

Texts and Textiles

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Affect, Synaesthesia and Metaphor in Fiction

By

Diana Mary Eva Thomas

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INTRODUCTION

An ancient metaphor: thought is a thread, and the raconteur is a spinner of yarns—but the true storyteller, the poet, is a weaver. The scribes made this old and audible abstraction into a new and visible fact. After long practice, their work took on such an even, flexible texture that they called the written page a *textus*¹, which means cloth. (Bringhurst 2004, 25)

The epigraph to this chapter succinctly draws together the affinity between the woven word and the woven cloth. Furthermore, the origins of the words “text” and “textile” underline the complexity of the connections and interrelationships between the two concepts. The word “text” is derived from “**late Middle English:** from Old Northern French *texte*, from Latin *textus* ‘tissue, literary style’ ... , from *text*—‘woven’, from the verb *texere*” (*Oxford Dictionary of English* 2010). Similarly, “textile” is derived from “**early 17th cent.:** from Latin *textilis*, from *text*—‘woven’, from the verb *texere*” (*Oxford Dictionary of English* 2010).

It is not only in Western cultures that these pairings are evident. In China, poetry, painting and calligraphy traditionally stem from a common root metaphor—*wen*. *Wen* can refer to:

physical markings, patterns on coloured woven silk and painted designs of carriages as well as writing, literature and culture.... “*Wen* means assembling various colours to form brocade or embroidery, assembling words to form phrases and meanings like patterned embroidery”. (Goldberg 1998)

These early shared roots survive in our everyday language in the many words and phrases that link texts and textiles together. These include: embroidering the truth, spinning a yarn, knitting together, weaving a story, the warp of time, fabric and fabrication, the web of life, unravelling, tangle, fray, loose ends and wool-gathering. Alternatively, examples of tactile words that are usually applied to textiles but are linked with

¹ All quotations are given exactly as they appear in the original text unless stated otherwise, excluding quotation marks which have been adjusted in accordance with Chicago Style practice.

language and speech include: coarse language, velvet or silky-tongued, cotton-mouthed speech, brittle laughter, firm tone and smooth or sharp-tongued. This is not a modern union. Stevens points out that Roman writers such as Cicero and Quintilian used tactile descriptors (Stevens 2008, 163) to indicate the social standing of their characters. There are marked differences between city (smooth), country (rough) and foreign language use:

Latin has a basic aesthetic distinction between “pleasant” and “unpleasant.” The distinction is at root tactile: pleasant is “smooth” (*lenis*), unpleasant is “rough” (*asper*). Thus Cicero writes that urban Latin lacks “rustic roughness” (*rusticam asperitatem*), being smooth by implied contrast, as well as “foreign insolence” (*peregrinam insolentiam ...*). (Stevens 2008, 167)

The connections between text and textiles are also plainly seen in the way ideas are passed on from one person to another, one culture to another. To transmit a message that has longevity, text needs to be written down onto a surface or incorporated into a textile. Stone, clay, bone, bamboo, silk, wood, papyrus and parchment were the forerunners and contemporaries of paper. Paper was first made from the papyrus plant in Egypt and the word “paper” comes via Latin from the Greek “papuros” (*Oxford Dictionary of English* 2010). The papyrus was sliced, interwoven, pressed tightly, dried and polished to form an early version of the writing material we know today as paper. Not only was good quality paper made from rags (textiles) but good quality textiles (silks) were used to write on. By the twelfth century the technology of paper and silk production had travelled from the Islamic world to the rest of Europe (Ten Grotenhuis 2006, 10). This interchangeability of textile and paper to form the writing material that carries the text provides another link within the text/textile juxtapositioning. It has been argued that the Silk Road was the route used to transport both silk and paper from China where both were made for centuries before the West knew of either of their production techniques in their entirety. Thus, silk and paper have a parallel history of secret production, guarded jealously for thousands of years (Ten Grotenhuis 2006).

Christina Leitner remarks on the implicit qualities of paper in her book *Paper Textiles*:

As the medium on which we write, it represents memory, human progress and the dissemination of knowledge. In other documents, it creates

identities and authorities. As money, it regulates the comparison of products and services. (Leitner 2005, 9)

Leitner also compares the similarities between the uses of textiles and paper and the ease with which one can be exchanged for the other. Hence, textiles can also be used to write on, paper can be used as cloaks or floor coverings (Leitner 2005, 11-12). She describes how the Japanese Kamiko—or “paper shirt”—comes from *kami* (paper) and *koromo* (monk’s robe). These were originally made by the Buddhist monks, so the legend goes, from the pages of old Sutras (Leitner 2005, 18). The spiritual implications of using holy scripts next to the skin as a means of internalizing the words spread throughout the religious community and into general use. Kamiko are also used as a metaphor for material poverty and spiritual wealth in haiku poetry (Leitner 2005, 21). Another form of paper cloth is *Shifu*. “*Shi* means paper, *fu* means cloth or weave. *Shifu* is therefore ‘woven paper cloth’” (Leitner 2005, 22). The paper was cut into strips which were traditionally twisted by hand or on a spinning wheel, into very strong fibres that were woven and made into clothing. This type of fibre is still used today for knitting into garments.

