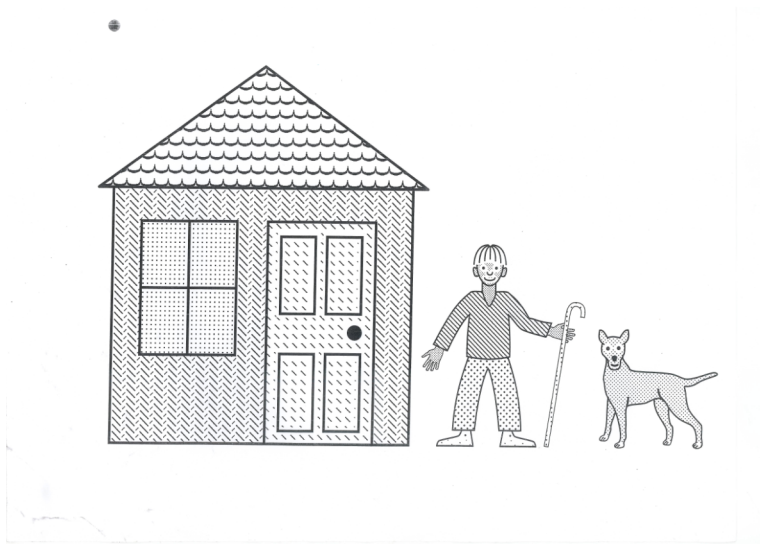


Figure 3: 'corrected tactile' Howkins 2011 RNIB College

Perception through Touch

Whilst the above observations are logical and reasonable to state, there are several researchers (for example, Eriksson 1999, Heller 2002, Kennedy n.d, 1983, 1993) in the field of cognitive psychology who have found some astonishing results when working with the blind and visually impaired. The experiments carried out by the cognitive psychologist are intended to learn more about how we perceive through touch. The experiments generally include: congenitally blind (or early blind); late blind (those whose vision was lost after childhood); visually impaired (those who still have some visual function) and blindfolded sighted subjects. In many of the experiments the congenitally blind tend to perform in much the same way as the blindfolded sighted subjects whilst the late blind tend to outperform both. For example, and contrary to what was discussed previously, when Heller (2002) tested the ability of congenitally blind, late blind and blindfolded sighted subjects to identify the use of perspective in tactile drawings the result of the congenitally blind and blindfolded sighted subjects were comparable. One explanation for the out performance of the late blind subjects is that, unlike the congenitally blind they have a visual memory to aid them, and unlike the blindfolded sighted subjects they tend to have a developed reliance and as a consequence, sensitivity to perception through touch (Heller 2002). Furthermore, Kennedy's (n.d) research suggests that there are commonalities in the way that congenitally blind and sighted subjects draw the world around them, he states,

Most significantly we have learned that blind and sighted people share a form of pictorial shorthand. That is, they adopt many of the same devices in sketching their surroundings: for example, both groups use lines to represent the edges of surfaces. Both employ foreshortened shapes and converging lines to convey depth. Both typically portray scenes from a single vantage point. Both render extended or irregular lines to connote motion. And both use shapes that are symbolic, though not always visually correct, such as a heart or a star.

One explanation for this is that perception of the physical world is never exclusively through one sense, visual or otherwise. As Kennedy (1993, p.2) suggests, "We are able to perceive because objects have distinct surfaces, both visibly and tangibly (the surfaces also affect taste and audition). Our perceptual systems extract information about surfaces from our sensory arrays, and more than one sense detects the relief formed by arrangement of flat and curved surfaces, their corners, vertices, edges and boundaries."

Some of the lines created in drawings from both the congenitally blind and sighted, describe the boundaries of objects or the point at which objects meet. As Kennedy (n.d.) states, "Neither feature need to be seen to be perceived. Both can be discerned by touching." Kennedy has discovered that congenitally blind subjects can discern the visual world through the use of touch, however, constructs like perspective foreshortening and the depiction of motion within images tend only to be incorporated into drawings by the congenitally blind after explanation of their existence by the researcher. One congenitally blind woman remarked after having read and perceived through touch a cube drawn in perspective, "...So you sighted people don't see it as a square" (*in* Heller et al. 2005, p.165). Heller et al. (2005, p.165) suggest this comment demonstrates an developing understanding of the sighted world through the, "... realisation that perspective drawings yield some distortion and foreshortening of the images."