Texts are often also inherent in textiles. Textiles can tell a story, communicate an idea or convey a narrative, meaning or emotion to the viewer in a visual or a tactile way. There are many instances of this, from the Bayeux Tapestry to the symbolism of designs on clothing in Indigenous cultures. Australian fiction with textile motifs can be of the straight narrative style, just telling a story, but other meanings can be revealed through an exploration specifically of textile use, with its sensory overtones, coupled with the activation of affect through synaesthetic² writing. These aspects have only rarely been studied. The creating of textile pieces involves, primarily, the sense of touch. The “sense” of touch tells us about the “reality” of the fabric, the “knowing” of touch and its immediacy stimulates memory. Because our hands hold the wool when we knit, touch the fabric for quilting, cut with shears and scissors, pull thread through linen or canvas, or move to the rhythm of the loom, we have intimate first-hand knowledge of the tactility of the materials and the procedure. Even people not engaged in the creative process know the feel of a knitted jumper, a favourite quilt or an embroidered tablecloth.

² The spelling of the word synaesthesia varies. I have used the “ae” spelling—synaesthesia—throughout this study except in quotations where the alternate spelling is used—synesthesia.

My hypothesis is that the use of textiles in fiction allows novelists to deploy synaesthetic writing so that an affective reaction is generated in the reader in a pre-cognitive state, which is then augmented through cognitive memories of learning and experience, particularly those of a sensory nature. I will focus on quilted, knitted and embroidered textiles in Australian fiction to demonstrate this theory. Questions that will make the role of synaesthesia and synaesthetic metaphor in the creation of affect clearer include:

- What is synaesthesia and the synaesthetic metaphor?
- What is affect and how is it created in the reader?
- How do synaesthetic metaphors intensify affect?
- How is affect created in Australian fiction that has an emphasis on handcrafted textiles through the use of synaesthesia and synaesthetic metaphors?
- Do authors who write about textiles in their fiction use synaesthetic metaphors more often than other writers and do they make reference to touch more frequently as the significant component of the synaesthetic compound?

Some writing seems to activate the senses of the reader and in doing so increases their involvement with the text. During my research I studied novels and short stories that had textiles as a major component in them. I read international as well as Australian literature to try to identify the function of textiles in fiction beyond their use as straight metaphor. I realized that I wanted to study the way in which textiles are used in fiction to create a synaesthetic response in the reader that may or may not lead to an affective reaction. My work concentrates on Australian fiction that makes use of textiles in a major and meaningful way, using supporting material drawn from international fiction. “Australian fiction” refers to novels by Australian authors, rather than the settings of their works.

Analysis of three types of textile structure—quilting, knitting, and embroidery—shows how synaesthesia is used similarly and differently in the texts. There are novels that employ each of these three major groups of textile making, to a greater or lesser degree. Quilting and knitting are well represented in major works by Australian authors, embroidery less so, but the instances of embroidery that do exist show how that technique can reveal secrets and hidden meaning. Crochet, lace work and beadwork are not included in this study as these are not textile arts used in a significant way by Australian authors. Weaving has a rich and complex history in fiction, myth and poetry but again Australian novels that contain weaving

references are difficult to find, do not use textiles as a main motif and are not plentiful enough to offer a worthwhile comparison or complement to the works that I have chosen.

Aristotle (384-322BC) concluded in *De Anima* (1952, 656) that there are five senses perceived by human beings—sight, hearing, smell, taste and touch. These categories continue to be the way in which we describe our senses today, although his classification of the senses is a cultural rather than a scientific one. But which of the five commonly accepted senses are relevant to this study? Vision and touch are the obvious main senses that translate the appeal of fabric to the human self. The sight of a fabric excites our aesthetic appreciation through the play of colour, pattern and weave or repels us if it uses unappealing materials and combinations of them. The tactile qualities of fabric go hand in hand with the visual qualities, whether it be the pleasing feel of the surface of the fabric or the unpleasant texture of a coarse cloth. Smell and hearing can also play a part in our appreciation of textiles. The odour of a fabric can be pleasant or unpleasant to the nose, evoking memories of a favourite scent or floral fragrance, or take us back to an unsavoury moment, and the auditory qualities of some fabrics can have the same effect.

When two or more of these senses provide our brains with information to evaluate, the cross-modal nature of this transaction is said to be “synaesthetic”. The word “synaesthesia”, literally means “joined sensation” according to Richard Cytowic, a leading researcher in the field:

It comes from the Greek *syn*, union + *aesthesis*, sensation. It denotes the rare capacity to hear colors, taste shapes, or experience other equally strange sensory fusions whose quality seems difficult for the rest of us to imagine. For example, my voice would be not just something that is heard, but also felt, seen, or tasted. (Cytowic 2002, 2)

A true synaesthete has the ability to experience two sensory events at the same time. An example of this phenomenon would be a person who perceives colours while listening to music, or sees coloured letters as they read. Only a small percentage of human beings have this gift but everyone experiences cross-modal sensations as we gather information from visual, tactile, auditory, olfactory and taste sources simultaneously.

There are, in the interrelationship between text and textile, opportunities for the construction of several types of metaphor. On the most elementary level, the straightforward metaphor of thread and text, equates to textile creation and story. There are the text/textile metaphors

that have been supported and extended into modern use from the myths and legends of Greece and Rome (Penelope, Ariadne, Arachne, Philomela, etc.) to works such as Tennyson's "The Lady of Shalott". There is also the connection between the textile arts and women's work that make it a fruitful source for fiction and particularly for fiction about women. Also there are the metaphors that express the concept of how a life is lived or how a community unites to overcome the problems of its members. However, there are more than just straightforward metaphors in the intertwining of text and textile.

A "synaesthetic metaphor" is one that employs two or more senses or sense words to deliver metaphors such as "loud colour", "soft sound" or the more unusual examples of "yellow smoothness" or "soft sight", that bring together touch and vision. A synaesthetic metaphor goes further than a simple metaphor, by heightening the sensual qualities of the writing, to make a familiar language exciting with a new twist and connection with the sensory memory of the reader. It is the multiple evocations made possible with a synaesthetic metaphor that makes it so powerful and arresting. Keats and Byron used synaesthetic metaphors extensively in their poetry. Fogle notes when writing of synaesthetic metaphor in the work of Keats: "It frequently appears as a tendency to ally sense-images with the sense of touch in order to make them stronger and more concrete" (1964, 41) and it assists with the compressed and compact nature of his poetry by conveying his meaning and its sensory implications in a few words. The same intensity that these metaphors bring to poetry is found in fiction. A synaesthetic metaphor that appeals to the senses of the reader uses a universal language and summons a collective consciousness. Research into the relationship between advertising and synaesthetic metaphor (Nelson and Hitchon 1999) has shown that in some circumstances cross-sensory advertisements are perceived to be more pleasant than literal advertisements as our sensory imagination can add intensity. The vigour and freshness that synaesthetic metaphors bring to fiction can result in, or at least, contribute to, the "affect" response in the reader.

The concept of "affect" changes its meaning depending on whether it is being used in the context of psychology, the arts or cultural and literary theory, but in this study it refers to the narrow definitions and work of Silvan Tomkins and Brian Massumi. Tomkins explored the theory of human drives and affects focusing on their physical manifestations, whereas Massumi concentrated on the interaction of the event and the body and linked affect with synaesthesia, textiles and literature.

This work does not exist in a vacuum. In the field of textile theory the book *Cloth and Human Experience* edited by Annette Weiner and Jane Schneider is a starting point for any study on the interaction between cloth and society. It traces the social and political meanings of cloth, its production, trade and value in a commercial and a spiritual context. Most importantly the book systematically catalogues the importance of cloth in ritual and everyday life across a broad range of societies. The symbolic and metaphorical nature of cloth and design is made abundantly clear as the evidence repeats itself in one culture after another. *Prehistoric Textiles* (Barber 1991) has proven to be an invaluable source of information on the history of textile production, although its emphasis is on weaving, spinning and dyeing. In recent years (2012) *The Textile Reader* edited by Jessica Hemmings has brought together essays and extracts on Touch, Memory, Structure, Politics, Production and Use. While some chapters are reprints of previous articles and stories (there are extracts from *The Scarlet Letter* and “Everyday Use”) the selection includes the work of Isak Dinesen, Deleuze and Guattari, Italo Calvino, Anni Albers, Rozsika Parker, Elaine Showalter and Elizabeth Wayland Barber. In Australia, much study has been made of the connections between written works and the visual arts. *Between Literature and Painting: Three Australian Women Writers* by Roberta Buffi studies the work of Janine Burke, Beverley Farmer and Drusilla Modjeska to investigate the way that women writers relate to their surroundings in a visual way as they explore self-image and experience. The manner in which one art form can influence another is examined in the book *Patrick White, Painter Manqué: Paintings, painters and their influence on his writing* by Helen Verity Hewitt. She uncovers Patrick White’s pivotal relationships with Australian visual artists whose work influenced and created an echo in his writing. However, there has been less attention given to literary connections to textiles until recently (see Bartlett (2005), Brennan (1997), Jones (1997, 2000, 2001, 2002, 2011), Sharrad (2004)).