Furthermore, one subject commented to Heller (2005, p.165), "... that blind people are aware that sighted people "see half a tree" but blind people "imagine the whole tree." This comment really highlights the fundamental difference in the perception of a world explored by touch - the tree is experienced as the subject wraps their arms around the trunk (Vinter et al. 2010, p.5/6) - and that explored by sight; the congenitally blind perceive the world in three-dimensions through the sense of touch and are therefore not familiar with pictorial conventions. However, the quote also suggests that whilst in practice, as in the example given earlier in *figure 2*, it seems reasonable to state that a tactile drawing that includes spatial conventions is unsuccessful as an aid, it may be that the congenitally blind could understand these images if they were taught the rules of pictorial representation. As Eriksson (1999) suggests, "In order for correct perception and understanding to be possible through the sense of touch, one should know how to go about using that sense efficiently." That is, without the understanding of conventions of pictorial representation it would be impossible

to know how to 'read' the drawing through touch. However, as Heller et al. (2005, p.168) suggest, "The translation of depth information to two-dimensional surfaces may present some small initial difficulty for congenitally blind persons. However, these problems appear minor and can probably be overcome with minimal experience or explicit instruction."

Phenomenological Tactile Drawings

There is clearly a distinct and necessary place for the tactile drawings created by sighted people specifically for the education and development of the blind and visually impaired. However, the consideration here is that this form of learning can be greatly enhanced by the experience of the creation of tactile drawings by the congenitally blind. As previously discussed, the congenitally blind gain much of their experience of the physical world through the things they encounter through touch (TBAG 2006, p.1). When they imagine what the world looks like it is this physical experience that determines that imagination. When the congenitally blind draw, their lines tend to follow the path of their touch. As Vinter et al. (2010, p.10) have observed, "... blind children drew objects from the exploring hands point of view, that is, used the graphic line as a projection of the hand path or arm path when they touched the objects."

Through the use of either swell paper or German Film – a transparent film that leaves a raised surface when drawn upon with a ballpoint pen - drawing allows for this exploration to be directly perceptible on the paper. The lines and marks trace the movement of the body and the process of understanding and recognition as it takes place through the perception generated by touch. Referring back to Merleau-Ponty's suggestion that the body is the mediator between the mind and the physical world, the experience of drawing can develop understanding through the physical act of touch exploration, documenting the tactile qualities experienced during interaction with an object or part of the physical world. Therefore, the line created on the tactile drawing can bear witness to the process of learning through the experience. As de Zegher (2010, p.24) suggests, "If, for the linguists, naming with the word was the act of consciousness through which we begin to know, for the artists the rendering of form in drawing transformed the perception into naming, and so was the process through which they came to know. Cognition thus proceeds from creation, with line as an indicator of a cognitive process." This in part maps onto the consideration of Cain (2007) that drawing, "... was perhaps a knowledge-constituting *process* involving a dialectic between knowing and not-knowing." This leads to the consideration that the process of drawing has the potential to enable the blind and visually impaired to develop their understanding of the physical environment through the act of drawing and through the act of reading their own drawings and re-experiencing through touch.

The physical engagement of the body implicated in the process of drawing also enhances this mode of learning through touch, the world is absorbed through the senses and drawing is phenomenological as it documents this movement through both the physical world and the process of thoughts. As Cain (2010, p. 52) states, "Thinking is not a form of representation but a matter of enaction in which knowledge occurs from knowing through the body." A blind or visually impaired person reading their own drawings through touch will once again engage the body in physical action with the raised line on the paper's surface. This engagement has the potential to both evoke the memory of the experience of the object or part of the physical world and generate a further experience as the detail of the drawing is experienced through the movement of the body and touch of the fingertips. As Cain (2010, p. 59) states, "The individual's experience is central to the production of relational knowledge because what comes to be known is enacted through the bodily history of the individual ..."

As previously discussed, the congenitally blind tend to draw out their experiences on paper through the following of the hand as it explores the object or part of the environment. They become extremely proficient in exploring the world through these movements of the fingertips. Eriksson (1999) suggests that the movement of the hands across objects and surfaces replicates the movement of the eyes as they rapidly survey the world. The brain pieces together this information in a split second to give us a feeling of instantaneous recognition. Hinton (1996) suggests that this is also the case when reading drawings, the blind and visually impaired will scan a drawing with the fingers of both hands and thus, with

experience will also appear to recognise images instantaneously. Therefore, there is a distinct connection between the process of exploring both two and three-dimensional phenomena and a developed capability of the blind and visually impaired to engage with and understand both.

Conclusion

Tactile drawings have a clear part to play in the education of the blind and visually impaired. The benefit of the use of these drawings is multi-fold: they enhance learning and allow the user to enter into a sighted world of pictures previously unavailable. There is an identified aesthetic reward for the reading of tactiles that stimulates the users' imagination and enables them to visualise and experience artworks. Alongside this when the blind and visually impaired create and therefore experience drawings phenomenologically it helps to improve understanding of the world as experienced through touch. As a consequence, tactile drawings produced by the blind and visually impaired have the potential to inform producers of graphic tactiles, about how the blind and visually impaired make sense of the three-dimensional world in two-dimensions. Thus enabling the creation of more effective tactiles learning tools for the education of the blind and visually impaired.