Internationally, while there are many books on the theory of dress, costume and fashion in fiction (Hughes 2006, Kortsch 2009, Kuhn 2005, Ribeiro 2005), there are few major works about the history of quilting, knitting and embroidery in fiction. There are an increasing number of “how to” manuals and pattern books but few that analyse fiction texts that employ handcrafted textiles. Most of the theory written about textiles and textiles in fiction has concentrated on quilts and quilting. There is the impressive *The Patchwork Quilt: Ideas of Community in Nineteenth-Century American Women’s Fiction* (Shepard 2005) which focuses on the metaphor of the quilt and quilt-making in the building of community as

reflected in contemporary fiction. Two other books *Quilt Culture: Tracing the Pattern* (Torsney and Elsley 1994) and *Quilts as Text[iles]: The Semiotics of Quilting* (Elsley 1996) contain collections of previously published articles ranging from essays on the significance of the quilt in Walker's *The Color Purple* and Morrison's *Beloved: A Novel* to political aspects of the AIDS Quilt. There are also significant articles in journals, such as "Historical Figures and Paradoxical Patterns: The Quilting Metaphor in Margaret Atwood's *Alias Grace*" (Murray 2001). However, these all speak to the metaphor of quilts and quilt-making rather than to the synaesthetic and affective impact of them—interest lies in the thematic and structural use of textiles rather than the way in which the writing itself impacts on the reader. There is even less written about knitting and embroidery in fiction and little about any of them in fiction coupled with their synaesthetic qualities or the affect that they can create. Further critical works about the three types of textiles will be discussed as they arise in relevant chapters.

Research about textiles in Australian fiction has been limited. Two chapters in Sue Rowley's 1997 collection of essays, *Craft and Contemporary Theory*, are significant (Rowley 1997). Anne Brennan's essay (1997) tells about her research into the stories of the indigent women who were residents of Hyde Park Barracks in Sydney between 1848 and 1886. The archaeological record mostly consists of fragments of clothing and sewing. Brennan and Anne Ferran tried to find out what happened to these women during and after their stay, but apart from a few official records, most of them had faded into history, unrecorded. The two researchers argue that the "lack" of record was as important as the existence of written traces, and that the scraps of sewing were the unvoiced stories of the women and their connection to the present. The body posture of the women and the repetitive nature of the stitching on the fabric corresponded with the physical effort of writing their stories by the researchers, forming a repetition of process. The second relevant essay (1997) in the same collection is by Dorothy Jones, who has been interested in the interaction of text and textile for over thirty years. Jones has written much about the connections between the Greek myths and weaving as well as the use of textiles by Virginia Woolf, Margaret Atwood, and knitting and embroidery in the novels of Australian authors such as Jessica Anderson and Marion Halligan. Paul Sharrad's writing on the importance of textiles in the writing of Salman Rushdie and about tapa cloth in fiction, are also significant.

I will be carrying out close readings of selected Australian novels to determine how textile motifs are used. My reading will be guided by theories of affect (Thrift, Tomkins, Massumi) and synaesthesia (Cytowic, Marks, Ramachandran), touch (Paterson, Rodaway), metaphor (Lakoff and Johnson), synaesthetic metaphor (Sean Day), reading and memory, textiles and text (Weigel, Minugh) and gender and the creative arts (Parker). Each of the three categories of textile allows a different way of looking at how they are used in texts, because each of the textiles is constructed using different methods, although there is some overlap in the way they are produced. A quilt is made of pieces cut from purchased or recycled fabric and re-sewn together in a multitude of patterns, whereas a knitted garment is created by working with (usually) one piece of yarn at a time and with very different tools—knitting needles as opposed to a sewing needle. Embroidery uses the surface of an already constructed cloth and embellishes that surface.

This study is structured so that the reader is guided through the definitions and theories needed to fully understand an investigation into fiction texts that contain the three textile types—quilting, knitting and embroidery. Chapter One will explain the importance of touch in everyday life and how haptics operate to enrich our lives. This prefaces discussion of the way in which touch connects to memory and how it can conjure personal and collective memories from the past through fabric and text.

In Chapter Two, an in-depth exploration of what synaesthesia is and how it works both from a psychological perspective and a literary perspective, will be followed by how synaesthesia and particularly the combinations of vision and touch combine to work in fiction texts. Synaesthetic metaphor will form a major part of this discussion as it is a manifestation of synaesthesia in text and is particularly relevant when vision, touch and textile/texture come together.

By exploring and explaining the theories of affect in Chapter Three, particularly as formulated by Silvan Tomkins and Brian Massumi, and by gaining an understanding of the act of reading, a basis will be established to look at each of the three types of textiles. Once theories of synaesthesia and affect are understood, we can then analyse and appreciate how they combine in the text to create affect in the reader. The interrelationship between textiles and text needs to be set against a background of why readers read and how they read. This will help to explain why the senses are so important when we read and how and why the reader experiences affect. The place of the aesthetic qualities of the text, including the

aesthetics of the physical word on the page, the beauty of the language and the idea of the *plaisir du texte* and the space that the reader inhabits are also discussed. At the same time, an understanding of the qualities of textiles is essential if we are to comprehend how authors use these qualities to manipulate the reader during the reading process.

Chapter Four concentrates on quilts, quilt-making and the quilter. I will first make a brief survey of the history of world quilt-making (particularly in the United Kingdom and the United States) and quilt history in Australia, to emphasise the social and cultural traditions of the technique. Then I will examine quilt-making in fiction internationally and the use of metaphors that quilts and quilt-making provide, to create a context in which Kate Grenville's work *The Idea of Perfection* can be discussed. This is followed by an investigation into *The Idea of Perfection* by Kate Grenville, which will show how she employs quilts to skilfully bring to mind the memories of the characters and, by proxy, those of the reader. The role of synaesthetic metaphors in Grenville's writing will be explored to evaluate their use and frequency and compared with the results of the studies in Chapter Two to show how her emphasis on textiles changes the normal frequency of use for types of synaesthetic metaphor. Kate Grenville's work is used to test the idea that knowingly or unknowingly she includes more than average cross-modal sense-related metaphors and that these metaphors are predominantly associated with touch.

Chapter Five begins with an overview of the history of knitting internationally and in Australia and of its use in fiction. The texts chosen to examine this work's hypothesis for knitting and the knitter in the novel are *Lambs of God* by Marele Day and *Knitting* by Anne Bartlett. These two novels are preoccupied with religion and religious ritual and particularly with the idea of Grace. Some of the concerns of these novels will mirror those of the previous chapter, but these texts also have their own characteristics as the knitting process is unique. The pulling out of yarn, the knotting, completing and advancing of the work, the interplay of plain and fancy stitches that may be dropped or twisted or created with a variety of thin cottons or thick wools are all aspects of the making of a textile and of a text. The meditative process in making the textile, working as a community or individually, the role of identity, of warmth, caring and comfort that knitted textiles possess, will also be a part of this chapter.

Chapter Six will focus on embroidery and the embroiderer in the novels *Tirra Lirra by the River* by Jessica Anderson and *Spider Cup* by Marion Halligan. This is prefaced with a history of world embroidery and

Australian embroidery and the use of embroidery in international and Australian fiction. Embroidery can be used as a surface texture, in white or colours, worked from the front or the back of the work. It can be a thread that runs through the text, through the cloth, backwards or forwards, covering the entire surface or some of it, making holes in it, gathering it, puckering it or simply embellishing it.

The final chapter will give an overview of the findings and the conclusions of the work, and propose questions for further research.

CHAPTER ONE

TOUCH AND MEMORY

So touch, like vision, articulates an equally rich, complex world, a world of movement and exploration, of non-verbal social communication. It is a carnal world, with its pleasures of feeling and being felt, of tasting and touching the textures of flesh and of food. And equally it is a profound world of philosophical verification, of the communication of presence and empathy with others, of the co-implication of body, flesh and world. (Paterson 2007, 2)

In this chapter I will outline the way in which Western culture understands touch, the way that vision and touch work together, and their importance in our everyday lives. Human beings need the sense of touch to gather information, to position themselves in their surrounds and to appreciate the intrinsic pleasure of the material world. Memory is a significant co-contributor with touch in creating the reading experience, so I will also describe the way that memory functions and how personal and collective memory combine with our senses to intensify our response to textiles in fiction.

Aristotle's five human senses—sight, hearing, smell, taste and touch (1952, 656)—continue to be the way in which we describe our senses in Western culture today. However, the idea that there are a set number of senses is a social construct. Other cultures recognise a greater or lesser number of senses, for example, the Hausa of Nigeria divide the senses into two and Buddhist cultures recognise six senses, the sixth being “the mind” (Classen 1993, 2). Twenty-one senses have been identified by Durie (2005). Aristotle also suggested a standard ranking of the senses—sight, hearing, smell, taste and then touch. An alternate hierarchy orders each sense depending on its distance from the body. So taste (inside the mouth), touch (skin, usually hands), smell (from a short distance from the body), hearing and sight (near or far away from the body) (Rodaway 1994, 26-27).