References

- BAILEY, G.H. 1982, *Drawing and the drawing activity: a phenomenological investigation*, Thesis (PhD), University of London.
- CAIN, P. 2007, Drawing as Coming to Know, in *Ambiguity*, Tracey Online Journal, Loughborough University. Available from: <http://www.lboro.ac.uk/departments/ac/tracey/somag/brien.html>. [Accessed 15 February 2009]
- CAIN, P. 2010, *Drawing the Enactive Evolution of the Practitioner*, Bristol, UK, Chicago, USA: Intellect Ltd
- DE ZEGHER, C. 2010, A Century Under the Sign of Line – Drawing and its Extension (1910-2010), in BUTLER, C. H. & DE ZEGHER, C. 2010, *Online – Drawing Through the Twentieth Century*, NY: MoMA
- ERIKSSON, Y. 1999, How to make tactile pictures understandable to the blind reader, 65th IFLA Council and General Conference, Bangkok, Thailand, Aug 20-28. Accessible at: <http://archive.ifla.org/IV/ifla65/65ye-e.htm>. [Accessed 20 December 2011]
- FARTHING, S. 2005, Dirtying the Paper Delicately, in: University of the Arts, *Inaugural Lecture*, London, April 26th 2005.
- FISHER, J. (2003). On Drawing, in DE ZEGHER, C. (ed.) *The Stage of Drawing: Gesture and Act, Selected from the Tate Collection*. London. New York: Tate Publishing & The Drawing Center. pp. 217-226.
- HELLER, M. A. 2002, Tactile Picture Perception in Sighted and Blind People. *Behavioural Brain Research*, vol. 135, pp. 65-88. Accessible at: www.elsevier.com/locate/bbr. [Accessed 4 January 2012]
- HELLER, M. A., MCCARTHY, M. & CLARKE, A. 2005, Pattern Perception and Pictures for the Blind, *Psicológica*, USA: Eastern Illinois University, vol. 26, pp.161-171. Accessible at: www.uv.es/revistas/articulos1.05/11.HELLER.pdf [Accessed 10 January 2012]
- HINTON, R. 1996, *Tactile Graphics*, Scottish Sensory Centre. Accessible at: www.ssc.education.ed.ac.uk/resources/vieemulti/hinton/hinton1.html [Accessed 4 January 2012]
- KENNEDY, J. M. n.d. *How the Blind Draw*. Accessible at: www.artbeyondsight.org/teach/how-blind-draw.shtml. [Accessed 20 December 2011]
- KENNEDY, J. M. 1983, What Can We Learn About Pictures From the Blind? *American Scientist*, vol. 71 (No.1), pp. 19-26
- KENNEDY, J. M. 1993, *Drawing and the Blind: Pictures to Touch*. New Haven & London: Yale University Press. Accessible at: <https://tspace.lib.utoronto.ca/handle/1807/1021>. [Accessed 20 December 2011]
- LIVING PAINTINGS, Accessible at: www.livingpaintings.org. [Accessed 20 December 2011]
- MERLEAU-PONTY, M. 1964, 1908-1961, *The Primacy of Perception: and Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics*, Evanston, Illinois: Northwestern University Press.
- MERLEAU-PONTY, M. 2002 (reprinted), *The Phenomenology of Perception*, London, New York: Routledge.
- MERLEAU-PONTY, M. 2004 (reprinted), *The World of Perception*, Oxford, New York: Routledge.
- NEWMAN, A. & DE ZEGHER, C. 2003, Conversation. In DE ZEGHER, C. ed. *The Stage of Drawing: Gesture and Act, Selected from the Tate Collection*. London. New York: Tate Publishing & The Drawing Center. 67-81, 165-173, 231-237.
- PETHERBRIDGE, D. 2008, Nailing the Liminal: The Difficulties of Defining Drawing, in Garner, S. 2008, *Writing on Drawing: Essays on Drawing Practice and Research*, Bristol, Chicago: Intellect. pp. 27-42.
- ROSAND, D. 2002, *Drawing Acts – studies in graphic expression and representation*, Cambridge: Cambridge University Press.
- TAYLOR, A. 2008, Re: Positioning Drawing, in GARNER, S. 2008, *Writing on Drawing, essays on Drawing Practice and Research*, Bristol, Chicago: Intellect Books. pp. 9-12.
- TBAG (Tactile Book Advancement Group), 2006, *Telling Stories Through Touch*. Accessible at: www.tactilebooks.org/making/telling-touch.pdf. [Accessed 4 January 2012]
- VINTER, A., FERNANDES, V. & CLAUDET, P. 2010, Drawing in Blind and Visually Impaired Children, *Terra Haptica*, Les Doigts Qui Rêvent, (No. 1).