The term “sense” which comes from the root *sent*, to go, to find out (Classen 1993, 72), has two definitions. It can mean “making sense”

which implies understanding and it can also refer to “the senses”, those five senses listed above, which are used in the context of feeling and sensation. As Rodaway explains:

These two aspects are closely related and often implied by each other. The sense(s) is (are) both a reaching out to the world as a source of information and an understanding of that world so gathered. This sensuous experience and understanding is grounded in previous experience and expectation, each dependent on sensual and sensory capacities and educational training and cultural conditioning. (Rodaway 1994, 5)

Rodaway’s “reaching out to the world” and Classen’s “find out” are particularly relevant when discussing the sense of touch. Our hands “reach out” to evaluate, orientate, gain knowledge, and this “sense of touch” combined with vision is what is important when we assess textiles and read about them.

Vision and touch are the two senses that primarily carry the appeal of fabric to our brains, although the other senses may play a part. The sight of a fabric excites our aesthetic appreciation through the beauty of colour, pattern or weave or jars our sensibilities with discordant elements. The tactile qualities of fabric include the feel of the surface of the cloth between our fingers or as it drapes across our body but an unpleasant sensation may result from contact with a coarse or unclean cloth. The smell of a fabric may evoke memories of people or events from the past through the odour of mothballs, old musty blankets, of babies and mother’s milk, or the offensive odours of blood or faeces caught in the weave. The auditory qualities of some fabrics, such as the rustle of silk or satin or the electrical crackling of nylon or man-made fabrics, may join with the sound of scissors cutting through the cloth, ripping fabric, rolls thudding on the counter or the noise of the sewing machine, to recall memories from the past.

As Aristotle (1952, 654) pointed out when he wrote about the senses, there are more variations and qualities to the touch experience than are involved with the other senses. These range from hot/cold, rough/smooth, hard/soft, dry/moist, etc. on a primary level, to the physical and emotional arousal of the body by the touch of a lover. Just as love can be indicated and received through touch, pain is another aspect of its spectrum. Heller notes that touch is a warning mechanism and allows us to manoeuvre in the world (Heller 1991, 2). Although we may think of the hand as the main source for gathering tactile information, our whole body is monitoring our surroundings at all times and we rely on it unconsciously in every aspect

of our lives. Heller comments that our skin feels the textures that come in contact with it, and that our movements are often motivated by responses to the world around us that we feel on and through our skin.

More to the point, many of the most important events in our lives involve the sense of touch. Touch has a powerful affective component as well as a cognitive one. We feel pain and pleasure, and these seem essential to existence. One can't conceive of human life devoid of the sense of touch. Imagine one's entire skin surface always under anesthesia [*sic*]! (Heller 1991, 3)

Paterson, in the epigraph to this chapter, reinforces this idea, summing up the intricate and elaborate meaning that accompanies the word "touch", encompassing both its "carnal" and "philosophical" aspects.

The importance of touch as one of the body's main information gathering tools for decision-making is undeniable. Montagu notes that touch is the very first sensation that a foetus registers in the womb (Montagu 1971, 1). Young children are encouraged to experience and learn about the surfaces around them, to touch and feel in order to acclimatise themselves to the world. Books and toys have been specifically developed to help them explore their surroundings. There are board books for counting that have illustrations showing the meaning of each number as well as having the number indented on each page so that the child can feel as well as see them (*Making Numbers* 2006). Some board books have shapes cut out of the pictures on the page and fabric inserted so that children can feel the difference between rough, smooth, silky, furry and fluffy textures (Watt 2007). The importance of touching and being touched in childhood is now fully realised after many years of research (Carlson 2006, 11). As an example, studies have shown how important touching is for premature babies:

Massaged babies gain weight as much as 50 percent faster than unmassaged babies. They're more active, alert, and responsive, more aware of their surroundings, better able to tolerate noise, and they orient themselves faster and are emotionally more in control.... In a follow-up examination, eight months later, the massaged preemies were found to be bigger in general, with larger heads and fewer physical problems. (Ackerman 1990, 73)

The positive attributes of touch need not have a human catalyst. A study at Maternity Hospital, Cambridge, England, showed that, if premature babies were left on a lamb's-wool blanket for a day they gained an average of fifteen grams more than usual. The tactile stimulation of

wrapping the baby tightly in a blanket or other fabric, decreased the heart rate and relaxed the baby (Ackerman 1990, 78).

This need for touch and its efficacious effects seems to continue into adulthood as two experiments cited by Ackerman suggest. In the first study a librarian lightly brushed the hand of half the patrons as they were being served. The half that were subconsciously brushed were much more satisfied with the library service and life in general than those who weren't. In a second study, diners at a restaurant in Oxford, Mississippi were lightly touched on the hand or shoulder by the waitress. Those touched consistently gave the waitress a larger tip (Ackerman 1990, 122-23).

The inexplicable benefits of touching others goes some way to explaining our need to touch textiles. It seems that as human beings we have always sort the certainty of touch. Tactility involves physical materiality, a quality that the other senses do not have. The phrase "Doubting Thomas" is used to describe a person who needs physical evidence to believe that something is true. It derives from an incident in *The Bible* (John 20:24-29) when Thomas the Apostle, doubting the resurrection of Jesus, needs to touch His wounds before he will believe that it is truly Him.

24 But Thomas, one of the twelve, called Didymus, was not with them when Jesus came.

25 The other disciples therefore said unto him, We have seen the Lord. But he said unto them, Except I shall see in his hands the print of the nails, and put my finger into the print of the nails, and thrust my hand into his side, I will not believe.

...

27 Then saith he to Thomas, Reach hither thy finger, and behold my hands; and reach hither thy hand, and thrust *it* into my side: and be not faithless, but believing.

28 And Thomas answered and said unto him, My Lord and my God.

29 Jesus saith unto him, Thomas, because thou hast seen me, thou hast believed: blessed *are* they that have not seen, and *yet* have believed. (*Holy Bible* 1958)

Diderot's *Letter on the Blind* (1749) reinforces the example of "Doubting Thomas". When a blind man was asked if he would like to have his sight

he replied that he would rather have longer arms as touch was a much more reliable sense than vision (quoted in Morgan 1977, 35).

But there is another side to touch and its predominantly pleasant outcomes. Pain administered to human flesh creates a response throughout the entire body. Sweat is generated, pupils dilate and blood pressure rises (Ackerman 1990, 107-8). Pain may also lead to a distortion of the face or the body, to violent arm gestures, writhing and, in severe cases, the addition of sound—moans, grunts or screams.

Children learn which objects shouldn't be touched through the experience of pain and as adults we decide for ourselves what to touch and what to leave untouched. But at art galleries, museums and quilt shows our ability to touch is restricted by "no touching" signs. At quilt shows, touching the displayed quilts is particularly frowned on. The forbidden coverings, valued for their tactile qualities and associated with warmth and comfort, lose these essential aspects. Although past experience informs us how the quilt will feel, there is still a strong urge to touch it, a feeling that can be so overwhelming that some viewers will lean forward and touch, unable to restrain themselves despite the signs. The tactile qualities of the quilts draw us to them—the visual sense does not satisfy all our needs. It seems a primal urge exists, making it imperative that the fabric be touched.

Market research shows that part of the experience of touching an item is the result of the "autotelic factor"—"central to defining the domain of autotelic touch are its hedonics (e.g., enjoyment and affect) and the compulsive or irresistible need to engage in exploratory variety seeking via touch (e.g., lack of control and indiscriminate processing)" (Peck and Childers 2003a, 431). A desire exists for sensory stimulation and enjoyment for its own sake that creates in us a preconscious compulsion.

The importance of the tactile qualities of objects to the visually impaired exemplified in the use of Braille, has broadened in recent years to include exhibitions and programmes that have tactile elements incorporated into them. For example, Vision Australia used a Dr Seuss picture book kit to advertise its services and itself in 2007. The suitcase pictured in the advertisement contains "braille and audio storybooks along with toys and tactile objects that help to bring the magical world of the stories to life" (VisionAustralia 2007).

Museums and Art Galleries around the world have regular sessions for disabled visitors. The Art Gallery of New South Wales, for example, has developed a series of “touch tours”:

To support the touch tours, the Gallery is developing a sensory trolley so that people visiting Frederick McCubbin’s *On the Wallaby Track*, for instance, can smell eucalyptus leaves, swing a billycan and feel samples of the fabrics worn by the early settlers in this iconic painting. (Art Gallery Society of New South Wales 2007, 33)

Touch galleries have been designed not only for the enjoyment of the visually impaired but also to allow the general public tactile access to exhibits. Opportunities are provided to touch museum items at the Victoria and Albert, Tate Modern etc. and at dedicated Touch galleries such as Wolverhampton Art Gallery and the Chicago Art Institute. “Touch Me”, an exhibition held at the Victoria and Albert Museum in London in 2005, explored how touch related to contemporary design. Various designers contributed “existing products, prototypes, artists’ projects that simulate new product launches ...” (Arning 2006, 151). About fifty percent of the exhibits were able to be touched, although by the end of the exhibition many no longer worked. The importance of the autotelic factor to our appreciation of art is increasingly recognised.

Textile artists are not always worried about damage to the art works they produce. Gabriella Verstraeten who works mostly with machine embroidery combined with fabric manipulation (e.g. appliqué, layering, cutback, padding and sculpting) actively encourages tactile interaction:

I love it when people want to reach out and touch the embroidery. To be fascinated by the surface. These kind of feelings and attractions do not occur when we look at paintings or drawings. With embroidery there is more and I want to exploit it. (Original italics) (Rogers 1992, 53)

Some artists play with the qualities of touch, fooling us into thinking that there is a further dimension to their work when none exists. Vik Muniz, an artist born in Brazil but currently based in New York, uses string to create intricate pictures on a light box and then photographs the pictures. These photographs become his exhibition pieces. His work extends beyond the sense of touch and is really a tricking of the senses, of turning the tactile into the visual (Plummer 2007).

An art work entitled Tickle Salon (Dekker and van Saaze 2005, 119-20) developed by Erwin Driessens and Maria Verstappen consists of a small brush hanging from the ceiling and connected to a motor which in

turn is connected to a computer. A guest is asked to lie on a bed beneath the brush and as the brush strokes the body the contours are reflected in a 3D computer drawing on the screen. The machine creates a visual representation of the body through touch.

The importance of our sense of touch is easily demonstrated, but how does it figure in combination with vision to provide information to us? Heller carried out three experiments to investigate the intermodal relationships between vision and touch in the perception of texture. By using different grades of sandpaper in blind and sighted touch tests, he found that the best judgements were made in the bimodal visual and haptic experiments as opposed to a single perceptual modality. This raised questions about bimodality—do subjects “add together” the information to acquire more information or do we usually use senses in a cooperative manner and by being restricted to one sense the subject is deprived of information:

The results of the experiments suggest that texture perception may normally be multi-modal. The restriction of an observer to a single modality degrades performance in texture-perception tasks. (Heller 1982, 343)

Heller found that when perceiving texture, the brain uses information from both available senses but that:

Haptic cues may be more perceptually salient than visual texture cues when both sources of information are available and redundant. (Heller 1982, 343)

Touch is more important than vision, according to Heller, because it allows us to feel very fine textures or surface variation, including hardness and softness and hot and cold (1991, 4).

Words that describe touch reflect this surface variation and are onomatopoeic. Texture words, such as “soft”, “smooth”, “velvet” and “satin”, as opposed to “rough”, “harsh”, “coarse” and “nubbly”, align the meanings of the words with their sounds. The pleasant words have drawn-out, elongated pronunciations, while the unpleasant are short and sharp.

The preconscious compulsion to touch material surfaces is coupled with cognition and memory to create emotion. A survey carried out by DeLong, Wu and Bao, involving female American art and design students and a similar group of students in China, was published in 2007. It was designed to assess the “role of touch sensation in early memory” (DeLong,

Wu, and Bao 2007, 41). Students were given a questionnaire about their early touch experiences. This study found that for the female American students the second most prominent remembered category was “bedding” (14%) after the category “animals” (27%):

US respondents combined cognitive and affective descriptors when describing touch experience with bedding. All such touch sensations were described cognitively as “soft” or “smooth,” and affectively as “comforting,” having a “sense of security,” or “calming.” These experiences were reported as “liked.” Repeating or reinforced perceptions of “soft” or “smooth” were likely to result in positive experiences of “comfort,” having a “sense of security,” or “calming”. (DeLong, Wu, and Bao 2007, 42)

Pleasant experiences predominated over painful ones and “repetitive exposure”, such as sleeping, consolidated these memories (DeLong, Wu, and Bao 2007, 45).

This 2007 survey, which used only female students, was followed by one using 103 female and 101 male American design students, which looked at how gender effects the childhood memories of tactile items. There was surprisingly little difference between the two groups. The most remembered textile product for the male group was wool/cashmere sweaters, then bedding. This result was reversed for the female group to bedding and then wool/cashmere sweaters. Overall more pleasant touch memories were recorded than unpleasant (female 79.7% liked and 20.3% disliked, male 70.3% liked, 29.7% disliked) (DeLong and Park 2008, 40). Strangely 22% of males mentioned home furnishings compared to 9% of females (DeLong and Park 2008, 31).

When we read fiction that employs textiles, we bring a pre-knowledge of how the textile in the text feels to the touch. It is a visual as well as a tactile response to the text. Our other senses—smell, hearing and, to a lesser extent, taste—may also be involved in our appraisal of a textile. These sensations may remain as separate entities, or may combine with precognitive affect—a tingling down the spine, a tear, a smile or a laugh. Textiles present multilayered patterns, as well as embellishment, truth and lies.

In other art forms, in painting, for example, the artist can run the gamut from the abstract to a photo-realistic image or the many interpretations in between. The viewer can, if they wish, fill in the gaps that the artist has not explicitly depicted. We can understand the perspective of a painting from